

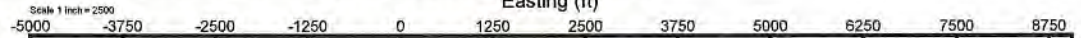


ANTERO RESOURCES CORPORATION



Location: Tyler County, WV
 Field: Tyler
 Facility: Margery Pad

Slot: Slot #11
 Well: Glamdring Unit 1H
 Wellbore: Glamdring Unit 1H PWB

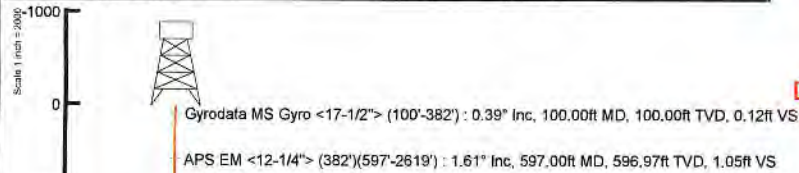


BH AT Curve <8-1/2"> (6066')(6105'-21224') : 5801.89ft TVD, 883.60ft N, 1506.24ft E
 APS EM <8-3/4"> (2619')(2704'-6066') : 2597.63ft TVD, 336.86ft N, 514.21ft E
 APS EM <12-1/4"> (382')(597'-2619') : 596.97ft TVD, 0.12ft N, 3.56ft E
 Gyrodata MS Gyro <17-1/2"> (100'-382') : 100.00ft TVD, 0.04ft S, 0.25ft E
 Marcellus POE: 7262' MD : 6643.13ft TVD, 522.23ft N, 2029.12ft E

Plot reference wellbore is Glamdring Unit 1H PWP Rev-B,0	Grid System: WAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to H&P 317 (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to H&P 317 (RKB)	Scale: True distance
H&P 317 (RKB) to Mean Sea Level: 1066.5 feet	Coordinates are in feet referenced to Slat
Mean Sea Level to Ground level (At Slot: Slot #11): -1041 feet	Depths are in feet
Offset wellbore MDs are referenced to each path's detail MD datum	Created by: wsbayne on 2021-10-22; Database: WA_NPL_EASTERNUS_Data

Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Margery Pad	1688470.750	14350316.100	38°31'2.1450"N	80°49'46.5880"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Longitude
Slot #11	103.77	161.07	1688631.760	14350419.880	39°31'3.1676"N 80°49'44.5302"W
Comment: Glamdring Unit 1H					
H&P 317 (RKB) to Ground level (At Slot: Slot #11)			25.5ft		
Mean Sea Level to Ground level (At Slot: Slot #11)			-1041ft		
H&P 317 (RKB) to Mean Sea Level			1066.5ft		

API: 47-095-02742-0000
 BH Job #: 111030760
 Rig: H&P 317
 Duration: 10/13/2021-10/17/2021



Well Data			
Slot	Well	Wellbore	Wellpath
Slot #11	Glamdring Unit 1H	Glamdring Unit 1H AWB	Glamdring Unit 1H AWP Proj: 21249'
Slot #11	Glamdring Unit 1H	Glamdring Unit 1H PWB	Glamdring Unit 1H PWP Rev-B,0

APS EM <8-3/4"> (2619')(2704'-6066') : 19.55° Inc, 2704.00ft MD, 2597.63ft TVD, -150.48ft VS

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	2619.00	20.340	52.950	2517.72	318.52	491.78	0.76	-140.46
Proj. to Bottom	2687.00	20.340	52.950	2581.48	332.76	510.64	0.00	-147.76
Drill Out	2767.00	20.340	52.950	2656.49	349.52	532.84	0.00	-156.35
End of 3D Arc	2929.65	19.745	62.292	2809.33	379.33	579.73	2.00	-169.22
Curve KOP	6288.70	19.745	62.292	5970.89	906.98	1584.40	0.00	-339.86
POE	7224.03	74.817	149.813	6630.00	536.95	2015.69	8.00	150.72
Landing Pt.	7413.82	90.000	148.613	6655.00	375.15	2110.58	8.00	334.65
On AZI	7791.26	90.000	160.937	6655.00	32.85	2298.20	3.00	709.65
BHL	21218.20	90.000	160.937	8665.00	-12657.70	8653.62	0.00	14136.57

BH AT Curve <8-1/2"> (6066')(6105'-21224') : 13.93° Inc, 6105.00ft MD, 5801.89ft TVD, -343.29ft VS

Marcellus POE: 7262' MD : 76.59° Inc, 7262.00ft MD, 6643.13ft TVD, 169.03ft VS

Projected MD at TD: 21249' : 89.75° Inc, 21249.00ft MD, 6664.06ft TVD, 14148.10ft VS



User specified (HDGM) Dip: 66.45° Field: 51749 nT
 Magnetic North is 7.41 degrees West of True North (at 11/Oct/2021)
 Grid North is 0.11 degrees East of True North
 To correct azimuth from True to Grid subtract 6.11 degrees
 To correct azimuth from Magnetic to Grid subtract 7.52 degrees

Projected MD at TD: 21249' : 6664.06ft TVD, 12666.04ft S, 6664.83ft E

Vertical Section (ft)
 Azimuth 160.94° with reference 0.00 N, 0.00 E

Scale 1 inch = 2000



Actual Wellpath Report

Glamdring Unit 1H AWP Proj: 21249'
Page 1 of 12



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Glamdring Unit 1H
Field	Tyler	API	47-095-02742-0000
Facility	Margery Pad	Wellbore	Glamdring Unit 1H AWB
Slot	Slot #11		

REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Edsaryar
Scale	0.999603	Report Generated	22/Oct/2021 at 21:23
Convergence at slot	0.11° East	Database	WA_MPL_EASTERNUS_Defn

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	103.77	161.07	1688631.76	14350419.88	39°31'3.1676"N	80°49'44.5302"W
Facility Reference Pt			1688470.75	14350316.15	39°31'2.1450"N	80°49'46.5880"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.3013"W

WELLPATH DATUM

Calculation method	Minimum curvature	H&P 317 (RKB) to Facility Vertical Datum	1066.50ft
Horizontal Reference Pt	Slot	H&P 317 (RKB) to Mean Sea Level	1066.50ft
Vertical Reference Pt	H&P 317 (RKB)	H&P 317 (RKB) to Ground Level at Slot (Slot #11)	25.50ft
MD Reference Pt	H&P 317 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	160.94°

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Actual Wellpath Report

Glamdring Unit 1H AWP Proj: 21249'
Page 2 of 12



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Glamdring Unit 1H
Field	Tyler	API	47-095-02742-0000
Facility	Margery Pad	Wellbore	Glamdring Unit 1H AWB
Slot	Slot #11		

WELLPATH DATA (235 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	99.650	0.00	0.00	0.00	0.00	1688631.76	14350419.88	39°31'3.1676"N	80°49'44.5302"W	0.00	0.000	0.00	0.00	0.00	
25.50	0.000	99.650	25.50	0.00	0.00	0.00	1688631.76	14350419.88	39°31'3.1676"N	80°49'44.5302"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.390	99.650	100.00	0.12	-0.04	0.25	1688632.01	14350419.84	39°31'3.1672"N	80°49'44.5271"W	0.25	99.650	0.52	0.52	0.00	Gyrodata MS Gyro <17-1/2"> (100'-382')
200.00	0.280	113.940	200.00	0.45	-0.20	0.81	1688632.57	14350419.68	39°31'3.1657"N	80°49'44.5199"W	0.83	103.803	0.14	-0.11	14.29	
300.00	0.210	151.840	300.00	0.80	-0.46	1.12	1688632.88	14350419.42	39°31'3.1631"N	80°49'44.5160"W	1.21	112.328	0.17	-0.07	37.90	
382.00	0.210	247.580	382.00	0.96	-0.65	1.05	1688632.81	14350419.23	39°31'3.1612"N	80°49'44.5168"W	1.24	121.713	0.38	0.00	116.76	
597.00	1.610	72.360	596.97	1.05	0.12	3.56	1688635.32	14350420.00	39°31'3.1687"N	80°49'44.4847"W	3.57	88.139	0.85	0.65	-81.50	APS EM <12-1/4"> (382')(597'-2619')
688.00	2.710	68.890	687.91	1.01	1.28	6.79	1688638.55	14350421.16	39°31'3.1801"N	80°49'44.4436"W	6.91	79.340	1.22	1.21	-3.81	
779.00	4.790	63.560	778.71	0.44	3.74	12.20	1688643.95	14350423.62	39°31'3.2044"N	80°49'44.3745"W	12.76	72.935	2.32	2.29	-5.86	
869.00	6.690	56.920	868.25	-1.31	8.28	19.96	1688651.71	14350428.18	39°31'3.2491"N	80°49'44.2754"W	21.61	67.468	2.23	2.11	-7.38	
958.00	8.320	58.390	956.49	-3.96	14.48	29.79	1688661.53	14350434.36	39°31'3.3102"N	80°49'44.1498"W	33.12	64.067	1.84	1.83	1.65	
1048.00	10.580	54.600	1045.26	-7.70	22.69	42.07	1688673.81	14350442.56	39°31'3.3910"N	80°49'43.9929"W	47.79	61.664	2.60	2.51	-4.21	
1143.00	12.170	56.350	1138.39	-12.68	33.29	57.51	1688689.25	14350453.15	39°31'3.4955"N	80°49'43.7956"W	66.45	59.940	1.71	1.67	1.84	
1238.00	14.530	55.720	1230.82	-18.33	45.55	75.70	1688707.43	14350465.41	39°31'3.6164"N	80°49'43.5632"W	88.35	58.964	2.49	2.48	-0.66	
1332.00	16.390	53.940	1321.41	-25.31	60.00	96.17	1688727.89	14350479.85	39°31'3.7588"N	80°49'43.3017"W	113.35	58.040	2.04	1.98	-1.89	
1427.00	18.680	53.540	1411.99	-33.78	76.93	119.24	1688750.95	14350496.78	39°31'3.9257"N	80°49'43.0069"W	141.90	57.171	2.41	2.41	-0.42	
1521.00	21.020	53.930	1500.40	-43.21	95.81	144.98	1688776.68	14350515.65	39°31'4.1118"N	80°49'42.6780"W	173.77	56.542	2.49	2.49	0.41	
1615.00	22.810	57.210	1587.61	-52.47	115.60	173.92	1688805.62	14350535.44	39°31'4.3069"N	80°49'42.3082"W	208.84	56.389	2.31	1.90	3.49	
1710.00	24.080	56.470	1674.76	-61.68	136.28	205.58	1688837.24	14350556.11	39°31'4.5107"N	80°49'41.9040"W	246.63	56.457	1.37	1.34	-0.78	
1804.00	24.150	59.090	1760.56	-70.42	156.75	238.05	1688869.71	14350576.57	39°31'4.7124"N	80°49'41.4890"W	285.02	56.636	1.14	0.07	2.79	
1899.00	23.700	58.890	1847.40	-78.40	176.60	271.07	1688902.72	14350596.41	39°31'4.9079"N	80°49'41.0671"W	323.52	56.916	0.48	-0.47	-0.21	
1993.00	21.990	59.600	1934.02	-85.80	195.27	302.42	1688934.06	14350615.07	39°31'5.0918"N	80°49'40.6666"W	359.98	57.151	1.84	-1.82	0.76	
2087.00	22.290	58.290	2021.09	-93.17	213.54	332.77	1688964.40	14350633.34	39°31'5.2719"N	80°49'40.2789"W	395.39	57.311	0.61	0.32	-1.39	
2181.00	22.290	58.180	2108.07	-101.01	232.31	363.08	1688994.70	14350652.10	39°31'5.4568"N	80°49'39.8917"W	431.04	57.387	0.04	0.00	-0.12	
2276.00	21.020	58.010	2196.36	-108.80	250.84	392.84	1689024.45	14350670.62	39°31'5.6393"N	80°49'39.5115"W	466.10	57.441	1.34	-1.34	-0.18	
2371.00	20.540	55.980	2285.18	-116.92	269.19	421.11	1689052.70	14350688.96	39°31'5.8202"N	80°49'39.1504"W	499.79	57.412	0.91	-0.51	-2.14	
2466.00	20.240	55.990	2374.23	-125.46	287.71	448.54	1689080.12	14350707.47	39°31'6.0027"N	80°49'38.7998"W	532.88	57.323	0.32	-0.32	0.01	
2561.00	20.340	54.210	2463.34	-134.45	306.55	475.56	1689107.13	14350726.31	39°31'6.1884"N	80°49'38.4547"W	565.80	57.193	0.66	0.11	-1.87	
2619.00	20.340	52.950	2517.72	-140.46	318.52	491.78	1689123.34	14350738.27	39°31'6.3064"N	80°49'38.2474"W	585.92	57.069	0.76	0.00	-2.17	
2704.00	19.550	48.410	2597.63	-150.48	336.86	514.21	1689145.78	14350756.61	39°31'6.4873"N	80°49'37.9607"W	614.72	56.771	2.04	-0.93	-5.34	APS EM <8-3/4"> (2619')(2704'-6066')

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Actual Wellpath Report

Glamdring Unit 1H AWP Proj: 21249'
Page 3 of 12



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Glamdring Unit 1H
Field	Tyler	API	47-095-02742-0000
Facility	Margery Pad	Wellbore	Glamdring Unit 1H AWB
Slot	Slot #11		

WELLPATH DATA (235 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
2750.00	19.990	47.240	2640.92	-156.59	347.31	525.74	1689157.29	14350767.05	39°31'6.5903"N	80°49'37.8134"W	630.10	56.551	1.29	0.96	-2.54	
2845.00	22.670	51.710	2729.41	-169.15	369.68	552.03	1689183.57	14350789.42	39°31'6.8109"N	80°49'37.4773"W	664.39	56.191	3.30	2.82	4.71	
2939.00	23.610	54.510	2815.84	-180.44	391.84	581.58	1689213.11	14350811.56	39°31'7.0293"N	80°49'37.0997"W	701.27	56.030	1.54	1.00	2.98	
3034.00	22.000	60.340	2903.43	-189.09	411.69	612.54	1689244.05	14350831.41	39°31'7.2250"N	80°49'36.7042"W	738.03	56.095	2.92	-1.69	6.14	
3128.00	20.530	67.630	2991.04	-193.28	426.68	643.09	1689274.59	14350846.39	39°31'7.3726"N	80°49'36.3140"W	771.76	56.436	3.22	-1.56	7.76	
3225.00	20.590	67.520	3081.86	-195.28	439.68	674.58	1689306.07	14350859.38	39°31'7.5004"N	80°49'35.9119"W	805.21	56.904	0.07	0.06	-0.11	
3320.00	20.370	65.380	3170.86	-197.88	452.95	705.04	1689336.52	14350872.65	39°31'7.6310"N	80°49'35.5228"W	838.01	57.281	0.82	-0.23	-2.25	
3415.00	20.080	62.560	3260.00	-201.86	467.36	734.55	1689366.02	14350887.05	39°31'7.7728"N	80°49'35.1459"W	870.62	57.533	1.07	-0.31	-2.97	
3509.00	20.370	59.780	3348.21	-207.38	483.03	763.01	1689394.46	14350902.71	39°31'7.9271"N	80°49'34.7824"W	903.05	57.664	1.07	0.31	-2.96	
3604.00	19.860	67.280	3437.43	-211.61	497.58	792.18	1689423.63	14350917.27	39°31'8.0704"N	80°49'34.4098"W	935.49	57.866	2.77	-0.54	7.89	
3699.00	19.890	65.900	3526.77	-214.06	510.42	821.82	1689453.25	14350930.09	39°31'8.1967"N	80°49'34.0313"W	967.43	58.156	0.49	0.03	-1.45	
3794.00	20.130	64.050	3616.04	-217.44	524.17	851.27	1689482.69	14350943.84	39°31'8.3320"N	80°49'33.6551"W	999.71	58.377	0.71	0.25	-1.95	
3889.00	19.670	61.070	3705.37	-222.14	539.06	879.96	1689511.37	14350958.72	39°31'8.4786"N	80°49'33.2886"W	1031.95	58.509	1.17	-0.48	-3.14	
3982.00	19.490	57.710	3792.99	-228.38	554.92	906.78	1689538.18	14350974.57	39°31'8.6349"N	80°49'32.9461"W	1063.10	58.535	1.23	-0.19	-3.61	
4077.00	18.810	62.390	3882.74	-234.28	570.48	933.75	1689565.14	14350990.13	39°31'8.7882"N	80°49'32.6016"W	1094.23	58.577	1.77	-0.72	4.93	
4172.00	18.420	60.620	3972.77	-239.25	584.94	960.40	1689591.78	14351004.59	39°31'8.9306"N	80°49'32.2611"W	1124.51	58.656	0.72	-0.41	-1.86	
4266.00	17.600	63.660	4062.17	-243.71	598.53	986.08	1689617.44	14351018.18	39°31'9.0644"N	80°49'31.9331"W	1153.51	58.743	1.33	-0.87	3.23	
4361.00	19.200	68.790	4152.31	-246.12	610.56	1013.52	1689644.87	14351030.20	39°31'9.1828"N	80°49'31.5827"W	1183.22	58.935	2.39	1.68	5.40	
4456.00	18.400	64.850	4242.25	-248.29	622.58	1041.65	1689673.00	14351042.22	39°31'9.3011"N	80°49'31.2234"W	1213.53	59.134	1.58	-0.84	-4.15	
4551.00	17.290	61.190	4332.68	-252.27	635.76	1067.60	1689698.93	14351055.39	39°31'9.4308"N	80°49'30.8920"W	1242.56	59.226	1.66	-1.17	-3.85	
4645.00	18.270	59.410	4422.19	-257.58	649.99	1092.52	1689723.84	14351069.61	39°31'9.5710"N	80°49'30.5736"W	1271.26	59.250	1.19	1.04	-1.89	
4740.00	18.800	59.960	4512.26	-263.48	665.23	1118.59	1689749.90	14351084.85	39°31'9.7211"N	80°49'30.2406"W	1301.45	59.260	0.59	0.56	0.58	
4835.00	19.490	62.940	4602.01	-268.60	680.10	1145.96	1689777.26	14351099.71	39°31'9.8676"N	80°49'29.8910"W	1332.58	59.312	1.26	0.73	3.14	
4929.00	17.880	59.010	4691.05	-273.76	694.67	1172.29	1689803.59	14351114.27	39°31'10.0110"N	80°49'29.5546"W	1362.66	59.350	2.17	-1.71	-4.18	
5024.00	18.070	61.310	4781.42	-279.24	709.25	1197.72	1689829.00	14351128.85	39°31'10.1546"N	80°49'29.2298"W	1391.97	59.367	0.77	0.20	2.42	
5119.00	17.990	66.170	4871.76	-282.93	722.25	1224.07	1689855.34	14351141.84	39°31'10.2826"N	80°49'28.8933"W	1421.26	59.458	1.59	-0.08	5.12	
5214.00	19.240	67.260	4961.79	-285.15	734.23	1251.92	1689883.18	14351153.82	39°31'10.4005"N	80°49'28.5375"W	1451.35	59.609	1.37	1.32	1.15	
5310.00	20.790	62.510	5051.99	-288.67	748.21	1281.63	1689912.88	14351167.79	39°31'10.5381"N	80°49'28.1581"W	1484.05	59.724	2.34	1.61	-4.95	
5404.00	22.220	63.530	5139.45	-293.40	763.84	1312.34	1689943.58	14351183.41	39°31'10.6919"N	80°49'27.7659"W	1518.45	59.799	1.57	1.52	1.09	
5499.00	21.240	60.010	5227.70	-298.98	780.44	1343.33	1689974.55	14351200.01	39°31'10.8554"N	80°49'27.3701"W	1553.58	59.844	1.72	-1.03	-3.71	

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WV Division
Environmental Compliance



Actual Wellpath Report

Glamdring Unit 1H AWP Proj: 21249'
Page 4 of 12



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Glamdring Unit 1H
Field	Tyler	API	47-095-02742-0000
Facility	Margery Pad	Wellbore	Glamdring Unit 1H AWB
Slot	Slot #11		

WELLPATH DATA (235 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)	
5594.00	20.130	56.980	5316.57	-306.19	797.95	1371.94	1690003.15	14351217.52	39°31'11.0280"N	80°49'27.0045"W	1587.12	59.817	1.62	-1.17	-3.19	
5688.00	18.880	59.090	5405.18	-313.22	814.58	1398.55	1690029.75	14351234.14	39°31'11.1918"N	80°49'26.6645"W	1618.48	59.781	1.53	-1.33	2.24	
5783.00	18.220	59.480	5495.24	-319.32	830.02	1424.53	1690055.72	14351249.57	39°31'11.3439"N	80°49'26.3326"W	1648.71	59.772	0.71	-0.69	0.41	
5877.00	19.410	58.840	5584.22	-325.52	845.57	1450.56	1690081.74	14351265.11	39°31'11.4970"N	80°49'26.0001"W	1679.02	59.761	1.28	1.27	-0.68	
5972.00	18.380	56.890	5674.10	-332.46	861.92	1476.61	1690107.78	14351281.45	39°31'11.6581"N	80°49'25.6672"W	1709.76	59.727	1.27	-1.08	-2.05	
6066.00	15.020	52.160	5764.13	-339.98	877.49	1498.65	1690129.82	14351297.02	39°31'11.8116"N	80°49'25.3856"W	1736.65	59.650	3.85	-3.57	-5.03	
6105.00	13.930	50.030	5801.89	-343.29	883.60	1506.24	1690137.40	14351303.13	39°31'11.8719"N	80°49'25.2886"W	1746.29	59.603	3.11	-2.79	-5.46	BH AT Curve <8-1/2"> (6066')(6105'-21224')
6170.00	14.680	60.250	5864.88	-347.61	892.72	1519.39	1690150.54	14351312.24	39°31'11.9617"N	80°49'25.1206"W	1762.24	59.564	4.05	1.15	15.72	
6264.00	17.290	82.680	5955.33	-346.97	900.42	1543.61	1690174.76	14351319.94	39°31'12.0373"N	80°49'24.8113"W	1787.04	59.744	7.08	2.78	23.86	
6359.00	20.290	93.900	6045.28	-337.67	901.10	1574.07	1690205.20	14351320.62	39°31'12.0434"N	80°49'24.4227"W	1813.74	60.210	4.93	3.16	11.81	
6453.00	25.290	95.690	6131.92	-322.90	898.00	1610.33	1690241.45	14351317.52	39°31'12.0121"N	80°49'23.9600"W	1843.79	60.854	5.37	5.32	1.90	
6548.00	28.540	102.170	6216.63	-302.63	891.20	1652.73	1690283.83	14351310.72	39°31'11.9441"N	80°49'23.4192"W	1877.70	61.665	4.60	3.42	6.82	
6643.00	33.120	112.240	6298.24	-273.70	876.57	1698.99	1690330.07	14351296.10	39°31'11.7986"N	80°49'22.8292"W	1911.79	62.709	7.25	4.82	10.60	
6704.00†	37.141	117.466	6348.13	-249.32	861.76	1730.78	1690361.84	14351281.30	39°31'11.6516"N	80°49'22.4240"W	1933.45	63.531	8.23	6.59	8.57	Sycamore: 6704' MD
6737.00	39.400	119.900	6374.04	-234.19	851.94	1748.70	1690379.76	14351271.48	39°31'11.5542"N	80°49'22.1956"W	1945.19	64.025	8.23	6.84	7.37	
6832.00	45.220	126.050	6444.29	-183.72	817.03	1802.16	1690433.20	14351236.58	39°31'11.2081"N	80°49'21.5142"W	1978.72	65.612	7.51	6.13	6.47	
6844.00†	46.476	126.995	6452.65	-176.62	811.90	1809.08	1690440.12	14351231.46	39°31'11.1573"N	80°49'21.4261"W	1982.92	65.830	11.90	10.47	7.88	Middlesex: 6844' MD
6927.00	55.340	132.620	6504.96	-121.47	770.58	1858.36	1690489.37	14351190.15	39°31'10.7479"N	80°49'20.7984"W	2011.78	67.478	11.90	10.68	6.78	
7019.00†	59.880	142.145	6554.31	-50.34	713.42	1910.73	1690541.73	14351133.01	39°31'10.1820"N	80°49'20.1315"W	2039.57	69.526	10.03	4.94	10.35	Burkett: 7019' MD
7022.00	60.040	142.440	6555.81	-47.88	711.36	1912.32	1690543.31	14351130.96	39°31'10.1617"N	80°49'20.1113"W	2040.34	69.595	10.03	5.32	9.83	
7075.00	62.990	146.050	6581.10	-3.27	673.56	1939.51	1690570.50	14351093.17	39°31'9.7875"N	80°49'19.7652"W	2053.14	70.849	8.17	5.57	6.81	Tully: 7075' MD
7117.00	66.590	147.760	6598.98	33.59	641.73	1960.25	1690591.23	14351061.35	39°31'9.4725"N	80°49'19.5014"W	2062.62	71.873	9.33	8.57	4.07	
7164.00	71.370	149.750	6615.84	76.46	604.23	1982.99	1690613.95	14351023.86	39°31'9.1014"N	80°49'19.2122"W	2073.00	73.054	10.91	10.17	4.23	
7211.00	73.560	150.670	6630.00	120.49	565.33	2005.25	1690636.21	14350984.99	39°31'8.7166"N	80°49'18.9291"W	2083.42	74.255	5.02	4.66	1.96	
7262.00†	76.587	151.381	6643.13	169.03	522.23	2029.12	1690660.07	14350941.90	39°31'8.2901"N	80°49'18.6257"W	2095.24	75.567	6.09	5.94	1.39	Marcellus POE: 7262' MD
7306.00	79.200	151.980	6652.36	211.48	484.36	2049.52	1690680.46	14350904.04	39°31'7.9154"N	80°49'18.3663"W	2105.98	76.703	6.09	5.94	1.36	
7401.00	85.970	151.570	6664.61	304.43	401.40	2094.05	1690724.97	14350821.12	39°31'7.0947"N	80°49'17.8001"W	2132.18	79.149	7.14	7.13	-0.43	
7496.00	89.570	151.180	6668.31	398.03	318.09	2139.52	1690770.43	14350737.84	39°31'6.2704"N	80°49'17.2220"W	2163.04	81.544	3.81	3.79	-0.41	
7591.00	89.720	154.790	6668.90	492.09	233.47	2182.66	1690813.55	14350653.26	39°31'5.4332"N	80°49'16.6737"W	2195.12	83.894	3.80	0.16	3.80	
7684.00	89.230	156.660	6669.75	584.70	148.70	2220.90	1690851.77	14350568.52	39°31'4.5947"N	80°49'16.1880"W	2225.87	86.169	2.08	-0.53	2.01	

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Page 5 of 12



REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Glamdring Unit 1H
Field	Tyler		API	47-095-02742-0000
Facility	Margery Pad		Wellbore	Glamdring Unit 1H AWB
Slot	Slot #11			

WELLPATH DATA (235 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
7779.00	89.480	160.080	6670.82	679.58	60.41	2255.91	1690886.77	14350480.27	39°31'3.7214"N	80°49'15.7435"W	2256.71	88.466	3.61	0.26	3.60	
7873.00	89.350	160.090	6671.78	773.57	-27.96	2287.92	1690918.77	14350391.93	39°31'2.8473"N	80°49'15.3372"W	2288.09	90.700	0.14	-0.14	0.01	
7968.00	89.450	158.900	6672.78	868.53	-116.94	2321.20	1690952.03	14350302.99	39°31'1.9673"N	80°49'14.9149"W	2324.14	92.884	1.26	0.11	-1.25	
8062.00	89.630	158.920	6673.53	962.47	-204.64	2355.02	1690985.84	14350215.32	39°31'1.0999"N	80°49'14.4855"W	2363.90	94.966	0.19	0.19	0.02	
8157.00	89.690	158.860	6674.09	1057.41	-293.26	2389.24	1691020.04	14350126.74	39°31'0.2233"N	80°49'14.0512"W	2407.17	96.998	0.09	0.08	-0.06	
8252.00	89.570	158.460	6674.71	1152.33	-381.75	2423.81	1691054.60	14350038.29	39°30'59.3481"N	80°49'13.6124"W	2453.68	98.950	0.44	-0.13	-0.42	
8346.00	89.720	158.980	6675.29	1246.26	-469.33	2457.92	1691088.70	14349950.73	39°30'58.4818"N	80°49'13.1793"W	2502.33	100.810	0.58	0.16	0.55	
8441.00	90.150	158.740	6675.40	1341.19	-567.94	2492.18	1691122.95	14349862.16	39°30'57.6054"N	80°49'12.7444"W	2553.87	102.619	0.52	0.45	-0.25	
8535.00	90.650	159.280	6674.74	1435.14	-645.70	2525.85	1691156.60	14349774.44	39°30'56.7373"N	80°49'12.3170"W	2607.08	104.340	0.78	0.53	0.57	
8630.00	89.410	159.830	6674.69	1530.11	-734.71	2559.04	1691189.77	14349685.46	39°30'55.8569"N	80°49'11.8959"W	2662.42	106.019	1.43	-1.31	0.58	
8725.00	89.170	162.120	6675.87	1625.09	-824.51	2590.00	1691220.72	14349595.70	39°30'54.9688"N	80°49'11.5031"W	2718.07	107.659	2.42	-0.25	2.41	
8820.00	89.910	161.200	6676.63	1720.08	-914.68	2619.89	1691250.60	14349505.56	39°30'54.0771"N	80°49'11.1240"W	2774.97	109.246	1.24	0.78	-0.97	
8914.00	88.800	161.910	6677.69	1814.07	-1003.84	2649.63	1691280.33	14349416.44	39°30'53.1952"N	80°49'10.7468"W	2833.41	110.750	1.40	-1.18	0.76	
9009.00	89.230	161.880	6679.32	1909.04	-1094.13	2679.15	1691309.84	14349326.19	39°30'52.3024"N	80°49'10.3725"W	2893.95	112.214	0.45	0.45	-0.03	
9104.00	89.690	160.870	6680.22	2004.03	-1184.15	2709.48	1691340.16	14349236.21	39°30'51.4121"N	80°49'9.9877"W	2956.94	113.607	1.17	0.48	-1.06	
9199.00	88.740	161.580	6681.52	2099.02	-1274.08	2740.06	1691370.72	14349146.31	39°30'50.5226"N	80°49'9.5999"W	3021.79	114.938	1.25	-1.00	0.75	
9294.00	89.010	161.950	6683.38	2193.99	-1364.29	2769.78	1691400.43	14349056.13	39°30'49.6304"N	80°49'9.2230"W	3087.55	116.223	0.48	0.28	0.39	
9388.00	89.170	161.650	6684.88	2287.97	-1453.58	2799.13	1691429.78	14348966.88	39°30'48.7474"N	80°49'8.8507"W	3154.05	117.443	0.36	0.17	-0.32	
9483.00	88.520	161.500	6686.79	2382.94	-1543.69	2829.15	1691459.78	14348876.81	39°30'47.8562"N	80°49'8.4700"W	3222.90	118.619	0.70	-0.68	-0.16	
9578.00	88.520	161.180	6689.25	2477.91	-1633.67	2859.54	1691490.16	14348786.87	39°30'46.9663"N	80°49'8.0846"W	3293.30	119.740	0.34	0.00	-0.34	
9672.00	89.480	161.870	6690.89	2571.89	-1722.81	2889.32	1691519.93	14348697.76	39°30'46.0847"N	80°49'7.7069"W	3363.96	120.806	1.26	1.02	0.73	
9766.00	89.320	160.860	6691.87	2665.88	-1811.87	2919.36	1691549.95	14348608.73	39°30'45.2039"N	80°49'7.3260"W	3435.92	121.825	1.09	-0.17	-1.07	
9861.00	90.280	161.710	6692.20	2760.88	-1901.85	2949.84	1691580.42	14348518.79	39°30'44.3140"N	80°49'6.9394"W	3509.78	122.811	1.35	1.01	0.89	
9956.00	89.750	160.950	6692.18	2855.87	-1991.85	2980.25	1691610.82	14348428.83	39°30'43.4239"N	80°49'6.5537"W	3584.60	123.757	0.98	-0.56	-0.80	
10050.00	90.060	162.380	6692.33	2949.86	-2081.07	3009.82	1691640.37	14348339.64	39°30'42.5415"N	80°49'6.1787"W	3659.22	124.661	1.56	0.33	1.52	
10145.00	89.600	160.110	6692.62	3044.85	-2171.02	3040.36	1691670.91	14348249.72	39°30'41.6519"N	80°49'5.7914"W	3735.92	125.529	2.44	-0.48	-2.39	
10239.00	90.340	160.990	6692.66	3138.85	-2259.66	3071.66	1691702.19	14348161.13	39°30'40.7753"N	80°49'5.3943"W	3813.28	126.340	1.22	0.79	0.94	
10334.00	89.690	161.620	6692.64	3233.85	-2349.64	3102.11	1691732.63	14348071.18	39°30'39.8853"N	80°49'5.0081"W	3891.52	127.142	0.95	-0.68	0.66	
10428.00	89.510	160.160	6693.30	3327.84	-2438.46	3132.88	1691763.39	14347982.40	39°30'39.0069"N	80°49'4.6178"W	3970.02	127.895	1.56	-0.19	-1.55	
10523.00	89.720	161.070	6693.93	3422.84	-2528.07	3164.41	1691794.91	14347892.82	39°30'38.1206"N	80°49'4.2178"W	4050.26	128.622	0.98	0.22	0.96	

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Page 6 of 12



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Field	Tyler	API	47-095-02742-0000
Facility	Margery Pad	Wellbore	Glamdring Unit 1H AWB
Slot	Slot #11		

WELLPATH DATA (235 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
10617.00	90.680	160.940	6693.61	3516.84	-2616.95	3195.01	1691825.49	14347803.98	39°30'37.2416"N	80°49'3.8298"W	4129.95	129.320	1.03	1.02	-0.14	
10712.00	90.180	161.130	6692.89	3611.83	-2706.79	3225.88	1691856.35	14347714.17	39°30'36.3530"N	80°49'3.4382"W	4211.06	130.000	0.56	-0.53	0.20	
10806.00	90.340	160.930	6692.47	3705.83	-2795.68	3256.44	1691886.90	14347625.31	39°30'35.4738"N	80°49'3.0506"W	4291.88	130.646	0.27	0.17	-0.21	
10901.00	89.780	159.880	6692.37	3800.83	-2885.18	3288.30	1691918.74	14347535.85	39°30'34.5887"N	80°49'2.6465"W	4374.60	131.264	1.25	-0.59	-1.11	
10995.00	89.970	161.000	6692.57	3894.82	-2973.75	3319.77	1691950.20	14347447.31	39°30'33.7127"N	80°49'2.2472"W	4456.91	131.853	1.21	0.20	1.19	
11090.00	89.690	160.220	6692.85	3989.82	-3063.36	3351.31	1691981.73	14347357.74	39°30'32.8264"N	80°49'1.8472"W	4540.42	132.430	0.87	-0.29	-0.82	
11185.00	90.000	160.910	6693.11	4084.81	-3152.95	3382.92	1692013.32	14347268.19	39°30'31.9403"N	80°49'1.4462"W	4624.41	132.985	0.80	0.33	0.73	
11280.00	90.400	161.540	6692.78	4179.81	-3242.89	3413.49	1692043.89	14347178.28	39°30'31.0508"N	80°49'1.0584"W	4708.32	133.532	0.79	0.42	0.66	
11375.00	90.710	161.900	6691.86	4274.80	-3333.10	3443.29	1692073.67	14347088.12	39°30'30.1587"N	80°49'0.6806"W	4792.26	134.068	0.50	0.33	0.38	
11470.00	90.550	161.400	6690.82	4369.79	-3423.26	3473.19	1692103.57	14346997.99	39°30'29.2670"N	80°49'0.3014"W	4876.66	134.585	0.55	-0.17	-0.53	
11565.00	90.430	161.230	6690.00	4464.78	-3513.25	3503.63	1692133.99	14346908.03	39°30'28.3770"N	80°48'59.9155"W	4961.69	135.079	0.22	-0.13	-0.18	
11659.00	90.890	161.710	6688.92	4558.77	-3602.37	3533.50	1692163.85	14346818.95	39°30'27.4956"N	80°48'59.5367"W	5046.06	135.553	0.71	0.49	0.51	
11754.00	90.950	161.120	6687.39	4653.75	-3692.40	3563.77	1692194.11	14346728.95	39°30'26.6051"N	80°48'59.1528"W	5131.70	136.016	0.62	0.06	-0.62	
11848.00	90.400	161.080	6686.29	4747.75	-3781.33	3594.22	1692224.54	14346640.06	39°30'25.7256"N	80°48'58.7667"W	5216.98	136.453	0.59	-0.59	-0.04	
11942.00	90.370	161.010	6685.66	4841.74	-3870.23	3624.75	1692255.06	14346551.20	39°30'24.8464"N	80°48'58.3795"W	5302.59	136.876	0.08	-0.03	-0.07	
12036.00	90.180	161.130	6685.20	4935.74	-3959.14	3655.25	1692285.55	14346462.32	39°30'23.9670"N	80°48'57.9927"W	5388.47	137.286	0.24	-0.20	0.13	
12131.00	90.980	161.590	6684.24	5030.73	-4049.16	3685.61	1692315.90	14346372.34	39°30'23.0767"N	80°48'57.6077"W	5475.34	137.691	0.97	0.84	0.48	
12225.00	90.370	160.840	6683.14	5124.73	-4138.14	3715.87	1692346.15	14346283.39	39°30'22.1967"N	80°48'57.2239"W	5561.65	138.078	1.03	-0.65	-0.80	
12319.00	90.830	161.780	6682.15	5218.72	-4227.18	3745.99	1692376.26	14346194.39	39°30'21.3161"N	80°48'56.8420"W	5648.14	138.454	1.11	0.49	1.00	
12414.00	90.740	161.990	6680.85	5313.69	-4317.46	3775.53	1692405.78	14346104.14	39°30'20.4232"N	80°48'56.4675"W	5735.42	138.831	0.24	-0.09	0.22	
12508.00	90.580	162.450	6679.77	5407.67	-4406.96	3804.23	1692434.47	14346014.68	39°30'19.5380"N	80°48'56.1037"W	5821.81	139.198	0.52	-0.17	0.49	
12603.00	90.980	162.130	6678.47	5502.63	-4497.45	3833.13	1692463.36	14345924.22	39°30'18.6431"N	80°48'55.7374"W	5909.31	139.559	0.54	0.42	-0.34	
12697.00	91.020	161.530	6676.83	5596.60	-4586.75	3862.44	1692492.65	14345834.96	39°30'17.7599"N	80°48'55.3658"W	5996.39	139.900	0.64	0.04	-0.64	
12792.00	90.620	161.290	6675.47	5691.59	-4676.79	3892.72	1692522.92	14345744.96	39°30'16.8695"N	80°48'54.9818"W	6084.87	140.228	0.49	-0.42	-0.25	
12886.00	90.490	159.750	6674.56	5785.58	-4765.40	3924.06	1692554.26	14345656.38	39°30'15.9931"N	80°48'54.5843"W	6173.11	140.530	1.64	-0.14	-1.64	
12981.00	90.800	160.920	6673.49	5880.57	-4854.85	3956.03	1692586.21	14345566.97	39°30'15.1083"N	80°48'54.1788"W	6262.57	140.825	1.27	0.33	1.23	
13075.00	90.920	161.510	6672.08	5974.56	-4943.83	3986.30	1692616.46	14345478.02	39°30'14.2283"N	80°48'53.7950"W	6350.75	141.120	0.64	0.13	0.63	
13169.00	91.020	162.290	6670.49	6068.53	-5033.17	4015.50	1692645.65	14345388.72	39°30'13.3447"N	80°48'53.4249"W	6438.71	141.417	0.84	0.11	0.83	
13264.00	90.830	161.370	6668.96	6163.50	-5123.42	4045.12	1692675.26	14345298.51	39°30'12.4522"N	80°48'53.0493"W	6527.82	141.708	0.99	-0.20	-0.97	
13358.00	90.950	161.500	6667.50	6257.49	-5212.52	4075.04	1692705.17	14345209.45	39°30'11.5710"N	80°48'52.6699"W	6616.36	141.982	0.19	0.13	0.14	

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Actual Wellpath Report

Glamdring Unit 1H AWP Proj: 21249'
Page 7 of 12



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Glamdring Unit 1H
Field	Tyler	API	47-095-02742-0000
Facility	Margery Pad	Wellbore	Glamdring Unit 1H AWB
Slot	Slot #11		

WELLPATH DATA (235 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
13453.00	90.280	161.380	6666.48	6352.48	-5302.57	4105.28	1692735.40	14345119.43	39°30'10.6803"N	80°48'52.2866"W	6706.01	142.253	0.72	-0.71	-0.13	
13547.00	90.490	161.490	6665.85	6446.47	-5391.68	4135.20	1692765.31	14345030.36	39°30'9.7991"N	80°48'51.9071"W	6794.86	142.513	0.25	0.22	0.12	
13642.00	90.550	161.420	6664.98	6541.46	-5481.74	4165.42	1692795.51	14344940.33	39°30'8.9083"N	80°48'51.5241"W	6884.78	142.770	0.10	0.06	-0.07	
13736.00	90.400	161.510	6664.20	6635.46	-5570.86	4195.30	1692825.38	14344851.24	39°30'8.0269"N	80°48'51.1452"W	6973.88	143.017	0.19	-0.16	0.10	
13831.00	90.400	161.690	6663.54	6730.45	-5661.00	4225.28	1692855.36	14344761.14	39°30'7.1354"N	80°48'50.7651"W	7063.99	143.263	0.19	0.00	0.19	
13925.00	90.340	161.700	6662.93	6824.44	-5750.24	4254.80	1692884.87	14344671.93	39°30'6.2528"N	80°48'50.3908"W	7153.23	143.501	0.06	-0.06	0.01	
14019.00	90.400	161.430	6662.33	6918.43	-5839.42	4284.53	1692914.58	14344582.79	39°30'5.3708"N	80°48'50.0139"W	7242.65	143.732	0.29	0.06	-0.29	
14114.00	90.340	161.650	6661.71	7013.42	-5929.53	4314.61	1692944.65	14344492.72	39°30'4.4796"N	80°48'49.6326"W	7333.15	143.959	0.24	-0.06	0.23	
14209.00	90.400	161.560	6661.10	7108.42	-6019.67	4344.59	1692974.61	14344402.61	39°30'3.5881"N	80°48'49.2525"W	7423.74	144.181	0.11	0.06	-0.09	
14303.00	90.550	160.290	6660.32	7202.41	-6108.50	4375.31	1693005.32	14344313.81	39°30'2.7095"N	80°48'48.8630"W	7513.80	144.387	1.36	0.16	-1.35	
14397.00	90.430	160.610	6659.52	7296.40	-6197.08	4406.76	1693036.76	14344225.27	39°30'1.8334"N	80°48'48.4641"W	7604.17	144.583	0.36	-0.13	0.34	
14492.00	90.310	160.600	6658.90	7391.40	-6286.69	4438.31	1693068.29	14344135.70	39°30'0.9472"N	80°48'48.0640"W	7695.52	144.778	0.13	-0.13	-0.01	
14586.00	90.120	160.300	6658.55	7485.40	-6375.27	4469.76	1693099.74	14344047.16	39°30'0.0710"N	80°48'47.6651"W	7786.07	144.965	0.38	-0.20	-0.32	
14681.00	90.220	160.910	6658.27	7580.39	-6464.88	4501.31	1693131.27	14343957.58	39°29'59.1848"N	80°48'47.2650"W	7877.59	145.152	0.65	0.11	0.64	
14776.00	89.780	160.000	6658.27	7675.39	-6554.40	4533.09	1693163.04	14343868.10	39°29'58.2993"N	80°48'46.8620"W	7969.26	145.332	1.06	-0.46	-0.96	
14870.00	90.180	160.170	6658.30	7769.38	-6642.78	4565.11	1693195.05	14343779.75	39°29'57.4252"N	80°48'46.4559"W	8060.20	145.502	0.46	0.43	0.18	
14964.00	89.940	160.460	6658.20	7863.37	-6731.29	4596.77	1693226.70	14343691.28	39°29'56.5498"N	80°48'46.0543"W	8151.11	145.671	0.40	-0.26	0.31	
15059.00	90.280	160.790	6658.02	7958.37	-6820.91	4628.29	1693258.20	14343601.70	39°29'55.6634"N	80°48'45.6546"W	8242.93	145.841	0.50	0.36	0.35	
15153.00	90.220	160.710	6657.61	8052.37	-6909.65	4659.28	1693289.18	14343512.99	39°29'54.7857"N	80°48'45.2617"W	8333.80	146.008	0.11	-0.06	-0.09	
15248.00	89.850	160.510	6657.55	8147.37	-6999.26	4690.82	1693320.71	14343423.41	39°29'53.8994"N	80°48'44.8617"W	8425.76	146.170	0.44	-0.39	-0.21	
15342.00	90.030	160.440	6657.65	8241.36	-7087.86	4722.24	1693352.11	14343334.85	39°29'53.0231"N	80°48'44.4633"W	8516.88	146.327	0.21	0.19	-0.07	
15437.00	90.150	160.830	6657.50	8336.36	-7177.48	4753.74	1693383.60	14343245.27	39°29'52.1367"N	80°48'44.0638"W	8608.96	146.483	0.43	0.13	0.41	
15531.00	90.310	160.590	6657.12	8430.36	-7266.20	4784.79	1693414.64	14343156.58	39°29'51.2592"N	80°48'43.6701"W	8700.11	146.635	0.31	0.17	-0.26	
15626.00	90.180	160.150	6656.72	8525.35	-7355.68	4816.70	1693446.54	14343067.14	39°29'50.3742"N	80°48'43.2654"W	8792.42	146.782	0.48	-0.14	-0.46	
15720.00	90.520	160.130	6656.14	8619.34	-7444.09	4848.64	1693478.46	14342978.76	39°29'49.4998"N	80°48'42.8604"W	8883.90	146.922	0.36	0.36	-0.02	
15815.00	89.970	160.360	6655.74	8714.34	-7533.50	4880.75	1693510.56	14342889.39	39°29'48.6154"N	80°48'42.4532"W	8976.37	147.062	0.63	-0.58	0.24	
15910.00	90.180	161.430	6655.61	8809.33	-7623.26	4911.84	1693541.64	14342799.66	39°29'47.7276"N	80°48'42.0589"W	9068.64	147.205	1.15	0.22	1.13	
16004.00	90.060	160.410	6655.42	8903.33	-7712.10	4942.57	1693572.35	14342710.86	39°29'46.8490"N	80°48'41.6693"W	9159.99	147.345	1.09	-0.13	-1.09	
16099.00	89.780	160.350	6655.55	8998.33	-7801.58	4974.47	1693604.24	14342621.41	39°29'45.9639"N	80°48'41.2648"W	9252.57	147.477	0.30	-0.29	-0.06	
16193.00	90.060	160.540	6655.68	9092.32	-7890.16	5005.93	1693635.69	14342532.87	39°29'45.0878"N	80°48'40.8659"W	9344.19	147.607	0.36	0.30	0.20	

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Actual Wellpath Report

Glamdring Unit 1H AWP Proj: 21249'
Page 8 of 12



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Glamdring Unit 1H
Field	Tyler	API	47-095-02742-0000
Facility	Margery Pad	Wellbore	Glamdring Unit 1H AWB
Slot	Slot #11		

WELLPATH DATA (235 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
16288.00	90.150	160.570	6655.51	9187.32	-7979.74	5037.55	1693667.30	14342443.33	39°29'44.2018"N	80°48'40.4648"W	9436.80	147.736	0.10	0.09	0.03	
16382.00	90.180	160.390	6655.24	9281.32	-8068.34	5068.96	1693698.70	14342354.77	39°29'43.3255"N	80°48'40.0666"W	9528.51	147.861	0.19	0.03	-0.19	
16477.00	90.250	160.470	6654.88	9376.31	-8157.85	5100.78	1693730.51	14342265.29	39°29'42.4402"N	80°48'39.6630"W	9621.25	147.984	0.11	0.07	0.08	
16572.00	90.150	160.710	6654.55	9471.31	-8247.45	5132.35	1693762.06	14342175.73	39°29'41.5540"N	80°48'39.2627"W	9713.98	148.106	0.27	-0.11	0.25	
16666.00	90.150	160.570	6654.30	9565.31	-8336.13	5163.51	1693793.21	14342087.08	39°29'40.6769"N	80°48'38.8676"W	9805.76	148.225	0.15	0.00	-0.15	
16761.00	90.180	160.690	6654.03	9660.31	-8425.75	5195.02	1693824.71	14341997.49	39°29'39.7904"N	80°48'38.4681"W	9898.57	148.343	0.13	0.03	0.13	
16855.00	89.970	160.500	6653.90	9754.31	-8514.41	5226.25	1693855.93	14341908.87	39°29'38.9135"N	80°48'38.0721"W	9990.44	148.458	0.30	-0.22	-0.20	
16950.00	90.150	160.580	6653.81	9849.30	-8603.99	5257.90	1693887.56	14341819.33	39°29'38.0276"N	80°48'37.6708"W	10083.36	148.571	0.21	0.19	0.08	
17045.00	90.180	160.710	6653.53	9944.30	-8693.62	5289.39	1693919.04	14341729.73	39°29'37.1411"N	80°48'37.2716"W	10176.28	148.683	0.14	0.03	0.14	
17139.00	90.120	160.800	6653.29	10038.30	-8782.37	5320.37	1693950.01	14341641.02	39°29'36.2633"N	80°48'36.8788"W	10268.22	148.792	0.12	-0.06	0.10	
17234.00	89.970	160.340	6653.21	10133.30	-8871.95	5351.97	1693981.60	14341551.47	39°29'35.3772"N	80°48'36.4781"W	10361.23	148.900	0.51	-0.16	-0.48	
17329.00	89.910	160.380	6653.31	10228.29	-8961.43	5383.90	1694013.51	14341462.03	39°29'34.4923"N	80°48'36.0732"W	10454.36	149.003	0.08	-0.06	0.04	
17423.00	90.180	160.680	6653.24	10322.29	-9050.05	5415.23	1694044.83	14341373.44	39°29'33.6157"N	80°48'35.6760"W	10546.48	149.105	0.43	0.29	0.32	
17517.00	90.120	160.670	6652.99	10416.29	-9138.76	5446.34	1694075.93	14341284.77	39°29'32.7384"N	80°48'35.2816"W	10638.58	149.207	0.06	-0.06	-0.01	
17612.00	90.250	160.580	6652.68	10511.29	-9228.37	5477.86	1694107.43	14341195.19	39°29'31.8520"N	80°48'34.8820"W	10731.72	149.307	0.17	0.14	-0.09	
17706.00	90.180	160.560	6652.33	10605.29	-9317.02	5509.13	1694138.69	14341106.58	39°29'30.9752"N	80°48'34.4855"W	10823.93	149.404	0.08	-0.07	-0.02	
17800.00	90.250	160.580	6651.98	10699.28	-9405.67	5540.40	1694169.94	14341017.97	39°29'30.0984"N	80°48'34.0891"W	10916.16	149.500	0.08	0.07	0.02	
17894.00	90.150	160.730	6651.65	10793.28	-9494.36	5571.53	1694201.07	14340929.31	39°29'29.2212"N	80°48'33.6943"W	11008.40	149.594	0.19	-0.11	0.16	
17989.00	90.090	160.630	6651.45	10888.28	-9584.01	5602.96	1694232.49	14340839.70	39°29'28.3345"N	80°48'33.2958"W	11101.64	149.689	0.12	-0.06	-0.11	
18083.00	90.090	160.350	6651.30	10982.28	-9672.61	5634.36	1694263.87	14340751.13	39°29'27.4582"N	80°48'32.8978"W	11193.99	149.779	0.30	0.00	-0.30	
18178.00	89.780	160.430	6651.41	11077.27	-9762.10	5666.24	1694295.74	14340661.68	39°29'26.5730"N	80°48'32.4935"W	11287.38	149.868	0.34	-0.33	0.08	
18273.00	90.000	160.450	6651.59	11172.27	-9851.62	5698.05	1694327.53	14340572.20	39°29'25.6876"N	80°48'32.0903"W	11380.78	149.955	0.23	0.23	0.02	
18367.00	89.910	160.860	6651.67	11266.27	-9940.31	5729.18	1694358.66	14340483.54	39°29'24.8104"N	80°48'31.6955"W	11473.16	150.043	0.45	-0.10	0.44	
18461.00	89.820	160.750	6651.89	11360.27	-10029.09	5760.09	1694389.55	14340394.80	39°29'23.9324"N	80°48'31.3037"W	11565.52	150.130	0.15	-0.10	-0.12	
18556.00	89.880	160.610	6652.14	11455.26	-10118.73	5791.52	1694420.97	14340305.19	39°29'23.0457"N	80°48'30.9053"W	11658.92	150.215	0.16	0.06	-0.15	
18650.00	89.780	160.360	6652.42	11549.26	-10207.33	5822.92	1694452.36	14340216.62	39°29'22.1694"N	80°48'30.5072"W	11751.43	150.297	0.29	-0.11	-0.27	
18744.00	89.750	160.580	6652.80	11643.26	-10295.93	5854.34	1694483.77	14340128.07	39°29'21.2931"N	80°48'30.1088"W	11843.96	150.377	0.24	-0.03	0.23	
18839.00	89.750	160.390	6653.22	11738.25	-10385.47	5886.08	1694515.49	14340038.56	39°29'20.4075"N	80°48'29.7064"W	11937.50	150.457	0.20	0.00	-0.20	
18933.00	89.540	160.440	6653.80	11832.25	-10474.03	5917.59	1694546.99	14339950.04	39°29'19.5315"N	80°48'29.3069"W	12030.09	150.535	0.23	-0.22	0.05	
19027.00	89.940	160.800	6654.23	11926.24	-10562.70	5948.78	1694578.16	14339861.40	39°29'18.6545"N	80°48'28.9115"W	12122.65	150.612	0.57	0.43	0.38	

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Glamdring Unit 1H AWP Proj: 21249'
Page 9 of 12



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Field	Tyler	API	47-095-02742-0000
Facility	Margery Pad	Wellbore	Glamdring Unit 1H AWB
Slot	Slot #11		

WELLPATH DATA (235 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
19122.00	89.820	160.770	6654.42	12021.24	-10652.41	5980.05	1694609.42	14339771.73	39°29'17.7672"N	80°48'28.5152"W	12216.17	150.691	0.13	-0.13	-0.03	
19216.00	89.880	160.800	6654.67	12115.24	-10741.17	6010.98	1694640.34	14339683.00	39°29'16.8893"N	80°48'28.1230"W	12308.72	150.768	0.07	0.06	0.03	
19311.00	89.910	160.430	6654.85	12210.24	-10830.78	6042.51	1694671.86	14339593.42	39°29'16.0030"N	80°48'27.7233"W	12402.33	150.843	0.39	0.03	-0.39	
19405.00	89.720	160.510	6655.15	12304.24	-10919.38	6073.94	1694703.27	14339504.86	39°29'15.1267"N	80°48'27.3249"W	12495.02	150.915	0.22	-0.20	0.09	
19500.00	89.750	160.500	6655.59	12399.23	-11008.93	6105.64	1694734.96	14339415.35	39°29'14.2410"N	80°48'26.9230"W	12588.70	150.987	0.03	0.03	-0.01	
19595.00	89.720	160.370	6656.03	12494.23	-11098.44	6137.45	1694766.76	14339325.87	39°29'13.3556"N	80°48'26.5197"W	12682.42	151.057	0.14	-0.03	-0.14	
19690.00	89.750	160.480	6656.47	12589.22	-11187.95	6169.28	1694798.58	14339236.40	39°29'12.4703"N	80°48'26.1161"W	12776.16	151.127	0.12	0.03	0.12	
19784.00	89.510	160.470	6657.07	12683.22	-11276.54	6200.70	1694829.98	14339147.84	39°29'11.5940"N	80°48'25.7179"W	12868.92	151.195	0.26	-0.26	-0.01	
19879.00	89.820	160.640	6657.83	12778.22	-11366.12	6232.32	1694861.60	14339058.30	39°29'10.7080"N	80°48'25.3170"W	12962.66	151.263	0.37	0.33	0.18	
19974.00	89.910	161.780	6657.85	12873.21	-11456.06	6262.92	1694892.18	14338968.40	39°29'9.8185"N	80°48'24.9292"W	13056.24	151.335	1.20	0.09	1.20	
20068.00	89.570	161.560	6658.28	12967.20	-11545.29	6292.48	1694921.73	14338879.20	39°29'8.9360"N	80°48'24.5546"W	13148.73	151.408	0.43	-0.36	-0.23	
20163.00	89.750	161.560	6658.84	13062.20	-11635.41	6322.53	1694951.77	14338789.12	39°29'8.0447"N	80°48'24.1738"W	13242.25	151.481	0.19	0.19	0.00	
20258.00	89.820	161.640	6659.20	13157.19	-11725.55	6352.52	1694981.74	14338699.01	39°29'7.1531"N	80°48'23.7938"W	13335.78	151.553	0.11	0.07	0.08	
20352.00	89.750	161.640	6659.55	13251.18	-11814.77	6382.13	1695011.34	14338609.83	39°29'6.2707"N	80°48'23.4186"W	13428.34	151.623	0.07	-0.07	0.00	
20447.00	89.540	161.350	6660.14	13346.18	-11904.85	6412.28	1695041.48	14338519.78	39°29'5.3797"N	80°48'23.0365"W	13521.94	151.692	0.38	-0.22	-0.31	
20541.00	89.750	161.720	6660.72	13440.17	-11994.01	6442.05	1695071.24	14338430.66	39°29'4.4979"N	80°48'22.6593"W	13614.56	151.760	0.45	0.22	0.39	
20636.00	89.630	161.260	6661.24	13535.16	-12084.09	6472.21	1695101.39	14338340.61	39°29'3.6070"N	80°48'22.2771"W	13708.20	151.827	0.50	-0.13	-0.48	
20730.00	89.750	161.740	6661.75	13629.16	-12173.24	6502.04	1695131.20	14338251.51	39°29'2.7253"N	80°48'21.8992"W	13800.87	151.892	0.53	0.13	0.51	
20825.00	89.780	161.740	6662.14	13724.15	-12263.45	6531.80	1695160.95	14338161.33	39°29'1.8330"N	80°48'21.5220"W	13894.48	151.959	0.03	0.03	0.00	
20920.00	89.690	161.760	6662.58	13819.14	-12353.67	6561.55	1695190.69	14338071.14	39°29'0.9407"N	80°48'21.1451"W	13988.11	152.025	0.10	-0.09	0.02	
21015.00	89.780	161.560	6663.01	13914.13	-12443.84	6591.44	1695220.57	14337981.00	39°29'0.0489"N	80°48'20.7663"W	14081.78	152.090	0.23	0.09	-0.21	
21109.00	89.720	161.690	6663.42	14008.12	-12533.05	6621.08	1695250.19	14337891.83	39°28'59.1666"N	80°48'20.3908"W	14174.48	152.153	0.15	-0.06	0.14	
21204.00	89.750	161.840	6663.86	14103.11	-12623.28	6650.80	1695279.91	14337801.64	39°28'58.2742"N	80°48'20.0142"W	14268.16	152.217	0.16	0.03	0.16	
21224.00	89.750	161.840	6663.95	14123.11	-12642.28	6657.04	1695286.14	14337782.65	39°28'58.0862"N	80°48'19.9352"W	14287.88	152.230	0.00	0.00	0.00	
21249.00	89.750	161.840	6664.06	14148.10	-12666.04	6664.83	1695293.93	14337758.90	39°28'57.8513"N	80°48'19.8365"W	14312.53	152.247	0.00	0.00	0.00	Projected MD at TD: 21249'

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Actual Wellpath Report

Glamdring Unit 1H AWP Proj: 21249'

Page 10 of 12



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Glamdring Unit 1H
Field	Tyler	API	47-095-02742-0000
Facility	Margery Pad	Wellbore	Glamdring Unit 1H AWB
Slot	Slot #11		

HOLE & CASING SECTIONS - Ref Wellbore: Glamdring Unit 1H AWB Ref Wellpath: Glamdring Unit 1H AWP Proj: 21249'									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
20in Conductor	25.50	126.00	100.50	25.50	126.00	0.00	0.00	-0.08	0.42
17.5in Open Hole	126.00	409.00	283.00	126.00	409.00	-0.08	0.42	-0.67	1.01
13.375in Casing Surface	25.50	389.00	363.50	25.50	389.00	0.00	0.00	-0.66	1.03
12.25in Open Hole	409.00	2687.00	2278.00	409.00	2581.61	-0.67	1.01	333.11	509.91
9.625in Casing Intermediate	25.50	2669.00	2643.50	25.50	2564.68	0.00	0.00	329.18	505.25
8.75in Open Hole	2687.00	6130.00	3443.00	2581.61	5826.14	333.11	509.91	887.33	1511.03
8.5in Open Hole	6130.00	21249.00	15119.00	5826.14	6664.06	887.33	1511.03	-12666.04	6664.83
5.5in Casing Production	25.50	21229.00	21203.50	25.50	6663.97	0.00	0.00	-12647.03	6658.59

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Actual Wellpath Report

Glamdring Unit 1H AWP Proj: 21249'
Page 11 of 12



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Glamdring Unit 1H
Field	Tyler	API	47-095-02742-0000
Facility	Margery Pad	Wellbore	Glamdring Unit 1H AWB
Slot	Slot #11		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Glamdring Unit 1H POE Rev-2	6630.00	536.95	2015.69	1690646.65	14350956.62	39°31'8.4359"N	80°49'18.7966"W	point
Glamdring Unit 1H AZI Rev-2	6655.00	32.85	2268.20	1690899.05	14350452.72	39°31'3.4488"N	80°49'15.5874"W	point
Glamdring Unit 1H BHL Rev-2	6655.00	-12657.70	6653.62	1695282.72	14337767.23	39°28'57.9339"N	80°48'19.9793"W	point
Glamdring Unit 1H LP Rev-2	6655.00	375.15	2110.58	1690741.50	14350794.88	39°31'6.8348"N	80°49'17.5899"W	point
Glamdring Unit 1H 50' L/R Hard Line	7000.00	-6311.25	4460.50	1693090.48	14344111.15	39°30'0.7039"N	80°48'47.7815"W	rectangle
2D Rectangle 13429.4 x 100.								

WELLPATH COMPOSITION - Ref Wellbore: Glamdring Unit 1H AWB Ref Wellpath: Glamdring Unit 1H AWP Proj: 21249'						
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date	
25.50	382.00	Gyrodata 2015 - GC+WIR+DPIPE	01 Gyrodata MS Gyro <17-1/2"> (100'-382')	Glamdring Unit 1H AWB	27/Sep/2021	
382.00	2619.00	BH NaviTrak (2019) (Axial Corr+HRGM)	02 APS EM <12-1/4"> (382')(597'-2619')	Glamdring Unit 1H AWB	27/Sep/2021	
2619.00	6066.00	BH NaviTrak (2019) (Axial Corr+HRGM)	03 APS EM <8-3/4"> (2619')(2704'-6066')	Glamdring Unit 1H AWB	11/Oct/2021	
6066.00	21249.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	04 BH AT Curve <8-1/2"> (6066')(6105'-21224')	Glamdring Unit 1H AWB	11/Oct/2021	

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Actual Wellpath Report

Glamdring Unit 1H AWP Proj: 21249'

Page 12 of 12



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Glamdring Unit 1H
Field	Tyler	API	47-095-02742-0000
Facility	Margery Pad	Wellbore	Glamdring Unit 1H AWB
Slot	Slot #11		

COMMENTS

Wellpath general comments

API: 47-095-02742-0000
BH Job #: 111030760
Rig: H&P 317
Duration: 10/13/2021-10/17/2021
Gyrodata MS Gyro <17-1/2"> (100'-382')
APS EM <12-1/4"> (382')(597'-2619')
APS EM <8-3/4"> (2619')(2704'-6066')
BH AT Curve <8-1/2"> (6066')(6105'-21224')
Sycamore: 6704' MD
Middlesex: 6844' MD
Burkett: 7019' MD
Tully: 7075' MD
Marcellus POE: 7262' MD
Projected MD at TD: 21249'

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