

ANTERO RESOURCES CORPORATION

Location: Tyler County, WV Slot: Slot #04
 Field: Tyler Well: Lancaster Unit 1H
 Facility: Hogue Pad Wellbore: Lancaster Unit 1H PWB

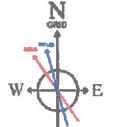
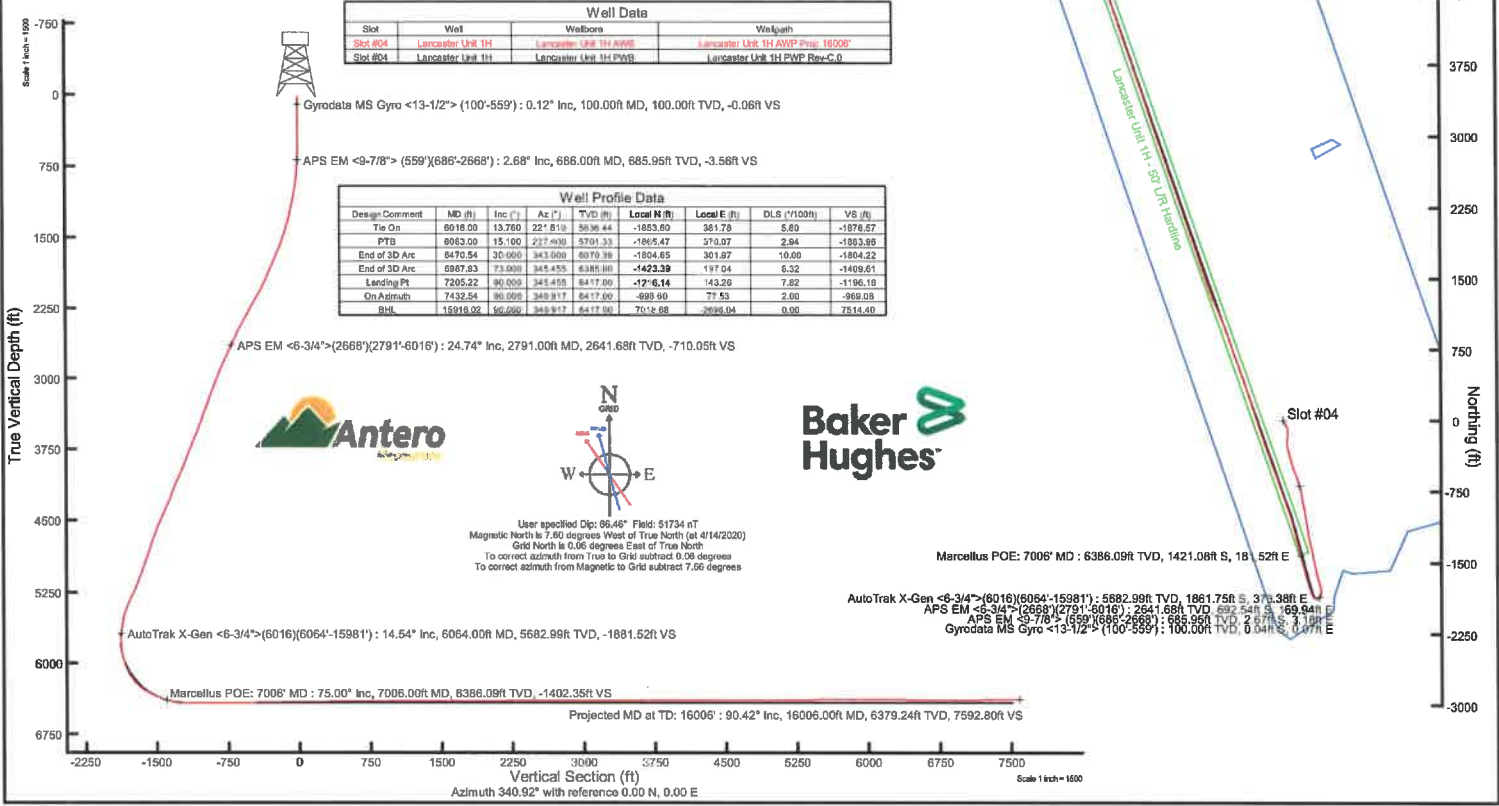
Plot reference subject to Lancaster Unit 1H PWB Rev-C-0	Grid System: NAD83 / UTM Zone 17 North, US feet
True vertical depths are referenced to MSP 317 (903)	North Reference = Grid north
Reference wellbore measured depths are referenced to MSP 317 (903)	Scale: True distance
MSP 317 (903) to Mean Sea Level: 1045 feet	Coordinates are in feet referenced to BNA
Mean Sea Level to Ground level (at Slot #04): -1014.0 ft	Depth units in feet
Other wellbore IDs are referenced to each well's default MD system	Created by desktop on 2/20/2020, Database tool, user: Laramie@BakerHughes.com

Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Hogue Pad	16091.60410	14333804.260	39°29'17.1060"N	80°53'53.6810"W	
Slot #04	33.82	30.78	16091.71181	14333837.063	39°29'17.5220"N 80°53'53.1680"W
MSP 317 (903) to Ground level (at Slot #04)	25.0ft				
Mean Sea Level to Ground level (at Slot #04)	-1014.0ft				
MSP 317 (903) to Mean Sea Level	1040ft				

API: 47-095-02674-0000
 BHI Job #: 110308557B
 Rig: H&P 317
 Duration: 03/03/2020-04/22/2020

Slot	Well	Wellbore	Wellpath
Slot #04	Lancaster Unit 1H	Lancaster Unit 1H AWP	Lancaster Unit 1H AWP Prop: 16006'
Slot #04	Lancaster Unit 1H	Lancaster Unit 1H PWB	Lancaster Unit 1H PWB Rev-C-0

Well Profile Data									
Design/Comment	MD (ft)	Inc. (")	Az. (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)	
True On	8016.00	13.700	22° 8' 18"	39.98 44	-1853.80	381.78	5.80	-1876.57	
PT3	8063.00	13.100	217° 40'	4701.53	-1865.47	370.07	2.94	-1863.89	
End of 3D Arc	8470.54	3D:000	343.000	6070.38	-1804.65	301.67	10.00	-1804.22	
End of 3D Arc	6987.83	73.000	345.455	6385.88	-1423.39	197.04	6.32	-1409.61	
Landing Pt	7205.22	90.000	345.455	6417.00	-12° 6.14	143.26	7.82	-1196.10	
On Assumed	7432.54	90.000	349.917	6417.00	-899.60	7° 53	2.00	-969.08	
BHL	15918.02	66.000	349.917	6417.00	701° 68	-2095.04	0.00	7514.40	



User specified Dip: 96.46° Field: 51734 nT
 Magnetic North is 7.80 degrees West of True North (at 4/14/2020)
 Grid North is 0.06 degrees East of True North
 To correct azimuth from True to Grid subtract 0.06 degrees
 To correct azimuth from Magnetic to Grid subtract 7.66 degrees

Marcellus POE: 7006' MD : 6386.09ft TVD, 1421.06ft S, 181.52ft E
 AutoTrak X-Gen <6-3/4">(6016)(6064-15981') : 5682.99ft TVD, 1861.75ft S, 316.39ft E
 APS EM <6-3/4">(2668)(2791-6016') : 2641.68ft TVD, 892.54ft S, 169.84ft E
 APS EM <6-3/4">(559)(686-2668') : 685.95ft TVD, 2.67ft S, 3.16ft E
 Gyrodatta MS Gyro <13-1/2"> (100-559) : 100.00ft TVD, 0.04ft S, 0.07ft E



Actual Wellpath Report
 Lancaster Unit 1H AWP Proj: 16006'
 Page 1 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Lancaster Unit 1H
Field	Tyler	API	47-095-02674-0000
Facility	Hogue Pad	Wellbore	Lancaster Unit 1H AWB
Slot	Slot #04		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Delaset
Scale	0.999601	Report Generated	4/24/2020 at 2:58:15 PM
Convergence at slot	0.06° 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	32.82	30.78	1669171.18	14333637.06	39°28'17.5220"N	80°53'53.1880"W
Facility Reference Pt			1669140.41	14333604.26	39°28'17.1980"N	80°53'53.5810"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	25.50ft
Horizontal Reference Pt	Slot	H&P 317 (RKB) to Mean Sea Level	1040.00ft
Vertical Reference Pt	H&P 317 (RKB)	H&P 317 (RKB) to Ground Level at Slot (Slot #04)	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	340.92°



Actual Wellpath Report

Lancaster Unit 1H AWP Proj: 16006'
Page 2 of 10



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Field	Tyler	API	47-095-02674-0000
Facility	Hogue Pad	Wellbore	Lancaster Unit 1H AWB
Slot	Slot #04		

WELLPATH DATA (193 stations) † = Interpolated, ‡ = extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
0.00	0.00	116.820	0.00	0.00	0.00	0.00	1669171.18	14333637.06	39°28'17.5220"N	80°53'53.1880"W	0.00	0.000	0.00	0.00	0.00	
25.50	0.00	116.820	25.50	0.00	0.00	0.00	1669171.18	14333637.06	39°28'17.5220"N	80°53'53.1880"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.12	116.820	100.00	-0.06	-0.04	0.07	1669171.25	14333637.03	39°28'17.5217"N	80°53'53.1871"W	0.08	116.820	0.16	0.16	0.00	Gyrodatta MS Gyro <13-1/2"> (100'-559')
125.00	0.07	40.15	125.00	-0.07	-0.04	0.10	1669171.28	14333637.03	39°28'17.5216"N	80°53'53.1867"W	0.11	108.965	0.50	-0.20	-306.68	
150.00	0.07	112.070	150.00	-0.07	-0.03	0.13	1669171.31	14333637.03	39°28'17.5217"N	80°53'53.1864"W	0.13	103.052	0.33	0.07	287.68	
175.00	0.08	61.180	175.00	-0.08	-0.03	0.15	1669171.34	14333637.04	39°28'17.5217"N	80°53'53.1860"W	0.16	99.706	0.26	0.04	-203.56	
200.00	0.07	91.980	200.00	-0.08	-0.02	0.19	1669171.37	14333637.04	39°28'17.5218"N	80°53'53.1856"W	0.19	95.759	0.16	-0.04	123.20	
225.00	0.10	107.860	225.00	-0.10	-0.03	0.22	1669171.40	14333637.04	39°28'17.5217"N	80°53'53.1852"W	0.22	96.670	0.15	0.12	63.52	
250.00	0.06	92.450	250.00	-0.12	-0.03	0.26	1669171.44	14333637.03	39°28'17.5217"N	80°53'53.1847"W	0.26	97.394	0.18	-0.16	-61.64	
275.00	0.13	76.160	275.00	-0.12	-0.03	0.30	1669171.48	14333637.04	39°28'17.5217"N	80°53'53.1842"W	0.30	95.206	0.30	0.28	-65.16	
300.00	0.09	82.220	300.00	-0.13	-0.02	0.34	1669171.52	14333637.05	39°28'17.5218"N	80°53'53.1836"W	0.34	92.934	0.17	-0.16	24.24	
325.00	0.09	129.460	325.00	-0.15	-0.03	0.38	1669171.56	14333637.04	39°28'17.5217"N	80°53'53.1832"W	0.38	94.146	0.29	0.00	188.96	
350.00	0.11	110.910	350.00	-0.18	-0.05	0.42	1669171.60	14333637.01	39°28'17.5215"N	80°53'53.1827"W	0.42	96.643	0.15	0.08	-74.20	
375.00	0.10	121.960	375.00	-0.21	-0.07	0.46	1669171.64	14333636.99	39°28'17.5213"N	80°53'53.1822"W	0.46	98.532	0.09	-0.04	44.20	
400.00	0.11	99.540	400.00	-0.24	-0.08	0.50	1669171.68	14333636.98	39°28'17.5212"N	80°53'53.1816"W	0.51	99.561	0.17	0.04	-89.68	
425.00	0.08	153.070	425.00	-0.27	-0.10	0.53	1669171.71	14333636.96	39°28'17.5210"N	80°53'53.1812"W	0.54	101.045	0.36	-0.12	214.12	
450.00	0.14	111.030	450.00	-0.31	-0.13	0.57	1669171.75	14333636.93	39°28'17.5207"N	80°53'53.1808"W	0.58	102.920	0.39	0.24	-168.16	
475.00	0.22	119.630	475.00	-0.36	-0.16	0.64	1669171.82	14333636.90	39°28'17.5204"N	80°53'53.1799"W	0.66	104.495	0.34	0.32	34.40	
500.10	0.22	108.330	500.10	-0.43	-0.20	0.73	1669171.91	14333636.86	39°28'17.5200"N	80°53'53.1788"W	0.75	105.697	0.17	0.00	-45.02	
525.00	0.24	126.840	525.00	-0.50	-0.25	0.81	1669171.99	14333636.81	39°28'17.5195"N	80°53'53.1778"W	0.85	107.119	0.31	0.08	74.74	
550.00	0.26	110.100	550.00	-0.58	-0.30	0.91	1669172.09	14333636.76	39°28'17.5190"N	80°53'53.1764"W	0.96	108.359	0.30	0.08	-67.36	
559.00	0.28	109.750	559.00	-0.61	-0.32	0.95	1669172.13	14333636.75	39°28'17.5189"N	80°53'53.1759"W	1.00	108.426	0.22	0.22	-3.88	
686.00	2.68	139.220	686.95	-3.56	-2.67	3.18	1669174.36	14333634.39	39°28'17.4956"N	80°53'53.1475"W	4.15	130.016	1.92	1.89	23.20	APS EM <9-7/8"> (559')(686'-2668')
774.00	5.39	141.800	773.72	-9.36	-7.48	7.07	1669178.25	14333629.59	39°28'17.4480"N	80°53'53.0979"W	10.30	136.600	3.09	3.08	3.05	
867.00	6.67	141.920	866.21	-18.57	-15.13	13.07	1669184.25	14333621.94	39°28'17.3723"N	80°53'53.0215"W	20.00	139.179	1.31	1.31	0.00	
963.00	9.01	148.590	961.31	-31.14	-25.90	20.40	1669191.57	14333611.18	39°28'17.2658"N	80°53'52.9283"W	32.97	141.776	2.67	2.50	6.95	
1056.00	10.59	160.340	1052.96	-46.80	-40.16	27.07	1669198.24	14333596.92	39°28'17.1248"N	80°53'52.8434"W	48.43	146.021	2.73	1.70	12.63	
1151.00	12.33	159.490	1146.07	-65.68	-57.89	33.56	1669204.73	14333579.20	39°28'16.9465"N	80°53'52.7609"W	66.91	149.896	1.84	1.83	-0.89	
1246.00	12.77	158.480	1238.80	-86.31	-77.15	40.97	1669212.13	14333559.94	39°28'16.7590"N	80°53'52.6667"W	87.35	152.033	0.52	0.48	-1.06	
1340.00	15.32	168.710	1329.99	-109.00	-99.00	47.21	1669218.37	14333538.10	39°28'16.5430"N	80°53'52.5874"W	109.68	154.506	3.78	2.71	10.88	



Actual Wellpath Report
Lancaster Unit 1H AWP Proj: 16006'
Page 3 of 10



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Operator	ANTERO RESOURCES CORPORATION		Well	Lancaster Unit 1H
Field	Tyler		API	47-095-02674-0000
Facility	Hogue Pad		Wellbore	Lancaster Unit 1H AWB
Slot	Slot #04			

WELLPATH DATA (193 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
1435.00	17.990	181.130	1421.03	-135.21	-125.99	49.38	1669220.54	14333511.12	39°28'16.2762"N	80°53'52.5602"W	135.32	158.599	4.67	2.81	13.07	
1530.00	21.070	187.870	1510.56	-164.21	-157.59	46.75	1669217.91	14333479.54	39°28'15.9640"N	80°53'52.6941"W	164.37	163.476	4.01	3.24	7.09	
1624.00	23.820	188.910	1597.43	-196.34	-193.17	42.15	1669213.32	14333443.97	39°28'15.6123"N	80°53'52.6533"W	197.72	167.691	2.95	2.93	-1.02	
1719.00	25.320	179.960	1683.85	-232.80	-232.54	39.86	1669211.02	14333404.61	39°28'15.2232"N	80°53'52.6831"W	235.93	170.274	3.42	1.58	-7.32	
1814.00	24.210	173.050	1770.13	-271.05	-272.20	42.23	1669213.39	14333364.97	39°28'14.8312"N	80°53'52.6534"W	275.46	171.182	3.26	-1.17	-7.27	
1909.00	22.310	165.920	1857.42	-308.07	-309.04	48.97	1669220.14	14333328.15	39°28'14.4671"N	80°53'52.5680"W	312.90	170.995	3.57	-2.00	-7.51	
2004.00	24.370	163.990	1944.64	-345.61	-345.37	58.77	1669229.93	14333291.83	39°28'14.1079"N	80°53'52.4436"W	350.34	170.343	2.31	2.17	-2.03	
2099.00	27.450	165.570	2030.08	-387.02	-385.43	69.63	1669240.79	14333251.79	39°28'13.7119"N	80°53'52.3056"W	391.67	169.759	3.32	3.24	1.66	
2193.00	29.200	164.490	2112.83	-431.50	-428.51	81.16	1669252.31	14333208.73	39°28'13.2860"N	80°53'52.1592"W	436.13	169.275	1.94	1.86	-1.15	
2288.00	29.300	162.270	2195.72	-477.87	-472.98	94.44	1669265.58	14333164.27	39°28'12.8463"N	80°53'51.9906"W	482.32	168.708	1.15	0.11	-2.34	
2383.00	29.000	158.670	2278.69	-524.12	-516.58	109.90	1669281.03	14333120.69	39°28'12.4152"N	80°53'51.7941"W	528.14	167.990	1.87	-0.32	-3.79	
2478.00	28.350	159.210	2362.04	-569.68	-559.12	126.28	1669297.41	14333078.17	39°28'11.9946"N	80°53'51.5858"W	573.20	167.273	0.74	-0.68	0.57	
2573.00	28.110	161.550	2445.74	-614.61	-601.43	141.37	1669312.49	14333035.87	39°28'11.5762"N	80°53'51.3940"W	617.83	166.773	1.19	-0.25	2.46	
2668.00	25.770	164.150	2530.43	-657.61	-642.54	154.09	1669325.21	14332994.78	39°28'11.1698"N	80°53'51.2324"W	660.76	166.514	2.76	-2.46	2.74	
2791.00	24.740	160.610	2641.68	-710.05	-692.54	169.94	1669341.06	14332944.80	39°28'10.6754"N	80°53'51.0310"W	713.09	166.213	1.49	-0.84	-2.88	APS EM <6.3/4">(2668)(2791-6016)
2885.00	25.450	166.000	2726.82	-749.84	-730.70	181.36	1669352.47	14332906.66	39°28'10.2982"N	80°53'50.8860"W	752.87	166.061	2.55	0.76	5.73	
2980.00	24.150	171.080	2813.06	-789.31	-769.71	189.31	1669360.42	14332867.66	39°28'9.9125"N	80°53'50.7851"W	792.65	166.182	2.63	-1.37	5.35	
3075.00	22.540	170.060	2900.28	-826.42	-806.84	195.47	1669366.57	14332830.54	39°28'9.5454"N	80°53'50.7072"W	830.18	166.382	1.75	-1.69	-1.07	
3170.00	22.990	172.130	2987.88	-862.59	-843.16	201.15	1669372.25	14332794.24	39°28'8.1865"N	80°53'50.6352"W	866.82	166.582	0.97	0.47	2.18	
3264.00	21.110	169.350	3075.01	-897.35	-877.98	206.80	1669377.89	14332759.43	39°28'8.8422"N	80°53'50.5639"W	902.01	166.746	2.29	-2.00	-2.96	
3359.00	19.260	165.750	3164.17	-929.89	-909.96	213.82	1669384.91	14332727.44	39°28'8.5259"N	80°53'50.4747"W	934.77	166.777	2.34	-1.95	-3.79	
3454.00	20.650	173.110	3253.48	-961.88	-941.81	219.68	1669390.78	14332695.63	39°28'8.2113"N	80°53'50.4004"W	967.09	166.870	3.02	1.46	7.75	
3548.00	21.360	170.420	3341.24	-994.96	-975.14	224.52	1669395.61	14332662.31	39°28'7.8817"N	80°53'50.3392"W	1000.66	167.034	1.27	0.76	-2.86	
3643.00	20.890	170.740	3429.85	-1028.72	-1008.92	230.13	1669401.21	14332628.55	39°28'7.5479"N	80°53'50.2682"W	1034.83	167.151	0.51	-0.49	0.34	
3742.00	21.060	171.690	3522.29	-1063.58	-1043.94	235.54	1669406.82	14332593.54	39°28'7.2017"N	80°53'50.1997"W	1070.18	167.286	0.38	0.17	0.96	
3837.00	22.280	169.280	3610.58	-1098.17	-1078.53	241.35	1669412.44	14332558.97	39°28'6.8598"N	80°53'50.1260"W	1105.20	167.386	1.59	1.28	-2.54	
3931.00	21.820	170.130	3697.70	-1133.05	-1113.25	247.66	1669418.74	14332524.26	39°28'6.5166"N	80°53'50.0461"W	1140.46	167.458	0.60	-0.49	0.90	
4026.00	20.870	171.370	3786.19	-1167.12	-1147.37	253.23	1669424.31	14332490.15	39°28'6.1792"N	80°53'49.9756"W	1174.98	167.554	1.11	-1.00	1.31	
4121.00	22.170	171.190	3874.56	-1201.40	-1181.82	258.51	1669429.59	14332455.72	39°28'5.8387"N	80°53'49.9087"W	1209.76	167.661	1.37	1.37	-0.19	
4215.00	23.640	170.900	3965.15	-1237.41	-1217.95	264.21	1669435.29	14332419.60	39°28'5.4815"N	80°53'49.8366"W	1246.28	167.760	1.57	1.56	-0.31	



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Page 4 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Lancaster Unit 1H
Field	Tyler	API	47-095-02674-0000
Facility	Hogue Pad	Wellbore	Lancaster Unit 1H AWB
Slot	Slot #04		

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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)	Built Rate (ft/100ft)	Turn Rate (°/100ft)	Comments
4310.00	25.080	169.200	4047.69	-1276.10	-1256.54	271.00	1669442.07	14332381.03	39°28'5.1000"N	80°53'49.7507"W	1285.43	167.830	1.69	1.53	-1.79	
4405.00	21.140	160.570	4135.07	-1313.18	-1292.50	280.47	1669451.54	14332345.08	39°28'4.7446"N	80°53'49.6303"W	1322.58	167.757	5.46	-4.15	-9.08	
4500.00	21.330	165.990	4223.63	-1347.52	-1325.42	290.36	1669461.42	14332312.17	39°28'4.4191"N	80°53'49.5048"W	1356.85	167.644	2.08	0.20	5.71	
4594.00	23.520	166.400	4310.52	-1383.22	-1360.24	298.91	1669469.97	14332277.37	39°28'4.0748"N	80°53'49.3963"W	1392.70	167.607	2.34	2.33	0.44	
4689.00	23.880	172.420	4397.52	-1420.94	-1397.73	305.90	1669476.96	14332239.89	39°28'3.7042"N	80°53'49.3076"W	1430.82	167.655	2.57	0.38	6.34	
4784.00	25.040	170.760	4483.99	-1459.60	-1436.64	311.67	1669482.72	14332201.00	39°28'3.3196"N	80°53'49.2347"W	1470.06	167.760	1.42	1.23	-1.75	
4879.00	22.370	164.760	4570.98	-1497.45	-1473.94	319.65	1669490.70	14332163.72	39°28'2.9509"N	80°53'49.1335"W	1508.20	167.764	3.78	-2.81	-6.32	
4974.00	21.790	168.510	4659.02	-1532.97	-1508.66	327.91	1669498.96	14332129.01	39°28'2.6076"N	80°53'49.0286"W	1543.89	167.737	1.60	-0.61	3.95	
5068.00	18.420	170.210	4747.28	-1564.93	-1540.40	333.92	1669504.96	14332097.28	39°28'2.2938"N	80°53'48.9525"W	1576.18	167.769	3.64	-3.59	1.81	
5163.00	18.420	168.280	4837.41	-1594.63	-1569.89	339.52	1669510.56	14332067.80	39°28'2.0023"N	80°53'48.8815"W	1606.18	167.797	0.64	0.00	-2.03	
5258.00	18.920	168.860	4927.41	-1624.77	-1599.70	345.54	1669516.58	14332038.01	39°28'1.7077"N	80°53'48.8051"W	1636.59	167.811	0.56	0.53	0.81	
5352.00	21.070	165.820	5015.74	-1656.70	-1631.04	352.63	1669523.67	14332006.68	39°28'1.3978"N	80°53'48.7153"W	1668.72	167.801	2.54	2.24	-3.23	
5447.00	21.200	163.520	5104.35	-1690.88	-1664.07	361.68	1669532.72	14331973.67	39°28'1.0713"N	80°53'48.6003"W	1702.92	167.738	0.88	0.14	-2.42	
5542.00	22.620	164.980	5192.49	-1726.26	-1698.18	371.29	1669542.32	14331939.56	39°28'0.7340"N	80°53'48.4783"W	1738.30	167.667	1.60	1.49	1.54	
5637.00	25.950	165.340	5279.07	-1765.22	-1735.95	381.29	1669552.32	14331901.81	39°28'0.3606"N	80°53'48.3513"W	1777.33	167.612	3.51	3.51	0.38	
5732.00	24.530	170.780	5365.01	-1805.38	-1775.53	389.71	1669560.74	14331862.24	39°27'59.9693"N	80°53'48.2445"W	1817.80	167.620	2.86	-1.49	5.73	
5826.00	17.420	171.690	5452.73	-1838.47	-1808.76	394.88	1669565.90	14331829.03	39°27'59.6409"N	80°53'48.1791"W	1851.36	167.685	7.57	-7.56	0.97	
5921.00	14.350	198.920	5544.21	-1861.75	-1834.00	393.11	1669564.14	14331803.79	39°27'59.3914"N	80°53'48.2020"W	1875.66	167.902	8.39	-3.23	28.66	
6016.00	13.760	221.610	5636.44	-1876.57	-1853.60	381.78	1669552.81	14331784.20	39°27'59.1978"N	80°53'48.3467"W	1892.51	168.362	5.80	-0.62	23.88	
6064.00	14.540	229.950	5682.99	-1881.52	-1861.75	373.38	1669544.41	14331776.06	39°27'59.4174"N	80°53'48.4540"W	1898.82	168.660	4.54	1.62	17.37	AutoTrak X-Gen <6-3/4">(6016)(8064-15981)
6159.00	11.480	280.570	5775.65	-1884.21	-1870.99	354.90	1669525.94	14331786.83	39°27'59.0263"N	80°53'48.6898"W	1904.35	169.259	7.82	-3.23	32.23	
6253.00	14.100	284.770	5867.37	-1876.26	-1869.60	334.58	1669505.63	14331768.21	39°27'59.0402"N	80°53'48.9488"W	1899.30	169.854	6.28	2.74	25.74	
6348.00	16.670	319.460	5959.15	-1857.09	-1856.26	314.49	1669485.55	14331781.54	39°27'59.1723"N	80°53'49.2048"W	1882.72	170.384	9.89	2.71	36.52	
6443.00	22.340	337.670	6048.74	-1826.33	-1829.16	298.75	1669469.81	14331608.64	39°27'59.4403"N	80°53'49.4051"W	1853.40	170.724	8.69	5.97	19.17	
6538.00	32.820	339.630	6132.83	-1782.44	-1788.21	282.88	1669453.95	14331849.57	39°27'59.8452"N	80°53'49.6066"W	1810.45	171.011	11.07	11.03	2.06	
6633.00	43.330	341.880	6207.52	-1723.95	-1732.94	263.73	1669434.80	14331904.82	39°28'0.3917"N	80°53'49.8503"W	1752.89	171.347	11.16	11.06	2.37	
6683.00	49.288	343.149	6242.04	-1687.82	-1698.47	252.89	1669423.97	14331939.28	39°28'0.7325"N	80°53'49.9880"W	1717.19	171.531	12.06	11.92	2.54	Middlesex: 8683' MD
6727.00	54.540	344.090	6289.17	-1653.24	-1665.25	243.14	1669414.22	14331972.48	39°28'1.0609"N	80°53'50.1118"W	1682.91	171.693	12.06	11.94	2.14	
6774.00	59.160	345.590	6294.87	-1614.00	-1627.28	232.86	1669403.95	14332010.44	39°28'1.4363"N	80°53'50.2423"W	1643.85	171.856	10.19	9.83	3.19	
6822.00	61.980	345.270	6318.45	-1572.33	-1586.82	222.35	1669393.44	14332050.88	39°28'1.8363"N	80°53'50.3758"W	1602.32	172.024	5.90	5.87	-0.67	



Antero Wellpath Report

Lancaster Unit 1H AWP Proj: 16006'
Page 5 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Lancaster Unit 1H
Field	Tyler	API	47-095-02674-0000
Facility	Hogue Pad	Wellbore	Lancaster Unit 1H AWB
Slot	Slot #04		

WELLPATH DATA (193 stations) † = Interpolated, ‡ = extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (°/100ft)	Comments
6849.00†	63.974	345.375	6330.72	-1548.35	-1563.55	216.25	1669387.35	14332074.14	39°28'2.0663"N	80°53'50.4532"W	1578.44	172.128	7.41	7.40	0.39	Burkett: 6849' MD
6869.00	65.461	345.450	6339.26	-1530.32	-1546.05	211.70	1669382.79	14332091.63	39°28'2.2394"N	80°53'50.5110"W	1560.48	172.203	7.41	7.40	0.38	
6904.00†	67.465	345.971	6353.23	-1498.34	-1514.96	203.78	1669374.88	14332122.71	39°28'2.5468"N	80°53'50.6115"W	1528.60	172.339	5.89	5.73	1.49	Tully: 6904' MD
6917.00	68.210	346.160	6358.14	-1486.35	-1503.27	200.88	1669371.98	14332134.39	39°28'2.6623"N	80°53'50.6483"W	1516.64	172.389	5.89	5.73	1.46	
6963.00	71.880	346.930	6373.83	-1443.33	-1461.23	190.82	1669361.93	14332176.42	39°28'3.0779"N	80°53'50.7759"W	1473.64	172.560	5.13	7.08	1.67	
7006.00†	74.995	346.974	6386.09	-1402.35	-1421.08	181.52	1669352.63	14332216.55	39°28'3.4748"N	80°53'50.8940"W	1432.63	172.721	7.25	7.24	0.10	Marcellus POE: 7006' MD
7012.00	75.430	346.980	6387.62	-1396.58	-1415.43	180.21	1669351.32	14332222.20	39°28'3.5307"N	80°53'50.9105"W	1426.86	172.744	7.25	7.24	0.10	
7107.00	82.770	346.140	6405.57	-1303.81	-1324.76	158.54	1669329.65	14332312.83	39°28'4.4271"N	80°53'51.1856"W	1334.22	173.176	7.77	7.73	-0.88	
7201.00	86.660	345.690	6414.23	-1210.58	-1233.99	135.76	1669306.89	14332403.56	39°28'5.3244"N	80°53'51.4747"W	1241.44	173.722	4.17	4.14	-0.48	
7296.00	90.511	343.970	6416.58	-1115.85	-1142.35	110.91	1669282.05	14332495.17	39°28'6.2304"N	80°53'51.7902"W	1147.73	174.454	4.44	4.05	-1.81	
7391.00	90.511	343.690	6415.73	-1020.98	-1051.12	84.46	1669255.60	14332586.37	39°28'7.1324"N	80°53'52.1262"W	1054.50	175.406	0.29	0.00	-0.29	
7486.00	90.420	340.740	6414.96	-926.02	-960.67	55.44	1669226.60	14332676.78	39°28'8.0267"N	80°53'52.4949"W	962.27	176.697	3.11	-0.09	-3.11	
7581.00	90.380	340.960	6414.30	-831.02	-870.93	24.28	1669195.45	14332766.48	39°28'8.9140"N	80°53'52.8909"W	871.27	178.403	0.24	-0.04	0.23	
7676.00	90.320	340.910	6413.72	-736.02	-781.14	-6.75	1669164.43	14332856.24	39°28'9.8017"N	80°53'53.2853"W	781.17	180.495	0.08	-0.06	-0.05	
7770.00	89.890	341.220	6413.54	-642.02	-692.23	-37.25	1669133.94	14332945.11	39°28'10.6808"N	80°53'53.6730"W	693.23	183.080	0.56	-0.46	0.33	
7865.00	90.690	339.500	6413.06	-547.03	-602.76	-69.18	1669102.03	14333034.54	39°28'11.5655"N	80°53'54.0788"W	606.72	186.547	2.00	0.84	-1.81	
7960.00	90.600	339.730	6411.99	-452.06	-513.72	-102.27	1669068.95	14333123.55	39°28'12.4459"N	80°53'54.4995"W	523.80	191.259	0.28	-0.09	0.24	
8055.00	91.460	341.950	6410.28	-357.09	-424.00	-133.44	1669037.79	14333213.23	39°28'13.3329"N	80°53'54.8957"W	444.50	197.470	2.51	0.91	2.34	
8160.00	91.030	340.420	6408.22	-262.11	-334.10	-164.07	1669007.17	14333303.10	39°28'14.2218"N	80°53'55.2850"W	372.21	206.155	1.67	-0.45	-1.61	
8245.00	91.000	341.720	6406.54	-187.13	-244.25	-184.89	1668976.37	14333392.91	39°28'15.1101"N	80°53'55.6766"W	312.47	218.586	1.37	-0.03	1.37	
8340.00	90.750	341.330	6405.09	-72.15	-154.16	-224.99	1668946.28	14333482.96	39°28'16.0009"N	80°53'56.0591"W	272.73	235.581	0.49	-0.26	-0.41	
8435.00	90.450	341.300	6404.09	22.85	-64.17	-255.42	1668915.86	14333572.92	39°28'16.8906"N	80°53'56.4459"W	263.36	255.897	0.32	-0.32	-0.03	
8529.00	90.480	342.250	6403.33	116.83	25.11	-284.82	1668886.48	14333662.16	39°28'17.7733"N	80°53'56.8195"W	285.92	275.038	1.01	0.03	1.01	
8624.00	90.350	342.140	6402.84	211.81	115.56	-313.88	1668857.44	14333752.57	39°28'18.6676"N	80°53'57.1886"W	334.46	290.212	0.18	-0.14	-0.12	
8719.00	90.480	342.100	6401.95	306.78	205.96	-343.03	1668828.29	14333842.95	39°28'19.5614"N	80°53'57.5592"W	400.12	300.982	0.14	0.14	-0.04	
8813.00	90.510	341.810	6401.14	400.76	295.34	-372.15	1668799.18	14333932.28	39°28'20.4451"N	80°53'57.9293"W	475.10	308.436	0.31	0.03	-0.31	
8908.00	90.380	342.200	6400.40	495.74	385.69	-401.50	1668769.85	14334022.60	39°28'21.3384"N	80°53'58.3022"W	556.74	313.850	0.43	-0.14	0.43	
9003.00	90.540	341.410	6399.64	590.73	475.93	-431.16	1668740.20	14334112.81	39°28'22.2306"N	80°53'58.6792"W	642.19	317.826	0.85	0.17	-0.83	
9098.00	90.420	340.270	6398.84	685.72	565.67	-462.34	1668709.03	14334202.50	39°28'23.1178"N	80°53'59.0755"W	730.57	320.740	1.21	-0.13	-1.20	
9192.00	90.510	340.640	6398.08	779.72	654.25	-493.78	1668677.80	14334291.05	39°28'23.9937"N	80°53'59.4752"W	819.67	322.957	0.41	0.10	0.39	



Actual Wellpath Report
Lancaster Unit 1H AWP Proj: 16006'
Page 6 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Lancaster Unit 1H
Field	Tyler	API	47-095-02674-0000
Facility	Hogue Pad	Wellbore	Lancaster Unit 1H AWB
Slot	Slot #04		

WELLPATH DATA (193 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
9287.00	90.320	340.740	6397.39	874.71	743.90	-525.20	1668646.19	14334380.67	39°28'24.8801"N	80°53'59.8745"W	910.62	324.778	0.23	-0.20	0.11	
9382.00	90.380	339.910	6398.81	969.71	833.35	-557.18	1668614.22	14334470.08	39°28'25.7645"N	80°54'0.2811"W	1002.46	326.233	0.88	0.06	-0.87	
9477.00	90.350	340.610	6396.21	1064.70	922.77	-589.27	1668582.15	14334559.46	39°28'26.6486"N	80°54'0.6880"W	1094.87	327.438	0.74	-0.03	0.74	
9571.00	90.140	339.320	6395.81	1158.68	1011.08	-621.47	1668549.96	14334647.73	39°28'27.5217"N	80°54'1.0984"W	1186.80	328.423	1.39	-0.22	-1.37	
9666.00	90.080	339.920	6395.62	1253.56	1100.13	-654.55	1668516.89	14334736.75	39°28'28.4022"N	80°54'1.5191"W	1280.13	329.248	0.63	-0.06	0.63	
9761.00	90.080	336.190	6395.49	1348.52	1188.23	-690.05	1668481.41	14334824.82	39°28'29.2734"N	80°54'1.9705"W	1374.07	329.855	3.93	0.00	-3.93	
9856.00	90.050	336.900	6395.38	1443.24	1275.38	-727.86	1668443.61	14334911.93	39°28'30.1351"N	80°54'2.4514"W	1468.46	330.287	0.75	-0.03	0.75	
9951.00	90.230	340.010	6395.15	1538.14	1363.73	-762.74	1668408.74	14335000.25	39°28'31.0087"N	80°54'2.8950"W	1562.54	330.781	3.28	0.19	3.27	
10045.00	90.260	341.120	6394.75	1632.14	1452.37	-794.02	1668377.48	14335088.85	39°28'31.8851"N	80°54'3.2926"W	1655.25	331.334	1.18	0.03	1.18	
10140.00	90.350	342.370	6394.24	1727.13	1542.59	-823.76	1668347.73	14335179.03	39°28'32.7771"N	80°54'3.6708"W	1748.77	331.897	1.32	0.09	1.32	
10235.00	90.110	341.330	6393.86	1822.11	1632.86	-853.37	1668316.15	14335269.27	39°28'33.6698"N	80°54'4.0469"W	1842.41	332.407	1.12	-0.25	-1.09	
10329.00	90.290	341.960	6393.53	1916.10	1722.08	-882.97	1668288.56	14335358.45	39°28'34.5517"N	80°54'4.4232"W	1935.25	332.854	0.70	0.19	0.67	
10424.00	90.510	342.200	6392.87	2011.08	1812.46	-912.20	1668259.35	14335448.80	39°28'35.4453"N	80°54'4.7947"W	2029.07	333.284	0.34	0.23	0.25	
10519.00	90.230	340.860	6392.26	2106.07	1902.57	-942.30	1668229.26	14335538.67	39°28'36.3362"N	80°54'5.1772"W	2123.13	333.652	1.44	-0.29	-1.41	
10614.00	90.200	341.420	6391.90	2201.07	1992.47	-973.01	1668198.57	14335628.73	39°28'37.2250"N	80°54'5.5670"W	2217.35	333.972	0.59	-0.03	0.59	
10709.00	90.170	340.660	6391.59	2296.07	2082.31	-1003.87	1668167.71	14335718.54	39°28'38.1133"N	80°54'5.9599"W	2311.66	334.262	0.80	-0.03	-0.80	
10804.00	90.140	341.090	6391.34	2391.07	2172.07	-1035.00	1668136.60	14335808.26	39°28'39.0008"N	80°54'6.3556"W	2406.05	334.522	0.45	-0.03	0.45	
10899.00	90.290	341.700	6390.98	2486.06	2262.10	-1065.30	1668106.30	14335898.26	39°28'39.8909"N	80°54'6.7409"W	2500.39	334.783	0.66	0.16	0.64	
10994.00	90.200	341.220	6390.57	2581.06	2352.17	-1095.51	1668076.11	14335988.29	39°28'40.7814"N	80°54'7.1248"W	2594.77	335.026	0.51	-0.09	-0.51	
11088.00	90.140	340.660	6390.30	2675.06	2441.02	-1126.21	1668045.43	14336077.10	39°28'41.6599"N	80°54'7.5151"W	2688.29	335.233	0.60	-0.06	-0.60	
11183.00	90.350	341.130	6389.89	2770.06	2530.78	-1157.30	1668014.34	14336166.83	39°28'42.5474"N	80°54'7.9103"W	2782.84	335.426	0.54	0.22	0.49	
11277.00	90.170	340.890	6389.46	2864.05	2619.66	-1187.89	1667983.77	14336255.68	39°28'43.4262"N	80°54'8.2992"W	2876.41	335.608	0.32	-0.19	-0.26	
11372.00	90.170	340.850	6389.18	2959.09	2709.42	-1219.02	1667952.65	14336345.39	39°28'44.3136"N	80°54'8.6950"W	2971.02	335.776	0.04	0.00	-0.04	
11467.00	90.140	341.220	6388.92	3054.05	2799.26	-1249.89	1667921.79	14336435.20	39°28'45.2019"N	80°54'9.0875"W	3065.63	335.939	0.39	-0.03	0.39	
11561.00	90.350	341.470	6388.50	3148.05	2888.32	-1279.96	1667891.73	14336524.23	39°28'46.0824"N	80°54'9.4697"W	3159.22	336.099	0.37	0.26	0.27	
11656.00	89.950	340.910	6388.22	3243.05	2978.25	-1310.59	1667861.11	14336614.11	39°28'46.9715"N	80°54'9.8591"W	3253.86	336.248	0.74	-0.45	-0.59	
11751.00	90.290	341.670	6388.02	3338.04	3068.23	-1341.07	1667830.65	14336704.06	39°28'47.8611"N	80°54'10.2465"W	3348.50	336.391	0.88	0.36	0.80	
11846.00	90.170	340.390	6387.64	3433.04	3158.06	-1371.95	1667799.78	14336793.86	39°28'48.7494"N	80°54'10.6391"W	3443.20	336.519	1.35	-0.13	-1.35	
11940.00	90.230	341.930	6387.32	3527.04	3247.02	-1402.30	1667769.44	14336882.76	39°28'49.6289"N	80°54'11.0250"W	3536.89	336.642	1.64	0.06	1.64	
12035.00	90.110	341.540	6387.03	3622.03	3337.24	-1432.07	1667739.66	14336972.96	39°28'50.5208"N	80°54'11.4034"W	3631.53	336.775	0.43	-0.13	-0.41	



Actual Wellpath Report
Lancaster Unit 1H AWP Proj: 16006'
Page 7 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Lancaster Unit 1H
Field	Tyler	API	47-095-02674-0000
Facility	Hogue Pad	Wellbore	Lancaster Unit 1H AWB
Slot	Slot #04		

WELLPATH DATA (193 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
12129.00	90.230	342.140	6386.75	3716.01	3426.55	-1461.37	1667710.40	14337062.24	39°28'51.4039"N	80°54'11.7758"W	3725.17	338.903	0.65	0.13	0.64	
12224.00	90.110	340.860	6386.47	3811.01	3516.64	-1491.51	1667690.26	14337152.29	39°28'52.2946"N	80°54'12.1590"W	3819.87	337.017	1.35	-0.13	-1.35	
12318.00	90.080	340.670	6386.32	3905.01	3605.39	-1522.48	1667649.31	14337241.01	39°28'53.1721"N	80°54'12.5528"W	3913.67	337.107	0.20	-0.03	-0.20	
12413.00	90.320	341.390	6385.98	4000.00	3695.23	-1553.36	1667618.44	14337330.81	39°28'54.0603"N	80°54'12.9454"W	4008.45	337.200	0.80	0.25	0.76	
12508.00	90.230	341.560	6385.53	4095.00	3785.31	-1583.55	1667588.27	14337420.85	39°28'54.9509"N	80°54'13.3291"W	4103.19	337.298	0.20	-0.09	0.18	
12603.00	90.350	340.760	6385.05	4190.00	3875.22	-1614.22	1667557.60	14337510.73	39°28'55.8398"N	80°54'13.7191"W	4197.98	337.386	0.65	0.13	-0.84	
12698.00	90.380	340.120	6384.44	4284.99	3964.73	-1646.03	1667525.61	14337600.21	39°28'56.7249"N	80°54'14.1235"W	4292.85	337.453	0.67	0.03	-0.67	
12792.00	89.980	341.400	6384.15	4378.99	4053.48	-1677.00	1667494.85	14337688.92	39°28'57.6023"N	80°54'14.5173"W	4386.69	337.524	1.43	-0.43	1.36	
12887.00	90.110	342.050	6384.07	4473.98	4143.69	-1706.79	1667465.07	14337779.09	39°28'58.4942"N	80°54'14.8960"W	4481.44	337.613	0.70	0.14	0.68	
12982.00	90.200	341.320	6383.82	4568.97	4233.88	-1736.65	1667435.23	14337869.24	39°28'59.3859"N	80°54'15.2755"W	4576.20	337.698	0.77	0.09	-0.77	
13076.00	90.140	341.400	6383.54	4662.97	4322.94	-1766.69	1667405.20	14337958.27	39°29'0.2665"N	80°54'15.6575"W	4670.02	337.771	0.11	-0.06	0.05	
13171.00	90.080	341.410	6383.35	4757.96	4412.99	-1796.98	1667374.92	14338048.26	39°29'1.1567"N	80°54'16.0426"W	4764.83	337.844	0.06	-0.06	0.01	
13266.00	89.980	341.190	6383.31	4852.96	4502.97	-1827.44	1667344.47	14338138.23	39°29'2.0464"N	80°54'16.4299"W	4859.66	337.911	0.25	-0.11	-0.23	
13361.00	90.170	341.410	6383.18	4947.96	4592.95	-1857.90	1667314.03	14338228.18	39°29'2.9361"N	80°54'16.8171"W	4954.50	337.976	0.31	0.20	0.23	
13455.00	89.950	341.200	6383.08	5041.95	4682.00	-1888.03	1667283.91	14338317.18	39°29'3.8164"N	80°54'17.2002"W	5048.34	338.038	0.32	-0.23	-0.23	
13550.00	90.200	341.480	6382.96	5136.95	4772.00	-1918.42	1667253.53	14338407.15	39°29'4.7063"N	80°54'17.5867"W	5143.18	338.099	0.40	0.26	0.29	
13645.00	90.200	341.820	6382.63	5231.94	4862.17	-1948.33	1667223.63	14338497.28	39°29'5.5978"N	80°54'17.9669"W	5238.00	338.163	0.36	0.00	0.36	
13739.00	90.230	341.080	6382.27	5325.94	4951.28	-1978.24	1667193.74	14338586.36	39°29'6.4788"N	80°54'18.3471"W	5331.85	338.221	0.79	0.03	-0.79	
13834.00	90.050	341.420	6382.04	5420.94	5041.24	-2008.77	1667163.21	14338676.28	39°29'7.3682"N	80°54'18.7353"W	5426.72	338.274	0.40	-0.19	0.36	
13929.00	90.200	341.550	6381.83	5515.93	5131.33	-2038.94	1667133.06	14338766.33	39°29'8.2589"N	80°54'19.1189"W	5521.57	338.330	0.21	0.16	0.14	
14023.00	90.080	341.060	6381.60	5609.93	5220.37	-2069.07	1667102.94	14338855.33	39°29'9.1392"N	80°54'19.5020"W	5615.45	338.379	0.54	-0.13	-0.52	
14118.00	90.350	341.480	6381.25	5704.93	5310.33	-2099.58	1667072.45	14338945.27	39°29'10.0287"N	80°54'19.8898"W	5710.33	338.427	0.53	0.28	0.44	
14213.00	90.230	341.490	6380.77	5799.92	5400.41	-2129.74	1667042.29	14339035.31	39°29'10.9193"N	80°54'20.2734"W	5805.19	338.477	0.13	-0.13	0.01	
14307.00	89.800	340.460	6380.74	5893.92	5489.28	-2160.38	1667011.66	14339124.14	39°29'11.7979"N	80°54'20.6630"W	5899.11	338.517	1.19	-0.46	-1.10	
14402.00	89.680	340.210	6381.17	5988.91	5578.74	-2192.35	1666979.71	14339213.56	39°29'12.6824"N	80°54'21.0596"W	5994.06	338.546	0.29	-0.13	-0.26	
14496.00	89.950	341.510	6381.48	6082.91	5667.54	-2223.17	1666948.90	14339302.33	39°29'13.5604"N	80°54'21.4615"W	6087.98	338.582	1.41	0.28	1.38	
14591.00	89.890	341.100	6381.61	6177.91	5757.53	-2253.62	1666918.46	14339392.28	39°29'14.4501"N	80°54'21.8486"W	6182.87	338.624	0.44	-0.06	-0.43	
14686.00	89.860	341.730	6381.82	6272.90	5847.57	-2283.90	1666888.20	14339482.29	39°29'15.3403"N	80°54'22.2336"W	6277.76	338.666	0.66	-0.03	0.66	
14780.00	89.950	341.170	6381.97	6366.90	5936.69	-2313.80	1666858.30	14339571.37	39°29'16.2214"N	80°54'22.6139"W	6371.65	338.707	0.60	0.10	-0.60	
14875.00	89.860	342.610	6382.13	6461.88	6026.98	-2343.33	1666828.79	14339661.82	39°29'17.1141"N	80°54'22.9893"W	6466.50	338.754	1.52	-0.08	1.52	



Actual Wellpath Report
Lancaster Unit 1H AWP Proj: 16006'
Page 8 of 10



REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Lancaster Unit 1H
Field	Tyler		API	47-095-02674-0000
Facility	Hogue Pad		Wellbore	Lancaster Unit 1H AWB
Slot	Slot #04			

WELLPATH DATA (193 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)	Buid Rate (°/100ft)	Turn Rate (°/100ft)	Comments
14970.00	89.890	341.500	6382.34	6556.86	6117.36	-2372.60	1666799.53	14339751.96	39°29'18.0076"N	80°54'23.3614"W	6561.35	338.801	1.17	0.03	-1.17	
15064.00	89.830	339.980	6382.57	6650.86	6206.09	-2403.61	1666768.54	14339840.67	39°29'18.8850"N	80°54'23.7557"W	6655.29	338.829	1.62	-0.06	-1.52	
15159.00	89.950	340.250	6382.75	6745.85	6295.43	-2435.92	1666736.24	14339929.96	39°29'19.7682"N	80°54'24.1667"W	6750.27	338.847	0.31	0.13	0.28	
15253.00	89.830	340.580	6382.93	6839.84	6383.99	-2467.43	1666704.74	14340018.49	39°29'20.6438"N	80°54'24.5674"W	6844.23	338.868	0.37	-0.13	0.35	
15348.00	89.830	340.300	6383.21	6934.84	6473.51	-2499.24	1666672.95	14340107.97	39°29'21.5289"N	80°54'24.9719"W	6939.20	338.890	0.29	0.00	-0.29	
15442.00	90.200	340.720	6383.19	7028.84	6562.12	-2530.60	1666641.60	14340196.55	39°29'22.4050"N	80°54'25.3707"W	7033.16	338.911	0.60	0.39	0.45	
15537.00	90.480	341.120	6382.62	7123.84	6651.90	-2561.65	1666610.56	14340286.29	39°29'23.2927"N	80°54'25.7656"W	7128.10	338.938	0.51	0.25	0.42	
15632.00	90.690	340.180	6381.65	7218.83	6741.53	-2593.13	1666579.09	14340375.88	39°29'24.1788"N	80°54'26.1659"W	7223.05	338.961	1.01	0.22	-0.99	
15726.00	90.350	340.410	6380.80	7312.82	6830.02	-2624.82	1666547.41	14340464.34	39°29'25.0537"N	80°54'26.5690"W	7317.02	338.978	0.44	-0.36	0.24	
15821.00	90.420	340.830	6380.16	7407.82	6919.63	-2656.34	1666515.90	14340553.92	39°29'25.9397"N	80°54'26.9699"W	7411.98	338.999	0.45	0.07	0.44	
15915.00	90.110	340.080	6379.73	7501.81	7008.21	-2687.79	1666484.47	14340642.47	39°29'26.8155"N	80°54'27.3698"W	7505.95	339.017	0.88	-0.33	-0.50	
15981.00	90.420	340.310	6379.42	7567.80	7070.31	-2710.15	1666462.12	14340704.54	39°29'27.4295"N	80°54'27.6543"W	7571.84	339.027	0.58	0.47	0.35	
16006.00	90.420	340.310	6379.24	7592.80	7093.85	-2718.57	1666453.70	14340728.07	39°29'27.6622"N	80°54'27.7614"W	7596.93	339.032	0.00	0.00	0.00	Projected MD at TD: 16006'

HOLE & CASING SECTIONS - Ref Wellbore: Lancaster Unit 1H AWB Ref Wellpath: Lancaster Unit 1H AWP Proj: 16006'									
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)
16in Conductor	25.50	105.50	80.00	25.50	105.50	0.00	0.00	-0.04	0.08
13.5in Open Hole	105.50	589.30	483.80	105.50	589.30	-0.04	0.08	-0.49	1.18
10.75in Casing Surface	25.50	589.30	563.80	25.50	589.30	0.00	0.00	-0.49	1.18
9.875in Open Hole	589.30	2738.00	2148.70	589.30	2593.63	-0.49	1.18	-671.35	162.81
7.625in Casing Intermediate	25.50	2726.90	2701.40	25.50	2583.59	0.00	0.00	-666.84	161.37
6.75in Open Hole	2738.00	16006.00	13268.00	2593.63	6379.24	-671.35	162.81	7093.85	-2718.57
5in Casing Production	25.50	16006.00	15980.50	25.50	6379.24	0.00	0.00	7093.85	-2718.57



Actual Wellpath Report
 Lancaster Unit 1H AWP Proj: 16006'
 Page 9 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Lancaster Unit 1H
Field	Tyler	API	47-095-02674-0000
Facility	Hogue Pad	Wellbore	Lancaster Unit 1H AWB
Slot	Slot #04		

TARGETS								
Name	TVD (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Shape
Lancaster Unit 1H - POE - Rev-3	6385.00	-1423.39	197.04	1669368.14	14332214.24	39°28'3.4518"N	80°53'50.6961"W	point
Lancaster Unit 1H - BHL - Rev-3	6417.00	7018.68	-2696.04	1666476.22	14340652.93	39°29'26.9191"N	80°54'27.4750"W	point
Lancaster Unit 1H - LP - Rev-3	6417.00	-1216.14	143.27	1669314.39	14332421.41	39°28'5.5008"N	80°53'51.3787"W	point
Lancaster Unit 1H - 50' L/R Hardline	6500.00	2811.60	-1240.62	1667931.05	14336447.54	39°28'45.3237"N	80°54'8.9691"W	rectangle
2D Rectangle 8906.64 x 100.								

WELLPATH COMPOSITION - Ref Wellbore: Lancaster Unit 1H AWB Ref Wellpath: Lancaster Unit 1H AWP Proj: 16006'					
Start MD (ft)	End MD (ft)	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
25.50	559.00	Gyrodatta 2015 - GC+WIR+CAS	01 Gyrodatta MS Gyro <1.3-1/2"> (100'-559')	Lancaster Unit 1H AWB	3/1/2020
559.00	2668.00	BH NaviTrak (2019) (Axial)	02 APS EM <9-7/8"> (559')(686'-2668')	Lancaster Unit 1H AWB	3/1/2020
2668.00	6016.00	BH NaviTrak (2019) (Axial)	03 APS EM <6-3/4">(2668')(2791'-6016')	Lancaster Unit 1H AWB	3/3/2020
6016.00	16006.00	BH OnTrak (2019) (Short spacing)	04 AutoTrak X-Gen <6-3/4">(6016')(6064'-15981')	Lancaster Unit 1H AWB	3/3/2020



Actual Wellpath Report

Lancaster Unit 1H AWP Proj: 16006'

Page 10 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Lancaster Unit 1H
Field	Tyler	API	47-095-02674-0000
Facility	Hogue Pad	Wellbore	Lancaster Unit 1H AWB
Slot	Slot #04		

COMMENTS

Wellpath general comments

API: 47-095-02674-0000

BHI Job #: 110308557B

Rig: H&P 317

Duration: 03/03/2020-04/22/2020

Gyrodata MS Gyro <13-1/2"> (100'-559')

APS EM <9-7/8"> (559')(686'-2668')

APS EM <6-3/4">(2668')(2791'-6016')

AutoTrak X-Gen <6-3/4">(6016)(6064'-15981')

Middlesex: 6683' MD

Burkett: 6849' MD

Tully: 6904' MD

Marcellus POE: 7006' MD

Projected MD at TD: 16006'

04/02/2021