



Actual Wellpath Report

Laser Unit 4H AWP Proj: 17693'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Laser Unit 4H
Field	Doddridge	API	API: 47-017-06895-0000
Facility	George Scott Pad	Wellbore	Laser Unit 4H AWB
Slot	Slot #03		

WELLPATH DATA (209 stations) † = interpolated, ‡ = extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
0.00	0.00	233.790	0.00	0.00	0.00	0.00	1715795.10	14274035.93	39°18'27.2770"N	80°44'0.6700"W	0.00	0.000	0.00	0.00	0.00	
25.50	0.00	233.790	25.50	0.00	0.00	0.00	1715795.10	14274035.93	39°18'27.2770"N	80°44'0.6700"W	0.00	0.000	0.00	0.00	0.00	
50.00	0.440	233.790	50.00	-0.03	-0.06	-0.08	1715795.02	14274035.87	39°18'27.2765"N	80°44'0.6710"W	0.09	233.790	1.80	1.80	0.00	Gyrodata MS Gyro <17-1/2">(50'-484')
75.00	0.450	233.600	75.00	-0.09	-0.17	-0.23	1715794.87	14274035.76	39°18'27.2753"N	80°44'0.6730"W	0.29	233.725	0.04	0.04	-0.76	
100.00	0.500	233.910	100.00	-0.16	-0.29	-0.40	1715794.70	14274035.64	39°18'27.2741"N	80°44'0.6751"W	0.50	233.741	0.20	0.20	1.24	
125.00	0.450	236.300	125.00	-0.22	-0.41	-0.57	1715794.53	14274035.52	39°18'27.2730"N	80°44'0.6772"W	0.70	234.125	0.22	-0.20	9.56	
150.00	0.510	234.980	150.00	-0.28	-0.53	-0.74	1715794.36	14274035.40	39°18'27.2718"N	80°44'0.6795"W	0.91	234.463	0.24	0.24	-5.28	
175.00	0.530	233.850	175.00	-0.35	-0.66	-0.93	1715794.17	14274035.27	39°18'27.2705"N	80°44'0.6818"W	1.14	234.451	0.09	0.08	-4.52	
200.00	0.540	233.820	199.99	-0.43	-0.80	-1.12	1715793.99	14274035.13	39°18'27.2691"N	80°44'0.6842"W	1.37	234.347	0.04	0.04	-0.12	
225.00	0.540	233.460	224.99	-0.50	-0.94	-1.30	1715793.80	14274034.99	39°18'27.2678"N	80°44'0.6866"W	1.61	234.243	0.01	0.00	-1.44	
250.00	0.540	233.700	249.99	-0.58	-1.08	-1.49	1715793.61	14274034.85	39°18'27.2664"N	80°44'0.6890"W	1.84	234.158	0.01	0.00	0.96	
275.00	0.520	242.930	274.99	-0.64	-1.20	-1.69	1715793.41	14274034.73	39°18'27.2652"N	80°44'0.6915"W	2.07	234.610	0.35	-0.08	36.92	
300.00	0.490	236.700	299.99	-0.68	-1.31	-1.88	1715793.22	14274034.62	39°18'27.2641"N	80°44'0.6940"W	2.29	235.118	0.25	-0.12	-24.92	
325.00	0.440	242.780	324.99	-0.73	-1.41	-2.06	1715793.05	14274034.52	39°18'27.2631"N	80°44'0.6962"W	2.49	235.480	0.28	-0.20	24.32	
350.00	0.460	231.830	349.99	-0.78	-1.52	-2.22	1715792.88	14274034.41	39°18'27.2621"N	80°44'0.6983"W	2.69	235.603	0.35	0.08	-43.80	
375.00	0.450	214.800	374.99	-0.88	-1.66	-2.35	1715792.75	14274034.27	39°18'27.2607"N	80°44'0.7000"W	2.88	234.779	0.54	-0.04	-68.12	
400.00	0.470	212.690	399.99	-1.00	-1.83	-2.47	1715792.63	14274034.10	39°18'27.2590"N	80°44'0.7014"W	3.07	233.433	0.10	0.08	-8.44	
425.00	0.470	203.480	424.99	-1.15	-2.01	-2.56	1715792.54	14274033.92	39°18'27.2572"N	80°44'0.7027"W	3.26	231.893	0.30	0.00	-36.84	
450.00	0.500	198.980	449.99	-1.31	-2.21	-2.64	1715792.46	14274033.72	39°18'27.2553"N	80°44'0.7036"W	3.44	230.093	0.19	0.12	-18.00	
475.00	0.530	192.290	474.98	-1.50	-2.42	-2.70	1715792.40	14274033.51	39°18'27.2531"N	80°44'0.7044"W	3.63	228.083	0.27	0.12	-26.76	
484.00	0.520	195.010	483.98	-1.57	-2.50	-2.72	1715792.38	14274033.43	39°18'27.2524"N	80°44'0.7047"W	3.70	227.360	0.30	-0.11	30.22	
603.00	0.770	215.720	602.98	-2.50	-3.67	-3.32	1715791.78	14274032.26	39°18'27.2408"N	80°44'0.7124"W	4.95	222.146	0.28	0.21	17.40	APS EM <12-1/4">(484')(603'-2559')
665.00	0.570	223.490	664.97	-2.90	-4.24	-3.78	1715791.32	14274031.70	39°18'27.2353"N	80°44'0.7182"W	5.68	221.748	0.35	-0.32	12.53	
756.00	0.350	48.770	755.97	-3.01	-4.38	-3.88	1715791.22	14274031.55	39°18'27.2338"N	80°44'0.7195"W	5.85	221.550	1.01	-0.24	-192.00	
887.00	1.990	30.720	886.94	-1.33	-2.16	-2.42	1715792.68	14274033.77	39°18'27.2557"N	80°44'0.7009"W	3.24	228.224	1.27	1.25	-13.78	
981.00	1.790	33.720	980.89	0.67	0.46	-0.77	1715794.33	14274036.39	39°18'27.2816"N	80°44'0.6798"W	0.90	300.948	0.24	-0.21	3.19	
1076.00	1.740	31.900	1075.84	2.54	2.92	0.81	1715795.91	14274038.85	39°18'27.3059"N	80°44'0.6595"W	3.03	15.584	0.08	-0.05	-1.92	
1171.00	0.670	36.220	1170.82	3.81	4.59	1.91	1715797.00	14274040.52	39°18'27.3224"N	80°44'0.6456"W	4.97	22.525	1.13	-1.13	4.55	
1266.00	0.040	166.560	1265.82	4.10	5.01	2.24	1715797.34	14274040.94	39°18'27.3265"N	80°44'0.6413"W	5.49	24.102	0.73	-0.66	137.20	
1361.00	0.960	208.360	1360.81	3.52	4.28	1.87	1715796.97	14274040.21	39°18'27.3192"N	80°44'0.6460"W	4.67	23.621	0.98	0.97	44.02	

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Field	Doddridge		API	API: 47-017-06895-0000
Facility	George Scott Pad		Wellbore	Laser Unit 4H AWB
Slot	Slot #03			

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4294.00	6.090	156.600	4292.29	-14.59	-15.86	-1.81	1715793.29	14274020.07	39°18'27.1203"N	80°44'0.6936"W	15.97	186.507	2.58	2.34	-12.97	
4389.00	7.750	164.290	4386.59	-26.00	-26.66	1.93	1715797.03	14274009.28	39°18'27.0135"N	80°44'0.6465"W	26.73	175.866	2.00	1.75	8.03	
4484.00	8.830	182.130	4480.62	-39.27	-40.11	3.39	1715798.49	14273995.83	39°18'26.8805"N	80°44'0.6284"W	40.25	175.169	2.92	1.14	18.78	
4579.00	9.300	182.290	4574.43	-53.36	-55.07	2.81	1715797.91	14273980.88	39°18'26.7327"N	80°44'0.6363"W	55.14	177.076	0.50	0.49	0.17	
4673.00	10.000	153.110	4667.15	-68.57	-69.95	6.20	1715801.30	14273966.01	39°18'26.5855"N	80°44'0.5937"W	70.22	174.933	5.20	0.74	-31.04	
4768.00	8.490	151.460	4760.92	-83.59	-83.46	13.28	1715808.38	14273952.50	39°18'26.4517"N	80°44'0.5041"W	84.51	170.957	1.61	-1.59	-1.74	
4863.00	8.420	180.520	4854.93	-97.10	-96.58	16.57	1715811.67	14273939.38	39°18'26.3219"N	80°44'0.4628"W	98.00	170.264	4.45	-0.07	30.59	
4958.00	9.590	188.800	4948.76	-110.80	-111.36	15.30	1715810.39	14273924.61	39°18'26.1759"N	80°44'0.4795"W	112.41	172.178	1.83	1.23	8.72	
5053.00	9.520	180.270	5042.45	-125.38	-127.04	14.05	1715809.15	14273908.94	39°18'26.0210"N	80°44'0.4960"W	127.81	173.689	1.49	-0.07	-8.98	
5148.00	9.480	181.670	5136.14	-140.25	-142.71	18.79	1715808.88	14273893.27	39°18'25.8661"N	80°44'0.5000"W	143.38	174.482	0.25	-0.04	1.47	
5243.00	9.630	181.070	5229.83	-155.17	-158.48	13.41	1715808.50	14273877.51	39°18'25.7103"N	80°44'0.5053"W	159.05	175.163	0.19	0.16	-0.63	
5338.00	8.270	179.680	5323.67	-169.23	-173.26	13.30	1715808.39	14273862.74	39°18'25.5642"N	80°44'0.5073"W	173.77	175.611	1.45	-1.43	-1.46	
5433.00	10.470	169.870	5417.40	-184.32	-188.59	14.86	1715809.95	14273847.42	39°18'25.4126"N	80°44'0.4881"W	189.17	175.496	2.85	2.32	-10.33	
5527.00	8.930	147.930	5510.08	-199.86	-203.19	20.23	1715815.33	14273832.83	39°18'25.2682"N	80°44'0.4202"W	204.19	174.313	4.23	-1.64	-23.34	
5622.00	9.470	156.150	5603.87	-214.76	-216.58	27.31	1715822.40	14273819.43	39°18'25.1356"N	80°44'0.3307"W	218.30	172.813	1.49	0.57	8.65	
5717.00	11.110	174.930	5697.36	-231.47	-232.85	31.28	1715826.37	14273803.17	39°18'24.9747"N	80°44'0.2808"W	234.94	172.349	3.91	1.73	19.77	
5812.00	12.790	178.290	5790.30	-250.53	-252.48	32.40	1715827.49	14273783.55	39°18'24.7806"N	80°44'0.2672"W	254.55	172.687	1.91	1.77	3.54	
5906.00	12.870	174.980	5881.95	-270.76	-273.31	33.63	1715828.72	14273762.73	39°18'24.5747"N	80°44'0.2524"W	275.37	172.985	0.79	0.09	-3.52	
6001.00	14.580	166.070	5974.25	-293.03	-295.46	37.43	1715832.52	14273740.59	39°18'24.3557"N	80°44'0.2048"W	297.82	172.779	2.86	1.80	-9.38	
6096.00	9.740	155.910	6067.10	-312.96	-314.42	43.60	1715838.68	14273721.64	39°18'24.1682"N	80°44'0.1272"W	317.42	172.106	5.55	-5.09	-10.69	
6191.00	10.800	178.320	6160.61	-329.52	-330.66	47.14	1715842.22	14273705.41	39°18'24.0076"N	80°44'0.0827"W	334.00	171.886	4.32	1.12	23.59	
6286.00	5.910	204.230	6254.61	-341.74	-344.02	45.39	1715840.47	14273692.04	39°18'23.8755"N	80°44'0.1054"W	347.01	172.484	6.37	-5.15	27.27	
6381.00	3.970	342.770	6349.45	-342.10	-345.35	42.40	1715837.49	14273690.72	39°18'23.8625"N	80°44'0.1435"W	347.94	173.000	9.75	-2.04	145.83	
6475.00	7.810	345.830	6442.93	-332.47	-336.04	39.88	1715834.96	14273700.02	39°18'23.9545"N	80°44'0.1753"W	338.40	173.233	4.10	4.09	3.26	
6570.00	18.250	318.090	6535.44	-312.41	-318.65	28.32	1715823.41	14273717.40	39°18'24.1267"N	80°44'0.3217"W	319.91	174.922	12.51	10.99	-29.20	
6665.00	25.580	331.190	6623.56	-278.68	-289.55	8.46	1715803.56	14273746.49	39°18'24.4149"N	80°44'0.5732"W	289.68	178.327	9.23	7.72	13.79	
6760.00	32.550	337.900	6706.57	-233.03	-247.84	-11.07	1715784.04	14273788.19	39°18'24.8278"N	80°44'0.8201"W	248.09	182.557	8.09	7.34	7.06	
6797.00†	35.876	334.925	6737.17	-212.35	-228.79	-19.41	1715775.70	14273807.23	39°18'25.0163"N	80°44'0.9255"W	229.61	184.849	10.06	8.99	-8.04	Middlesex: 6797' MD
6855.00	41.210	331.120	6782.52	-176.74	-196.64	-35.86	1715759.26	14273839.37	39°18'25.3345"N	80°44'1.1335"W	199.88	190.334	10.06	9.20	-6.56	
6950.00	50.210	325.340	6848.82	-111.02	-139.07	-71.82	1715723.31	14273896.91	39°18'25.9045"N	80°44'1.5888"W	156.52	207.311	10.42	9.47	-6.08	

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9427.00	89.450	346.230	7043.40	2295.61	2116.24	-922.09	1714873.37	14276151.33	39°18'48.2198"N	80°44'12.3222"W	2308.40	336.456	2.85	-0.03	-2.85	
9521.00	89.820	344.230	7044.00	2389.50	2207.12	-946.06	1714849.42	14276242.18	39°18'49.1188"N	80°44'12.6237"W	2401.34	336.798	2.16	0.39	-2.13	
9616.00	90.060	343.250	7044.10	2484.47	2298.32	-972.65	1714822.83	14276333.34	39°18'50.0210"N	80°44'12.9588"W	2495.67	337.062	1.06	0.25	-1.03	
9711.00	89.720	342.500	7044.28	2579.47	2389.11	-1000.63	1714794.87	14276424.10	39°18'50.9191"N	80°44'13.3113"W	2590.19	337.275	0.87	-0.36	-0.79	
9805.00	89.480	340.710	7044.94	2673.45	2478.30	-1030.29	1714765.22	14276513.25	39°18'51.8015"N	80°44'13.6854"W	2683.93	337.426	1.92	-0.26	-1.90	
9900.00	90.250	339.340	7045.17	2768.36	2567.58	-1062.74	1714732.78	14276602.50	39°18'52.6848"N	80°44'14.0950"W	2778.83	337.515	1.65	0.81	-1.44	
9995.00	89.540	335.950	7045.34	2863.01	2655.43	-1098.87	1714696.67	14276690.31	39°18'53.5541"N	80°44'14.5514"W	2873.82	337.519	3.65	-0.75	-3.57	
10090.00	89.380	336.350	7046.23	2957.42	2742.31	-1137.28	1714658.27	14276777.16	39°18'54.4139"N	80°44'15.0368"W	2968.79	337.475	0.45	-0.17	0.42	
10185.00	89.380	337.180	7047.26	3051.94	2829.60	-1174.75	1714620.81	14276864.41	39°18'55.2777"N	80°44'15.5104"W	3063.77	337.453	0.87	0.00	0.87	
10280.00	89.820	338.150	7047.93	3146.60	2917.47	-1210.86	1714584.72	14276952.25	39°18'56.1473"N	80°44'15.9665"W	3158.77	337.460	1.12	0.46	1.02	
10375.00	90.030	341.360	7048.05	3241.48	3006.59	-1243.72	1714551.87	14277041.33	39°18'57.0290"N	80°44'16.3814"W	3253.68	337.527	3.39	0.22	3.38	
10470.00	89.880	346.140	7048.12	3336.43	3097.77	-1270.30	1714525.30	14277132.47	39°18'57.9310"N	80°44'16.7162"W	3348.11	337.703	5.03	-0.16	5.03	
10564.00	89.820	346.370	7048.37	3430.23	3189.08	-1292.63	1714502.98	14277223.75	39°18'58.8340"N	80°44'16.9970"W	3441.09	337.936	0.25	-0.06	0.24	
10659.00	90.090	343.490	7048.45	3525.13	3280.80	-1317.33	1714478.29	14277315.43	39°18'59.7413"N	80°44'17.3078"W	3535.39	338.123	3.04	0.28	-3.03	
10754.00	90.030	339.540	7048.35	3620.10	3370.88	-1347.45	1714448.19	14277405.48	39°19'0.6325"N	80°44'17.6877"W	3630.21	338.212	4.16	-0.06	-4.16	
10849.00	90.250	340.040	7048.11	3714.99	3460.03	-1380.26	1714415.38	14277494.59	39°19'1.5146"N	80°44'18.1019"W	3725.18	338.252	0.58	0.23	0.53	
10944.00	90.150	342.440	7047.78	3809.96	3549.98	-1410.81	1714384.84	14277584.50	39°19'2.4044"N	80°44'18.4873"W	3820.04	338.326	2.53	-0.11	2.53	
11039.00	90.310	344.230	7047.40	3904.95	3640.98	-1438.06	1714357.61	14277675.47	39°19'3.3047"N	80°44'18.8306"W	3914.69	338.448	1.89	0.17	1.88	
11133.00	90.250	341.140	7046.94	3998.93	3730.71	-1466.03	1714329.65	14277765.17	39°19'4.1923"N	80°44'19.1832"W	4008.42	338.547	3.29	-0.06	-3.29	
11228.00	90.340	339.190	7046.45	4093.85	3820.07	-1498.26	1714297.43	14277854.49	39°19'5.0764"N	80°44'19.5901"W	4103.38	338.584	2.05	0.09	-2.05	
11323.00	89.600	328.780	7046.50	4187.68	3905.33	-1539.87	1714255.84	14277939.71	39°19'5.9203"N	80°44'20.1163"W	4197.95	338.481	10.99	-0.78	-10.96	
11418.00	90.120	326.020	7046.73	4279.39	3985.35	-1591.05	1714204.68	14278019.70	39°19'6.7126"N	80°44'20.7646"W	4291.21	338.237	2.96	0.55	-2.91	
11513.00	90.710	331.480	7046.05	4371.63	4066.53	-1640.31	1714155.43	14278100.86	39°19'7.5164"N	80°44'21.3884"W	4384.90	338.032	5.78	0.62	5.75	
11608.00	90.710	337.590	7044.87	4465.67	4152.26	-1681.14	1714114.63	14278186.55	39°19'8.3649"N	80°44'21.9047"W	4479.67	337.958	6.43	0.00	6.43	
11703.00	90.680	339.110	7043.71	4560.41	4240.55	-1716.18	1714079.60	14278274.80	39°19'9.2385"N	80°44'22.3474"W	4574.66	337.966	1.60	-0.03	1.60	
11798.00	90.280	341.250	7042.92	4655.32	4329.91	-1748.39	1714047.40	14278364.13	39°19'10.1226"N	80°44'22.7539"W	4669.58	338.011	2.29	-0.42	2.25	
11893.00	90.370	336.400	7042.38	4750.10	4418.47	-1782.70	1714013.11	14278452.65	39°19'10.9989"N	80°44'23.1872"W	4764.54	338.028	5.11	0.09	-5.11	
11987.00	90.550	340.600	7041.62	4843.85	4505.91	-1817.14	1713978.68	14278540.05	39°19'11.8641"N	80°44'23.6222"W	4858.52	338.037	4.47	0.19	4.47	
12082.00	90.310	344.690	7040.91	4938.83	4596.56	-1845.47	1713950.36	14278630.67	39°19'12.7608"N	80°44'23.9794"W	4953.19	338.125	4.31	-0.25	4.31	
12177.00	90.000	347.830	7040.65	5033.61	4688.83	-1868.03	1713927.81	14278722.90	39°19'13.6734"N	80°44'24.2630"W	5047.24	338.278	3.32	-0.33	3.31	

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Actual Wellpath Report

Laser Unit 4H AWP Proj: 17693'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Laser Unit 4H
Field	Doddridge	API	API: 47-017-06895-0000
Facility	George Scott Pad	Wellbore	Laser Unit 4H AWB
Slot	Slot #03		

WELLPATH DATA (209 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
15118.00	89.910	345.820	7054.94	7962.95	7503.25	-2683.43	1713112.73	14281536.21	39°19'41.5132"N	80°44'34.5364"W	7968.66	340.321	0.95	0.72	-0.62	
15213.00	89.080	347.130	7055.78	8057.72	7595.61	-2705.65	1713090.52	14281628.54	39°19'42.4266"N	80°44'34.8158"W	8063.11	340.393	1.63	-0.87	1.38	
15307.00	89.260	344.870	7057.14	8151.52	7686.80	-2728.38	1713067.79	14281719.69	39°19'43.3286"N	80°44'35.1018"W	8156.65	340.458	2.41	0.19	-2.40	
15402.00	89.290	343.560	7058.34	8246.47	7778.21	-2754.22	1713041.96	14281811.06	39°19'44.2328"N	80°44'35.4273"W	8251.44	340.501	1.38	0.03	-1.38	
15497.00	89.230	345.120	7059.57	8341.41	7869.67	-2779.86	1713016.33	14281902.49	39°19'45.1375"N	80°44'35.7503"W	8346.22	340.545	1.64	-0.06	1.64	
15592.00	89.050	343.610	7060.99	8436.35	7961.14	-2805.46	1712990.75	14281993.93	39°19'46.0423"N	80°44'36.0728"W	8441.00	340.588	1.60	-0.19	-1.59	
15687.00	89.420	343.440	7062.26	8531.32	8052.24	-2832.40	1712963.82	14282084.98	39°19'46.9433"N	80°44'36.4123"W	8535.87	340.620	0.43	0.39	-0.18	
15781.00	89.080	343.530	7063.49	8625.30	8142.35	-2859.12	1712937.11	14282175.06	39°19'47.8347"N	80°44'36.7491"W	8629.74	340.652	0.37	-0.36	0.10	
15876.00	89.230	344.970	7064.89	8720.24	8233.77	-2884.91	1712911.34	14282266.44	39°19'48.7390"N	80°44'37.0739"W	8724.54	340.691	1.52	0.16	1.52	
15971.00	89.050	340.940	7066.32	8815.21	8324.57	-2912.74	1712883.51	14282357.21	39°19'49.6372"N	80°44'37.4249"W	8819.44	340.715	4.25	-0.19	-4.24	
16066.00	89.170	337.070	7067.80	8910.00	8413.23	-2946.77	1712849.50	14282445.84	39°19'50.5145"N	80°44'37.8547"W	8914.37	340.697	4.08	0.13	-4.07	
16161.00	88.800	336.360	7069.48	9004.51	8500.48	-2984.32	1712811.96	14282533.05	39°19'51.3779"N	80°44'38.3294"W	9009.13	340.655	0.84	-0.39	-0.75	
16255.00	88.620	335.180	7071.59	9097.84	8586.18	-3022.88	1712773.41	14282618.71	39°19'52.2260"N	80°44'38.8171"W	9102.76	340.605	1.27	-0.19	-1.26	
16350.00	88.430	339.000	7074.04	9192.37	8673.64	-3059.85	1712736.46	14282706.14	39°19'53.0914"N	80°44'39.2843"W	9197.54	340.568	4.02	-0.20	4.02	
16445.00	88.770	341.340	7076.36	9287.25	8762.97	-3092.06	1712704.26	14282795.44	39°19'53.9753"N	80°44'39.6911"W	9292.50	340.564	2.49	0.36	2.46	
16540.00	88.520	343.070	7078.61	9382.22	8853.40	-3121.09	1712675.25	14282885.83	39°19'54.8698"N	80°44'40.0572"W	9387.43	340.581	1.84	-0.26	1.82	
16635.00	88.580	346.120	7081.01	9477.11	8944.95	-3146.31	1712650.03	14282977.34	39°19'55.7753"N	80°44'40.3749"W	9482.16	340.621	3.21	0.06	3.21	
16730.00	88.550	347.020	7083.39	9571.84	9037.32	-3168.37	1712627.98	14283069.67	39°19'56.6889"N	80°44'40.6523"W	9576.62	340.680	0.95	-0.03	0.95	
16824.00	88.650	345.820	7085.69	9665.59	9128.66	-3190.43	1712605.93	14283160.98	39°19'57.5923"N	80°44'40.9298"W	9670.13	340.736	1.28	0.11	-1.28	
16919.00	88.680	344.430	7087.90	9760.46	9220.45	-3214.81	1712581.56	14283252.73	39°19'58.5002"N	80°44'41.2368"W	9764.82	340.778	1.46	0.03	-1.46	
17014.00	88.650	346.070	7090.12	9855.32	9312.29	-3238.99	1712557.39	14283344.54	39°19'59.4086"N	80°44'41.5412"W	9859.51	340.821	1.73	-0.03	1.73	
17109.00	88.980	345.540	7092.08	9950.15	9404.37	-3262.28	1712534.11	14283436.58	39°20'0.3193"N	80°44'41.8343"W	9954.13	340.869	0.66	0.35	-0.56	
17204.00	88.490	344.520	7094.18	10045.03	9496.12	-3286.82	1712509.58	14283528.30	39°20'1.2269"N	80°44'42.1432"W	10048.86	340.908	1.19	-0.52	-1.07	
17298.00	88.980	342.470	7096.25	10138.98	9586.22	-3313.52	1712482.90	14283618.36	39°20'2.1181"N	80°44'42.4798"W	10142.73	340.932	2.24	0.52	-2.18	
17393.00	88.650	341.720	7098.22	10233.96	9676.60	-3342.72	1712453.71	14283708.70	39°20'3.0122"N	80°44'42.8481"W	10237.69	340.943	0.86	-0.35	-0.79	
17488.00	88.770	340.860	7100.36	10328.92	9766.56	-3373.18	1712423.25	14283798.62	39°20'3.9021"N	80°44'43.2326"W	10332.67	340.946	0.91	0.13	-0.91	
17583.00	89.320	338.460	7101.94	10423.78	9855.61	-3406.20	1712390.25	14283887.65	39°20'4.7833"N	80°44'43.6496"W	10427.62	340.934	2.59	0.58	-2.53	
17668.00	89.480	334.870	7102.83	10508.32	9933.64	-3439.86	1712356.60	14283965.65	39°20'5.5554"N	80°44'44.0752"W	10512.37	340.904	4.23	0.19	-4.22	
17693.00†	89.480	334.870	7103.06	10533.10	9956.28	-3450.47	1712345.99	14283988.27	39°20'5.7794"N	80°44'44.2095"W	10537.23	340.886	0.00	0.00	0.00	Projected MD at TD: 17693'

HOLE & CASING SECTIONS - Ref Wellbore: Laser Unit 4H AWB Ref Wellpath: Laser Unit 4H AWP Proj: 17693'									
String/Diameter	Start MD (ft)	End MD (ft)	Interval (ft)	Start TVD (ft)	End TVD (ft)	Start N/S (ft)	Start E/W (ft)	End N/S (ft)	End E/W (ft)
20in Conductor	25.50	105.50	80.00	25.50	105.50	0.00	0.00	-0.32	-0.44
17.5in Open Hole	105.50	562.00	456.50	105.50	561.98	-0.32	-0.44	-3.24	-3.04
13.375in Casing Surface	25.50	562.00	536.50	25.50	561.98	0.00	0.00	-3.24	-3.04
12.25in Open Hole	562.00	2630.00	2068.00	561.98	2628.97	-3.24	-3.04	4.38	-7.00
9.625in Casing Intermediate	25.50	2606.40	2580.90	25.50	2605.37	0.00	0.00	4.55	-7.61
8.5in Open Hole	2630.00	17693.00	15063.00	2628.97	7103.06	4.38	-7.00	9956.28	-3450.47
5.5in Casing Production	25.50	17693.00	17667.50	25.50	7103.06	0.00	0.00	9956.28	-3450.47

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Laser Unit 4H
Field	Doddridge	API	API: 47-017-06895-0000
Facility	George Scott Pad	Wellbore	Laser Unit 4H AWB
Slot	Slot #03		

COMMENTS

Wellpath general comments

API: 47-017-06895-0000

BHI Job #: 110049929B

Rig: H&P 317

Duration: 09/29/2019-12/17/2019

Gyrodata MS Gyro <17-1/2">(50'-484')

APS EM <12-1/4">(484')(603'-2559')

BH AT Curve <8-1/2"> (2559')(2682'-17668')

Middlesex: 6797' MD

Burkett: 7000' MD

Tully: 7052' MD

Marcellus POE: 7195' MD

Projected MD at TD: 17693'

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