



Actual Wellpath Report

Guild Unit 1H AWP Proj: 13711'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Tyler County, WV	Well	Guild Unit 1H
Field	Tyler	Wellbore	Guild Unit 1H AWB
Facility	Ferrell North Pad		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Delaset
Scale	0.999601	Report Generated	10/6/2019 at 5:53:17 PM
Convergence at slot	0.05° East	Database/Source file	WA_MPL_EasternUS_Defn/Guild_Unit_1H_AWP_Proj_13711_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-14.16	0.01	1663420.84	14333909.14	39°28'20.270"N	80°55'06.540"W
Facility Reference Pt			1663420.83	14333923.30	39°28'20.410"N	80°55'06.540"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM			
Calculation method	Minimum curvature	H&P 519 (RKB) to Facility Vertical Datum	787.00ft
Horizontal Reference Pt	Slot	H&P 519 (RKB) to Mean Sea Level	787.00ft
Vertical Reference Pt	H&P 519 (RKB)	H&P 519 (RKB) to Ground Level at Slot (Slot #02)	30.00ft
MD Reference Pt	H&P 519 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	340.97°

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Field	Tyler		Wellbore	Guild Unit 1H AWB
Facility	Ferrell North Pad			

WELLPATH DATA (159 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	261.470	0.00	0.00	0.00	0.00	1663420.84	14333909.14	39°28'20.270"N	80°55'06.540"W	0.00	0.000	0.00	0.00	0.00	
30.00	0.000	261.470	30.00	0.00	0.00	0.00	1663420.84	14333909.14	39°28'20.270"N	80°55'06.540"W	0.00	0.000	0.00	0.00	0.00	
115.00	0.200	261.470	115.00	0.03	-0.02	-0.15	1663420.69	14333909.12	39°28'20.270"N	80°55'06.542"W	0.15	261.470	0.24	0.24	-115.92	Gyrodata MS Gyro <17-1/2">(115'-302')
140.00	0.220	269.950	140.00	0.04	-0.04	-0.24	1663420.60	14333909.11	39°28'20.270"N	80°55'06.543"W	0.24	261.166	0.08	0.08	-6.08	
165.00	0.230	264.530	165.00	0.06	-0.05	-0.33	1663420.51	14333909.09	39°28'20.270"N	80°55'06.544"W	0.34	261.492	0.08	0.04	18.32	
190.00	0.270	268.090	190.00	0.09	-0.06	-0.44	1663420.40	14333909.09	39°28'20.269"N	80°55'06.546"W	0.45	262.701	0.17	0.16	14.24	
215.00	0.360	279.770	215.00	0.15	-0.05	-0.58	1663420.26	14333909.10	39°28'20.270"N	80°55'06.547"W	0.58	265.520	0.44	0.36	46.72	
240.00	0.280	260.010	240.00	0.19	-0.04	-0.72	1663420.12	14333909.10	39°28'20.270"N	80°55'06.549"W	0.72	266.595	0.54	-0.32	-79.04	
265.00	0.190	290.600	265.00	0.23	-0.04	-0.82	1663420.03	14333909.10	39°28'20.270"N	80°55'06.550"W	0.82	267.286	0.61	-0.36	122.36	
290.00	0.310	327.190	290.00	0.32	0.03	-0.89	1663419.95	14333909.18	39°28'20.270"N	80°55'06.551"W	0.89	272.104	0.78	0.48	146.36	
302.00	0.390	340.760	302.00	0.39	0.10	-0.92	1663419.92	14333909.24	39°28'20.271"N	80°55'06.552"W	0.93	276.101	0.96	0.67	113.08	
518.00	0.100	350.490	518.00	1.32	0.98	-1.20	1663419.65	14333910.12	39°28'20.280"N	80°55'06.555"W	1.55	309.294	0.14	-0.13	4.50	Gyrodata MS Gyro <12-1/4">(302')(518'-611')
611.00	0.320	69.490	611.00	1.40	1.15	-0.97	1663419.88	14333910.29	39°28'20.281"N	80°55'06.552"W	1.50	319.960	0.34	0.24	84.95	
735.00	3.380	84.940	734.92	0.53	1.59	3.00	1663423.84	14333910.74	39°28'20.286"N	80°55'06.502"W	3.40	62.029	2.48	2.47	12.46	WFT EM <12-1/4">(611')(735'-2587')
828.00	5.790	84.550	827.61	-1.24	2.28	10.40	1663431.24	14333911.42	39°28'20.292"N	80°55'06.407"W	10.65	77.633	2.59	2.59	-0.42	
922.00	7.380	82.160	920.99	-3.52	3.55	21.10	1663441.94	14333912.70	39°28'20.305"N	80°55'06.271"W	21.40	80.439	1.72	1.69	-2.54	
1016.00	9.050	83.580	1014.02	-6.31	5.21	34.43	1663455.26	14333914.35	39°28'20.321"N	80°55'06.101"W	34.82	81.404	1.79	1.78	1.51	
1111.00	11.160	83.560	1107.54	-9.94	7.07	50.99	1663471.81	14333916.21	39°28'20.339"N	80°55'05.890"W	51.48	82.105	2.22	2.22	-0.02	
1205.00	13.010	85.610	1199.46	-14.60	8.90	70.58	1663491.40	14333918.04	39°28'20.357"N	80°55'05.640"W	71.14	82.812	2.02	1.97	2.18	
1300.00	13.620	83.580	1291.90	-19.74	10.97	92.36	1663513.17	14333920.11	39°28'20.378"N	80°55'05.362"W	93.01	83.226	0.81	0.64	-2.14	
1394.00	14.490	81.990	1383.09	-24.41	13.85	115.01	1663535.80	14333922.98	39°28'20.406"N	80°55'05.073"W	115.84	83.134	1.01	0.93	-1.69	
1489.00	14.050	78.940	1475.16	-28.28	17.72	138.09	1663558.88	14333926.85	39°28'20.444"N	80°55'04.779"W	139.22	82.689	0.92	-0.46	-3.21	
1583.00	15.630	81.910	1566.02	-32.26	21.69	161.83	1663582.61	14333930.82	39°28'20.483"N	80°55'04.476"W	163.28	82.367	1.86	1.68	3.16	
1678.00	18.830	82.040	1656.74	-37.64	25.61	189.69	1663610.46	14333934.74	39°28'20.521"N	80°55'04.121"W	191.41	82.310	3.37	3.37	0.14	
1773.00	20.640	81.940	1746.16	-43.77	30.08	221.46	1663642.21	14333939.21	39°28'20.565"N	80°55'03.716"W	223.49	82.264	1.91	1.91	-0.11	
1867.00	21.300	81.290	1833.93	-49.98	34.99	254.74	1663675.47	14333944.12	39°28'20.614"N	80°55'03.291"W	257.13	82.178	0.74	0.70	-0.69	
1962.00	18.980	80.570	1923.12	-55.65	40.14	287.04	1663707.76	14333949.26	39°28'20.664"N	80°55'02.879"W	289.83	82.040	2.46	-2.44	-0.76	
2057.00	16.100	85.220	2013.70	-61.47	43.77	315.41	1663736.12	14333952.89	39°28'20.700"N	80°55'02.517"W	318.43	82.100	3.37	-3.03	4.89	
2152.00	16.840	85.090	2104.80	-68.07	46.04	342.25	1663762.95	14333955.17	39°28'20.722"N	80°55'02.175"W	345.33	82.338	0.78	0.78	-0.14	
2246.00	16.710	81.990	2194.80	-73.97	49.09	369.19	1663789.89	14333958.21	39°28'20.752"N	80°55'01.832"W	372.44	82.426	0.96	-0.14	-3.30	

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Area	Tyler County, WV		Well	Guild Unit 1H
Field	Tyler		Wellbore	Guild Unit 1H AWB
Facility	Ferrell North Pad			

WELLPATH DATA (159 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
2341.00	14.850	78.620	2286.22	-78.20	53.40	394.66	1663815.34	14333962.52	39°28'20.794"N	80°55'01.507"W	398.25	82.295	2.18	-1.96	-3.55	
2435.00	13.700	77.830	2377.32	-81.14	58.12	417.35	1663838.02	14333967.24	39°28'20.841"N	80°55'01.217"W	421.37	82.072	1.24	-1.22	-0.84	
2530.00	13.910	77.350	2469.57	-83.75	62.99	439.49	1663860.15	14333972.11	39°28'20.889"N	80°55'00.935"W	443.98	81.843	0.25	0.22	-0.51	
2587.00	13.180	75.810	2524.99	-85.06	66.09	452.47	1663873.13	14333975.20	39°28'20.919"N	80°55'00.769"W	457.27	81.690	1.43	-1.28	-2.70	
2695.00	13.240	74.850	2630.13	-86.94	72.34	476.35	1663897.00	14333981.45	39°28'20.981"N	80°55'00.465"W	481.81	81.365	0.21	0.06	-0.89	WFT EM <8-3/4">(2587')(2695'-5855')
2790.00	15.380	79.580	2722.18	-89.56	77.46	499.24	1663919.88	14333986.57	39°28'21.031"N	80°55'00.173"W	505.21	81.181	2.57	2.25	4.98	
2884.00	17.950	84.130	2812.23	-94.72	81.20	525.91	1663946.54	14333990.30	39°28'21.068"N	80°54'59.833"W	532.15	81.223	3.06	2.73	4.84	
2980.00	19.130	85.280	2903.24	-101.98	84.00	556.31	1663976.93	14333993.11	39°28'21.095"N	80°54'59.445"W	562.61	81.413	1.29	1.23	1.20	
3075.00	18.910	83.730	2993.06	-109.23	86.96	587.12	1664007.73	14333996.07	39°28'21.124"N	80°54'59.052"W	593.53	81.575	0.58	-0.23	-1.63	
3170.00	18.740	86.170	3082.98	-116.63	89.67	617.65	1664038.25	14333998.77	39°28'21.151"N	80°54'58.663"W	624.13	81.740	0.85	-0.18	2.57	
3264.00	18.550	85.210	3172.04	-124.27	91.92	647.62	1664068.20	14334001.03	39°28'21.173"N	80°54'58.281"W	654.11	81.921	0.38	-0.20	-1.02	
3359.00	19.350	85.370	3261.89	-131.90	94.45	678.36	1664098.93	14334003.56	39°28'21.197"N	80°54'57.889"W	684.91	82.073	0.84	0.84	0.17	
3454.00	19.370	83.940	3351.52	-139.35	97.39	709.72	1664130.27	14334006.49	39°28'21.226"N	80°54'57.489"W	716.37	82.187	0.50	0.02	-1.51	
3548.00	20.170	86.360	3439.98	-147.15	100.06	741.39	1664161.94	14334009.16	39°28'21.252"N	80°54'57.085"W	748.12	82.314	1.22	0.85	2.60	
3643.00	20.340	86.520	3529.11	-155.93	102.09	774.22	1664194.75	14334011.20	39°28'21.272"N	80°54'56.666"W	780.92	82.488	0.19	0.18	0.15	
3737.00	19.910	84.860	3617.37	-164.15	104.52	806.47	1664226.99	14334013.62	39°28'21.296"N	80°54'56.255"W	813.21	82.616	0.76	-0.46	-1.77	
3832.00	19.560	82.840	3706.79	-171.31	107.95	838.36	1664258.86	14334017.05	39°28'21.329"N	80°54'55.848"W	845.28	82.663	0.81	-0.37	-2.13	
3927.00	19.230	81.730	3796.40	-177.50	112.18	869.62	1664290.11	14334021.28	39°28'21.371"N	80°54'55.450"W	876.83	82.649	0.52	-0.35	-1.17	
4022.00	19.000	84.980	3886.16	-184.16	115.79	900.51	1664320.99	14334024.88	39°28'21.406"N	80°54'55.056"W	907.92	82.673	1.15	-0.24	3.42	
4116.00	18.700	84.090	3975.12	-191.29	118.68	930.74	1664351.21	14334027.77	39°28'21.434"N	80°54'54.670"W	936.27	82.734	0.44	-0.32	-0.95	
4211.00	18.400	82.370	4065.19	-197.71	122.24	960.75	1664381.20	14334031.33	39°28'21.469"N	80°54'54.287"W	968.49	82.749	0.66	-0.32	-1.81	
4306.00	18.470	80.900	4155.31	-203.27	126.61	990.47	1664410.91	14334035.70	39°28'21.512"N	80°54'53.908"W	998.53	82.716	0.49	0.07	-1.55	
4400.00	18.790	85.840	4244.39	-209.72	130.06	1020.27	1664440.70	14334039.15	39°28'21.546"N	80°54'53.528"W	1028.53	82.735	1.71	0.34	5.26	
4499.00	18.660	85.490	4338.15	-217.78	132.46	1051.96	1664472.38	14334041.55	39°28'21.570"N	80°54'53.124"W	1060.27	82.823	0.17	-0.13	-0.35	
4594.00	17.960	87.330	4428.34	-225.72	134.34	1081.74	1664502.15	14334043.43	39°28'21.588"N	80°54'52.744"W	1090.05	82.921	0.96	-0.74	1.94	
4689.00	17.990	86.630	4518.71	-233.80	135.88	1111.02	1664531.41	14334044.97	39°28'21.603"N	80°54'52.371"W	1119.30	83.027	0.23	0.03	-0.74	
4784.00	17.950	85.030	4609.07	-241.32	138.02	1140.25	1664560.63	14334047.10	39°28'21.624"N	80°54'51.998"W	1148.57	83.099	0.52	-0.04	-1.68	
4879.00	17.100	86.210	4699.66	-248.55	140.21	1168.77	1664589.14	14334049.29	39°28'21.645"N	80°54'51.635"W	1177.15	83.159	0.97	-0.89	1.24	
4973.00	17.190	85.840	4789.49	-255.75	142.13	1196.41	1664616.77	14334051.21	39°28'21.664"N	80°54'51.282"W	1204.83	83.225	0.15	0.10	-0.39	
5068.00	17.450	82.980	4880.18	-262.31	144.89	1224.55	1664644.90	14334053.97	39°28'21.691"N	80°54'50.923"W	1233.09	83.252	0.94	0.27	-3.01	

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 FERRELL NORTH PAD



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Area	Tyler County, WV	Well	Guild Unit 1H
Field	Tyler	Wellbore	Guild Unit 1H AWB
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5162.00	17.640	81.620	4969.81	-267.88	148.69	1252.63	1664672.97	14334057.77	39°28'21.728"N	80°54'50.565"W	1261.42	83.231	0.48	0.20	-1.45	
5256.00	16.510	84.710	5059.66	-273.68	151.99	1280.02	1664700.35	14334061.07	39°28'21.760"N	80°54'50.216"W	1289.02	83.228	1.54	-1.20	3.29	
5351.00	16.350	84.540	5150.78	-280.03	154.51	1306.78	1664727.09	14334063.59	39°28'21.785"N	80°54'49.875"W	1315.88	83.257	0.18	-0.17	-0.18	
5446.00	16.430	82.700	5241.92	-285.90	157.49	1333.41	1664753.72	14334066.57	39°28'21.814"N	80°54'49.535"W	1342.68	83.264	0.55	0.08	-1.94	
5540.00	17.600	81.780	5331.81	-291.26	161.24	1360.66	1664780.96	14334070.29	39°28'21.851"N	80°54'49.187"W	1370.18	83.243	1.28	1.24	-0.98	
5634.00	17.750	71.940	5421.39	-294.17	167.69	1388.36	1664808.64	14334076.76	39°28'21.915"N	80°54'48.834"W	1398.45	83.113	3.18	0.16	-10.47	
5698.00	18.610	55.710	5482.24	-291.65	176.47	1406.08	1664826.36	14334085.54	39°28'22.001"N	80°54'48.608"W	1417.11	82.847	8.00	1.34	-25.36	
5761.00	21.500	41.450	5541.44	-283.31	190.80	1422.04	1664842.31	14334099.86	39°28'22.143"N	80°54'48.404"W	1434.79	82.358	8.98	4.59	-22.63	
5824.00	24.390	29.920	5599.48	-269.07	210.74	1436.18	1664856.45	14334119.80	39°28'22.340"N	80°54'48.224"W	1451.56	81.652	8.46	4.59	-18.30	
5855.00	25.390	23.390	5627.61	-259.95	222.39	1442.02	1664862.28	14334131.44	39°28'22.455"N	80°54'48.149"W	1459.06	81.233	9.43	3.23	-21.06	
5900.00	27.250	15.860	5667.95	-244.38	241.16	1448.66	1664868.92	14334150.21	39°28'22.640"N	80°54'48.064"W	1468.60	80.549	8.49	4.13	-16.73	BH AT Curve <8-1/2">(5855')(5900'-13686')
5992.00	31.790	16.310	5747.99	-207.31	284.70	1461.23	1664881.49	14334193.73	39°28'23.070"N	80°54'47.903"W	1488.71	78.975	4.94	4.93	0.49	
6086.00	39.140	22.160	5824.52	-164.72	336.03	1479.41	1664899.65	14334245.03	39°28'23.577"N	80°54'47.671"W	1517.09	77.203	8.61	7.82	6.22	
6181.00	45.420	17.030	5894.79	-114.74	396.22	1500.65	1664920.89	14334305.21	39°28'24.172"N	80°54'47.399"W	1552.08	75.210	7.54	6.61	-5.40	
6260.00†	50.251	8.192	5947.86	-64.91	453.28	1513.24	1664933.47	14334362.24	39°28'24.736"N	80°54'47.238"W	1579.67	73.325	10.29	6.12	-11.19	Middlesex: 6260' MD
6275.00	51.240	6.660	5957.36	-54.51	464.80	1514.74	1664934.97	14334373.75	39°28'24.850"N	80°54'47.219"W	1584.45	72.941	10.29	6.59	-10.21	
6370.00	59.850	2.780	6011.07	17.16	542.78	1521.03	1664941.26	14334451.70	39°28'25.620"N	80°54'47.138"W	1614.97	70.361	9.67	9.06	-4.11	
6423.00†	63.631	1.789	6036.16	60.65	589.42	1522.87	1664943.10	14334498.32	39°28'26.081"N	80°54'47.114"W	1632.96	68.841	7.31	7.13	-1.83	Burkett: 6423' MD
6464.00	66.560	1.080	6053.42	95.49	626.59	1523.80	1664944.03	14334535.48	39°28'26.449"N	80°54'47.101"W	1647.60	67.648	7.31	7.14	-1.73	
6475.00†	67.468	0.412	6057.72	105.02	636.71	1523.93	1664944.16	14334545.60	39°28'26.549"N	80°54'47.099"W	1651.60	67.324	9.97	8.25	-6.07	Tully: 6475' MD
6540.00†	72.883	356.631	6079.76	163.29	697.80	1522.32	1664942.55	14334606.67	39°28'27.153"N	80°54'47.119"W	1674.63	65.374	9.97	8.33	-5.82	Marcellus POE: 6540' MD
6559.00	74.480	355.570	6085.10	180.90	715.99	1521.08	1664941.31	14334624.85	39°28'27.332"N	80°54'47.135"W	1681.17	64.793	9.97	8.40	-5.58	
6653.00	80.510	356.910	6105.44	269.38	807.52	1515.08	1664935.31	14334716.34	39°28'28.237"N	80°54'47.210"W	1716.84	61.943	6.56	6.41	1.43	
6748.00	88.980	357.160	6114.14	360.20	901.91	1510.19	1664930.43	14334810.69	39°28'29.170"N	80°54'47.271"W	1759.01	59.154	8.92	8.92	0.26	
6842.00	89.970	354.280	6115.00	451.09	995.63	1503.18	1664923.41	14334904.38	39°28'30.096"N	80°54'47.360"W	1803.00	56.481	3.24	1.05	-3.06	
6937.00	90.060	351.450	6114.97	544.04	1089.89	1491.38	1664911.62	14334998.59	39°28'31.028"N	80°54'47.509"W	1847.18	53.841	2.98	0.09	-2.98	
7031.00	90.090	348.090	6114.85	636.92	1182.38	1474.69	1664894.93	14335091.05	39°28'31.942"N	80°54'47.721"W	1890.17	51.278	3.57	0.03	-3.57	
7125.00	90.030	344.010	6114.75	730.53	1273.59	1452.03	1664872.29	14335182.22	39°28'32.844"N	80°54'48.009"W	1931.43	48.746	4.34	-0.06	-4.34	
7219.00	90.000	340.380	6114.73	824.50	1363.07	1423.29	1664843.56	14335271.67	39°28'33.729"N	80°54'48.374"W	1970.72	46.238	3.86	-0.03	-3.86	
7318.00	90.000	337.110	6114.73	923.41	1455.33	1387.41	1664807.69	14335363.88	39°28'34.641"N	80°54'48.830"W	2010.69	43.631	3.30	0.00	-3.30	

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Actual Wellpath Report

Guild Unit 1H AWP Proj: 13711'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #02
Area	Tyler County, WV		Well	Guild Unit 1H
Field	Tyler		Wellbore	Guild Unit 1H AWB
Facility	Ferrell North Pad			

WELLPATH DATA (159 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
7408.00	89.910	337.290	6114.80	1013.21	1538.29	1352.53	1664772.83	14335446.82	39°28'35.461"N	80°54'49.274"W	2048.34	41.323	0.22	-0.10	0.20	
7503.00	89.910	337.010	6114.95	1108.00	1625.84	1315.64	1664735.95	14335534.33	39°28'36.327"N	80°54'49.744"W	2091.47	38.980	0.29	0.00	-0.29	
7597.00	89.880	338.170	6115.12	1201.84	1712.74	1279.80	1664700.13	14335621.19	39°28'37.186"N	80°54'50.199"W	2138.08	36.768	1.23	-0.03	1.23	
7692.00	89.720	338.130	6115.45	1296.72	1800.91	1244.45	1664664.79	14335709.33	39°28'38.058"N	80°54'50.649"W	2189.05	34.645	0.17	-0.17	-0.04	
7786.00	89.880	341.910	6115.78	1390.69	1889.24	1212.33	1664632.69	14335797.62	39°28'38.931"N	80°54'51.058"W	2244.77	32.689	4.02	0.17	4.02	
7881.00	90.030	345.750	6115.85	1485.55	1980.46	1185.88	1664606.25	14335888.81	39°28'39.833"N	80°54'51.394"W	2308.37	30.913	4.05	0.16	4.04	
7975.00	90.430	345.300	6115.47	1579.26	2071.48	1162.39	1664582.76	14335979.79	39°28'40.733"N	80°54'51.692"W	2375.32	29.299	0.64	0.43	-0.48	
8070.00	90.280	344.190	6114.89	1674.05	2163.13	1137.39	1664557.78	14336071.40	39°28'41.639"N	80°54'52.010"W	2443.93	27.736	1.18	-0.16	-1.17	
8164.00	90.250	342.100	6114.45	1767.97	2253.08	1110.14	1664530.53	14336161.32	39°28'42.528"N	80°54'52.357"W	2511.73	26.230	2.22	-0.03	-2.22	
8258.00	90.180	341.200	6114.10	1861.96	2342.30	1080.55	1664500.95	14336250.50	39°28'43.410"N	80°54'52.733"W	2579.53	24.765	0.96	-0.07	-0.96	
8353.00	90.060	340.560	6113.90	1956.96	2432.06	1049.43	1664469.85	14336340.23	39°28'44.297"N	80°54'53.129"W	2648.81	23.340	0.69	-0.13	-0.67	
8447.00	90.220	339.690	6113.67	2050.95	2520.46	1017.47	1664437.91	14336428.59	39°28'45.171"N	80°54'53.535"W	2718.08	21.983	0.94	0.17	-0.93	
8541.00	90.150	340.370	6113.37	2144.94	2608.81	985.37	1664405.82	14336516.90	39°28'46.045"N	80°54'53.943"W	2788.70	20.692	0.73	-0.07	0.72	
8636.00	90.180	338.660	6113.09	2239.90	2697.80	952.14	1664372.60	14336605.86	39°28'46.925"N	80°54'54.366"W	2860.89	19.440	1.78	0.03	-1.78	
8730.00	90.030	336.660	6112.92	2333.74	2784.75	916.43	1664336.90	14336692.77	39°28'47.784"N	80°54'54.821"W	2931.67	18.216	2.15	-0.16	-2.15	
8825.00	90.310	333.730	6112.64	2428.25	2870.97	876.58	1664297.07	14336778.96	39°28'48.637"N	80°54'55.328"W	3001.81	16.979	3.10	0.29	-3.08	
8919.00	90.220	336.260	6112.20	2521.73	2956.16	836.85	1664257.35	14336864.11	39°28'49.479"N	80°54'55.833"W	3072.32	15.806	2.69	-0.10	2.69	
9014.00	90.310	342.710	6111.76	2616.65	3045.08	803.57	1664224.09	14336953.00	39°28'50.358"N	80°54'56.257"W	3149.33	14.783	6.79	0.09	6.79	
9108.00	90.310	343.480	6111.26	2710.58	3135.02	776.24	1664196.77	14337042.90	39°28'51.248"N	80°54'56.604"W	3229.69	13.907	0.82	0.00	0.82	
9203.00	90.460	343.240	6110.62	2805.50	3226.04	749.04	1664169.58	14337133.89	39°28'52.147"N	80°54'56.950"W	3311.85	13.072	0.30	0.16	-0.25	
9297.00	90.370	339.390	6109.94	2899.47	3315.06	718.93	1664139.48	14337222.88	39°28'53.028"N	80°54'57.333"W	3392.12	12.236	4.10	-0.10	-4.10	
9392.00	90.220	335.480	6109.45	2994.27	3402.77	682.48	1664103.05	14337310.55	39°28'53.895"N	80°54'57.797"W	3470.54	11.341	4.12	-0.16	-4.12	
9486.00	90.280	335.040	6109.04	3087.81	3488.14	643.14	1664063.72	14337395.89	39°28'54.739"N	80°54'58.297"W	3546.94	10.447	0.47	0.06	-0.47	
9581.00	90.280	334.520	6108.57	3182.25	3574.09	602.66	1664023.26	14337481.80	39°28'55.589"N	80°54'58.813"W	3624.54	9.571	0.55	0.00	-0.55	
9675.00	89.940	333.590	6108.39	3275.57	3658.61	561.54	1663982.15	14337566.29	39°28'56.424"N	80°54'59.336"W	3701.46	8.726	1.05	-0.36	-0.99	
9770.00	90.250	339.120	6108.23	3370.22	3745.60	523.45	1663944.08	14337653.24	39°28'57.285"N	80°54'59.821"W	3782.00	7.956	5.83	0.33	5.82	
9864.00	90.310	343.330	6107.77	3464.20	3834.58	493.20	1663913.85	14337742.18	39°28'58.164"N	80°55'00.206"W	3866.17	7.329	4.48	0.06	4.48	
9959.00	90.250	340.830	6107.31	3559.17	3924.96	463.98	1663884.63	14337832.53	39°28'59.058"N	80°55'00.577"W	3952.29	6.742	2.63	-0.06	-2.63	
10054.00	90.000	340.490	6107.10	3654.17	4014.60	432.52	1663853.18	14337922.13	39°28'59.944"N	80°55'00.978"W	4037.83	6.149	0.44	-0.26	-0.36	
10148.00	89.970	342.690	6107.13	3748.16	4103.79	402.83	1663823.51	14338011.28	39°29'00.826"N	80°55'01.355"W	4123.51	5.606	2.34	-0.03	2.34	

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #02
Area	Tyler County, WV		Well	Guild Unit 1H
Field	Tyler		Wellbore	Guild Unit 1H AWB
Facility	Ferrell North Pad			

WELLPATH DATA (159 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
10242.00	90.310	346.380	6106.90	3841.96	4194.37	377.77	1663798.46	14338101.83	39°29'01.721"N	80°55'01.674"W	4211.34	5.147	3.94	0.36	3.93	
10337.00	90.400	347.390	6106.31	3936.45	4286.89	356.21	1663776.91	14338194.31	39°29'02.636"N	80°55'01.947"W	4301.66	4.760	1.07	0.09	1.06	
10432.00	90.310	347.910	6105.72	4030.80	4379.69	335.90	1663756.60	14338287.07	39°29'03.553"N	80°55'02.205"W	4392.55	4.386	0.56	-0.09	0.55	
10526.00	90.550	348.330	6105.02	4124.07	4471.67	316.55	1663737.26	14338379.02	39°29'04.462"N	80°55'02.451"W	4482.86	4.049	0.51	0.26	0.45	
10621.00	90.400	348.870	6104.23	4218.43	4564.45	296.15	1663716.87	14338471.76	39°29'05.380"N	80°55'02.710"W	4574.04	3.712	1.54	-0.16	-1.54	
10715.00	90.400	340.830	6103.57	4312.26	4654.69	270.01	1663690.75	14338561.97	39°29'06.272"N	80°55'03.043"W	4662.52	3.320	6.43	0.00	-6.43	
10810.00	90.370	341.280	6102.93	4407.26	4744.55	239.17	1663659.92	14338651.78	39°29'07.160"N	80°55'03.435"W	4750.57	2.886	0.47	-0.03	0.47	
10904.00	90.310	343.310	6102.37	4501.23	4834.09	210.59	1663631.34	14338741.29	39°29'08.045"N	80°55'03.798"W	4838.67	2.494	2.16	-0.06	2.16	
10998.00	90.400	345.810	6101.79	4595.04	4924.69	185.56	1663606.33	14338831.85	39°29'08.941"N	80°55'04.116"W	4928.18	2.158	2.66	0.10	2.66	
11093.00	90.060	345.860	6101.41	4689.69	5016.80	162.32	1663583.09	14338923.92	39°29'09.852"N	80°55'04.412"W	5019.42	1.853	0.36	-0.36	0.05	
11187.00	90.120	343.510	6101.26	4783.49	5107.45	137.49	1663558.28	14339014.54	39°29'10.748"N	80°55'04.727"W	5109.30	1.542	2.50	0.06	-2.50	
11282.00	90.090	341.640	6101.09	4878.45	5198.09	109.04	1663529.84	14339105.14	39°29'11.644"N	80°55'05.089"W	5199.23	1.202	1.97	-0.03	-1.97	
11377.00	90.030	340.740	6100.99	4973.45	5288.01	78.41	1663499.22	14339195.03	39°29'12.533"N	80°55'05.479"W	5288.59	0.850	0.95	-0.06	-0.95	
11471.00	90.090	341.940	6100.89	5067.44	5377.07	48.34	1663469.16	14339284.05	39°29'13.413"N	80°55'05.861"W	5377.29	0.515	1.28	0.06	1.28	
11566.00	90.490	341.620	6100.41	5162.43	5467.31	18.63	1663439.47	14339374.25	39°29'14.305"N	80°55'06.239"W	5467.34	0.195	0.54	0.42	-0.34	
11660.00	89.510	339.400	6100.41	5256.42	5555.91	-12.73	1663408.12	14339462.83	39°29'15.181"N	80°55'06.638"W	5555.93	359.869	2.58	-1.04	-2.36	
11754.00	89.660	338.540	6101.09	5350.36	5643.65	-46.46	1663374.40	14339550.53	39°29'16.049"N	80°55'07.067"W	5643.84	359.528	0.93	0.16	-0.91	
11849.00	89.570	338.030	6101.73	5445.25	5731.90	-81.61	1663339.27	14339638.75	39°29'16.921"N	80°55'07.515"W	5732.49	359.184	0.55	-0.09	-0.54	
11943.00	89.600	338.110	6102.41	5539.13	5819.10	-116.71	1663304.18	14339725.91	39°29'17.783"N	80°55'07.961"W	5820.27	358.851	0.09	0.03	0.09	
12038.00	89.480	337.300	6103.17	5633.97	5907.00	-152.75	1663268.15	14339813.77	39°29'18.653"N	80°55'08.420"W	5908.97	358.519	0.86	-0.13	-0.85	
12132.00	89.690	336.640	6103.85	5727.74	5993.50	-189.52	1663231.39	14339900.24	39°29'19.508"N	80°55'08.888"W	5996.50	358.189	0.74	0.22	-0.70	
12226.00	90.220	337.530	6103.93	5821.52	6080.08	-226.12	1663194.81	14339986.78	39°29'20.364"N	80°55'09.354"W	6084.28	357.870	1.10	0.56	0.95	
12321.00	90.250	337.310	6103.54	5916.34	6167.80	-262.60	1663158.35	14340074.46	39°29'21.231"N	80°55'09.818"W	6173.39	357.562	0.23	0.03	-0.23	
12416.00	90.250	339.070	6103.12	6011.22	6255.99	-297.89	1663123.07	14340162.62	39°29'22.103"N	80°55'10.267"W	6263.08	357.274	1.85	0.00	1.85	
12511.00	90.340	341.400	6102.63	6106.21	6345.39	-330.02	1663090.96	14340251.99	39°29'22.987"N	80°55'10.676"W	6353.97	357.023	2.45	0.09	2.45	
12605.00	90.310	343.840	6102.10	6200.16	6435.09	-358.09	1663062.89	14340341.65	39°29'23.874"N	80°55'11.033"W	6445.05	356.815	2.60	-0.03	2.60	
12700.00	90.430	345.480	6101.49	6294.96	6526.70	-383.22	1663037.77	14340433.22	39°29'24.779"N	80°55'11.353"W	6537.94	356.640	1.73	0.13	1.73	
12795.00	90.370	344.970	6100.82	6389.69	6618.56	-407.45	1663013.56	14340525.04	39°29'25.687"N	80°55'11.661"W	6631.09	356.477	0.54	-0.06	-0.54	
12889.00	90.950	345.590	6099.74	6483.42	6709.46	-431.33	1662989.68	14340615.91	39°29'26.586"N	80°55'11.964"W	6723.31	356.322	0.90	0.62	0.66	
12983.00	90.400	343.580	6098.63	6577.22	6800.07	-456.32	1662964.71	14340706.48	39°29'27.482"N	80°55'12.282"W	6815.36	356.161	2.22	-0.59	-2.14	

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Guild Unit 1H AWP Proj: 13711'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Tyler County, WV	Well	Guild Unit 1H
Field	Tyler	Wellbore	Guild Unit 1H AWB
Facility	Ferrell North Pad		

WELLPATH DATA (159 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
13078.00	90.460	339.460	6097.92	6672.19	6890.15	-486.42	1662934.62	14340796.53	39°29'28.372"N	80°55'12.665"W	6907.30	355.962	4.34	0.06	-4.34	
13172.00	90.490	337.410	6097.14	6766.09	6977.56	-520.97	1662900.08	14340883.90	39°29'29.237"N	80°55'13.105"W	6996.98	355.730	2.18	0.03	-2.18	
13267.00	90.460	338.760	6096.35	6860.97	7065.69	-556.42	1662864.64	14340972.00	39°29'30.108"N	80°55'13.556"W	7087.57	355.497	1.42	-0.03	1.42	
13361.00	90.430	338.480	6095.62	6954.89	7153.22	-590.69	1662830.39	14341059.49	39°29'30.973"N	80°55'13.992"W	7177.57	355.279	0.30	-0.03	-0.30	
13456.00	90.430	339.480	6094.91	7049.82	7241.90	-624.76	1662796.33	14341148.13	39°29'31.850"N	80°55'14.425"W	7268.80	355.069	1.05	0.00	1.05	
13550.00	90.550	339.370	6094.11	7143.79	7329.90	-657.80	1662763.31	14341236.10	39°29'32.720"N	80°55'14.846"W	7359.35	354.872	0.17	0.13	-0.12	
13645.00	90.430	338.790	6093.29	7238.73	7418.63	-691.72	1662729.40	14341324.80	39°29'33.597"N	80°55'15.278"W	7450.81	354.673	0.62	-0.13	-0.61	
13686.00	90.430	338.510	6092.99	7279.70	7456.82	-706.64	1662714.48	14341362.97	39°29'33.975"N	80°55'15.467"W	7490.22	354.587	0.68	0.00	-0.68	
13711.00	90.430	338.510	6092.80	7304.67	7480.08	-715.80	1662705.33	14341386.22	39°29'34.205"N	80°55'15.584"W	7514.25	354.534	0.00	0.00	0.00	Projected MD at TD: 13711'

HOLE & CASING SECTIONS - Ref Wellbore: Guild Unit 1H AWB Ref Wellpath: Guild Unit 1H AWP Proj: 13711'									
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	30.00	110.00	80.00	30.00	110.00	0.00	0.00	-0.02	-0.13
17.5in Open Hole	110.00	396.00	286.00	110.00	396.00	-0.02	-0.13	0.61	-1.09
13.375in Casing Surface	30.00	396.00	366.00	30.00	396.00	0.00	0.00	0.61	-1.09
12.25in Open Hole	396.00	2668.00	2272.00	396.00	2603.84	0.61	-1.09	70.73	470.38
9.625in Casing Intermediate	30.00	2668.00	2638.00	30.00	2603.84	0.00	0.00	70.73	470.38
8.75in Open Hole	2668.00	5927.00	3259.00	2603.84	5691.81	70.73	470.38	253.32	1452.13
8.5in Open Hole	5927.00	13711.00	7784.00	5691.81	6092.80	253.32	1452.13	7480.08	-715.80
5.5in Casing Production	30.00	13711.00	13681.00	30.00	6092.80	0.00	0.00	7480.08	-715.80

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Actual Wellpath Report

Guild Unit 1H AWP Proj: 13711'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Tyler County, WV	Well	Guild Unit 1H
Field	Tyler	Wellbore	Guild Unit 1H AWB
Facility	Ferrell North Pad		

TARGETS									
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape	
Guild Unit 1H - POE - Rev-2	6077.00	673.45	1521.18	1664941.41	14334582.32	39°28'26.912"N	80°54'47.134"W	point	
Guild Unit 1H - BHL - Rev-2	6115.00	7496.73	-715.19	1662705.94	14341402.86	39°29'34.369"N	80°55'15.576"W	point	
Guild Unit 1H - LP - Rev-2	6115.00	893.02	1501.97	1664922.21	14334801.80	39°28'29.082"N	80°54'47.376"W	point	

WELLPATH COMPOSITION - Ref Wellbore: Guild Unit 1H AWB Ref Wellpath: Guild Unit 1H AWP Proj: 13711'				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
30.00	302.00	Gyrodata standard - Drop gyro or Multi-shot	01 Gyrodata MS Gyro <17-1/2">(115'-302')	Guild Unit 1H AWB
302.00	611.00	Gyrodata standard - Drop gyro or Multi-shot	02 Gyrodata MS Gyro <12-1/4">(302')(518'-611')	Guild Unit 1H AWB
611.00	2587.00	OWSG MWD rev2 + HRGM	03 WFT EM <12-1/4">(611')(735'-2587')	Guild Unit 1H AWB
2587.00	5855.00	OWSG MWD rev2 + HRGM	04 WFT EM <8-3/4">(2587')(2695'-5855')	Guild Unit 1H AWB
5855.00	13686.00	BHI AutoTrak Curve (Short)	05 BH AT Curve <8-1/2">(5855')(5900'-13686')	Guild Unit 1H AWB
13686.00	13711.00	Blind Drilling (std)	Projection to bit	Guild Unit 1H AWB

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Actual Wellpath Report

Guild Unit 1H AWP Proj: 13711'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Tyler County, WV	Well	Guild Unit 1H
Field	Tyler	Wellbore	Guild Unit 1H AWB
Facility	Ferrell North Pad		

COMMENTS
<p>Wellpath general comments API: 47-095-02573-0000 BHI Job #: 110049884A Rig: H&P 519 Duration: 10/01/2019-10/02/2019 Gyrodata MS Gyro <17-1/2">(115'-302') Gyrodata MS Gyro <12-1/4">(302')(518'-611') WFT EM <12-1/4">(611')(735'-2587') WFT EM <8-3/4">(2587')(2695'-5855') BH AT Curve <8-1/2">(5855')(5900'-13686') Middlesex: 6260' MD Burkett: 6423' MD Tully: 6475' MD Marcellus POE: 6540' MD Projected MD at TD: 13711'</p>

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