

ANTERO RESOURCES CORPORATION

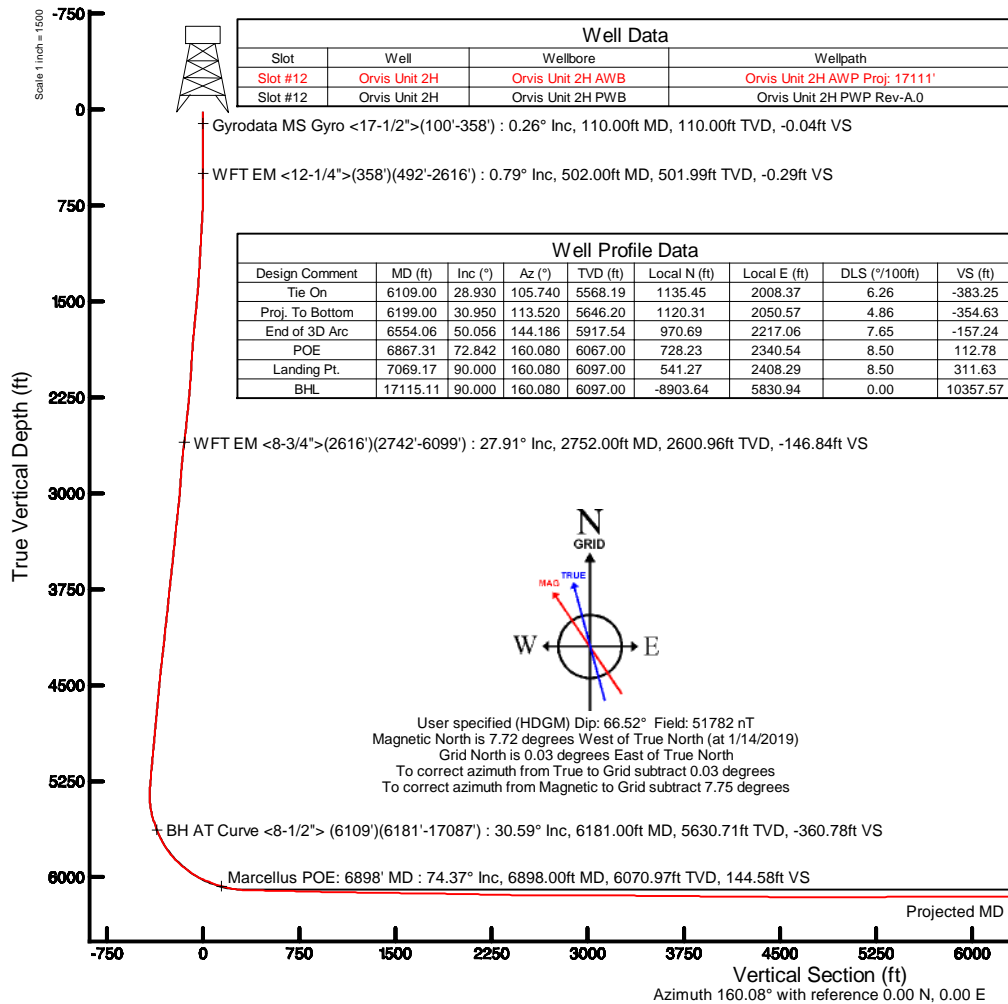
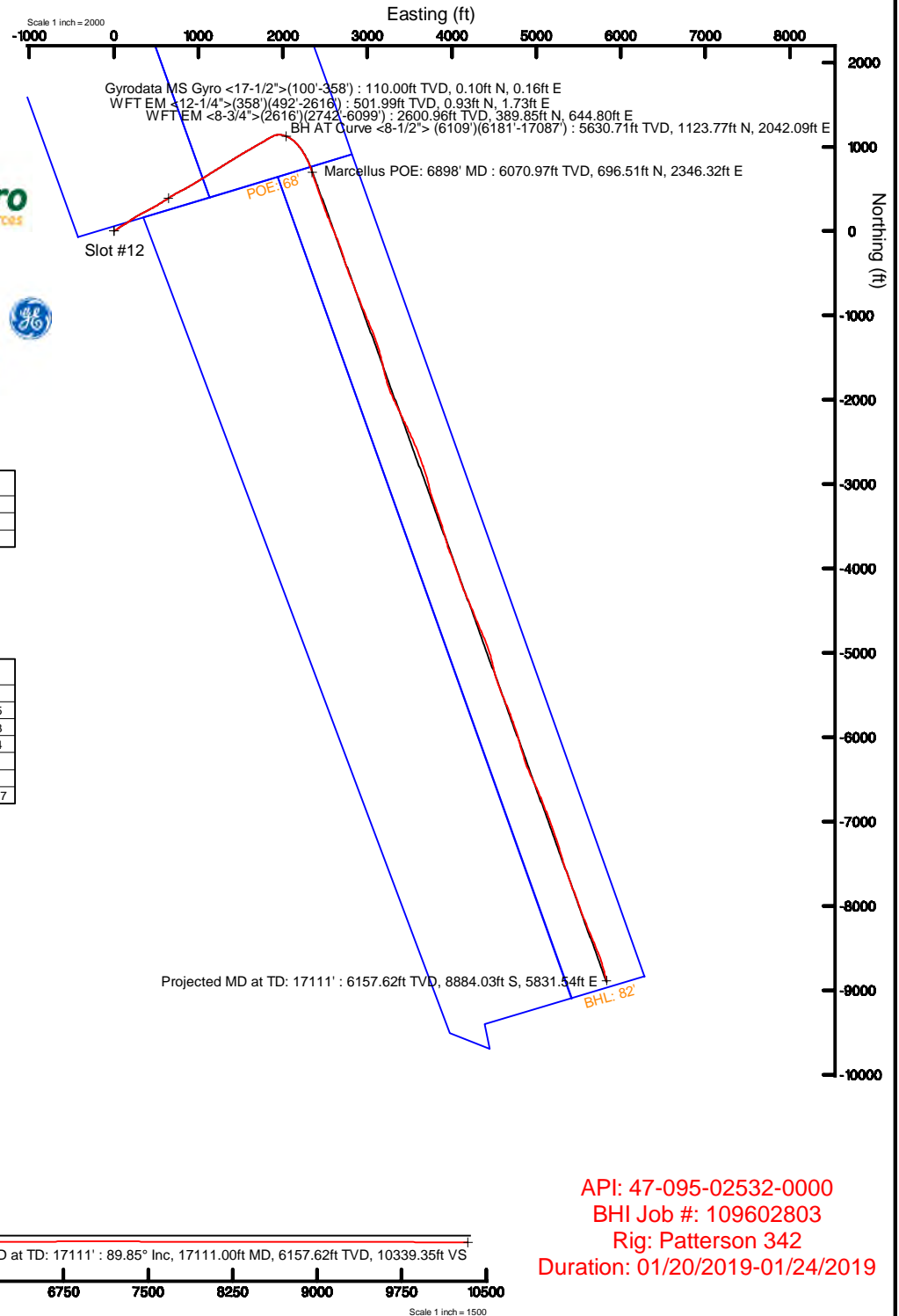
Location: Tyler County, WV
 Field: Tyler
 Facility: Sine Pad

Slot: Slot #12
 Well: Orvis Unit 2H
 Wellbore: Orvis Unit 2H PWB

Plot reference wellpath is Orvis Unit 2H PWP Rev-A.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to Patterson 342 (RKB)	North Reference: Grid north
Measured depths are referenced to Patterson 342 (RKB)	Scale: True distance
Patterson 342 (RKB) to Mean Sea Level: 824 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot: Slot #12): -799 feet	Created by: delaset on 2019-01-29
Coordinates are in feet referenced to Slot	Database: WA_MPL_EasternUS_Defn



Location Information				
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Sine Pad	1652653.868	14313061.080	39°24'54.210"N	80°57'24.020"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
Slot #12	-5.02	74.56	1652728.402	14313056.059
			39°24'54.160"N	80°57'23.070"W
Comment	Orvis Unit 2H			
Patterson 342 (RKB) to Ground level (At Slot: Slot #12)	25ft			
Mean Sea Level to Ground level (At Slot: Slot #12)	-799ft			
Patterson 342 (RKB) to Mean Sea Level	824ft			



API: 47-095-02532-0000
 BHI Job #: 109602803
 Rig: Patterson 342
 Duration: 01/20/2019-01/24/2019



Actual Wellpath Report

Orvis Unit 2H AWP Proj: 17111'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #12
Area	Tyler County, WV	Well	Orvis Unit 2H
Field	Tyler	Wellbore	Orvis Unit 2H AWB
Facility	Sine Pad		

REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Delaset
Scale	0.999600	Report Generated	1/29/2019 at 10:36:57 AM
Convergence at slot	0.03° East	Database/Source file	WA_MPL_EasternUS_Defn/Orvis_Unit_2H_AWP_Proj_17111_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-5.02	74.56	1652728.40	14313056.06	39°24'54.160"N	80°57'23.070"W
Facility Reference Pt			1652653.87	14313061.08	39°24'54.210"N	80°57'24.020"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM

Calculation method	Minimum curvature	Patterson 342 (RKB) to Facility Vertical Datum	25.00ft
Horizontal Reference Pt	Slot	Patterson 342 (RKB) to Mean Sea Level	824.00ft
Vertical Reference Pt	Patterson 342 (RKB)	Patterson 342 (RKB) to Ground Level at Slot (Slot #12)	25.00ft
MD Reference Pt	Patterson 342 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	160.08°



Actual Wellpath Report

Orvis Unit 2H AWP Proj: 17111'

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Area	Tyler County, WV	Well	Orvis Unit 2H
Field	Tyler	Wellbore	Orvis Unit 2H AWB
Facility	Sine Pad		

WELLPATH DATA (212 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	58.170	0.00	0.00	0.00	0.00	1652728.40	14313056.06	39°24'54.160"N	80°57'23.070"W	0.00	0.000	0.00	0.00	0.00	
25.00	0.000	58.170	25.00	0.00	0.00	0.00	1652728.40	14313056.06	39°24'54.160"N	80°57'23.070"W	0.00	0.000	0.00	0.00	0.00	
110.00	0.260	58.170	110.00	-0.04	0.10	0.16	1652728.57	14313056.16	39°24'54.161"N	80°57'23.068"W	0.19	58.170	0.31	0.31	68.44	Gyrodata MS Gyro <17-1/2">(100'-358')
135.00	0.280	73.220	135.00	-0.05	0.15	0.27	1652728.67	14313056.21	39°24'54.161"N	80°57'23.067"W	0.31	61.113	0.29	0.08	60.20	
160.00	0.320	76.030	160.00	-0.04	0.18	0.40	1652728.80	14313056.24	39°24'54.162"N	80°57'23.065"W	0.44	65.150	0.17	0.16	11.24	
185.00	0.250	75.870	185.00	-0.02	0.21	0.52	1652728.92	14313056.27	39°24'54.162"N	80°57'23.063"W	0.56	67.537	0.28	-0.28	-0.64	
210.00	0.220	66.870	210.00	-0.02	0.25	0.61	1652729.02	14313056.30	39°24'54.162"N	80°57'23.062"W	0.66	68.173	0.19	-0.12	-36.00	
235.00	0.070	106.040	235.00	-0.02	0.26	0.67	1652729.07	14313056.32	39°24'54.163"N	80°57'23.061"W	0.72	68.830	0.69	-0.60	156.68	
260.00	0.100	8.970	260.00	-0.03	0.28	0.69	1652729.09	14313056.34	39°24'54.163"N	80°57'23.061"W	0.75	68.090	0.52	0.12	-388.28	
285.00	0.100	338.330	285.00	-0.07	0.32	0.69	1652729.09	14313056.38	39°24'54.163"N	80°57'23.061"W	0.76	65.022	0.21	0.00	-122.56	
310.00	0.060	55.080	310.00	-0.09	0.35	0.69	1652729.09	14313056.41	39°24'54.163"N	80°57'23.061"W	0.77	63.238	0.42	-0.16	307.00	
335.00	0.070	53.460	335.00	-0.10	0.36	0.71	1652729.11	14313056.42	39°24'54.164"N	80°57'23.061"W	0.80	62.919	0.04	0.04	-6.48	
360.00	0.190	16.730	360.00	-0.14	0.41	0.74	1652729.14	14313056.47	39°24'54.164"N	80°57'23.061"W	0.84	60.719	0.56	0.48	-146.92	
368.00	0.180	32.300	368.00	-0.16	0.44	0.75	1652729.15	14313056.50	39°24'54.164"N	80°57'23.060"W	0.87	59.712	0.64	-0.13	194.62	
502.00	0.790	69.890	501.99	-0.29	0.93	1.73	1652730.13	14313056.99	39°24'54.169"N	80°57'23.048"W	1.96	61.649	0.49	0.46	28.05	WFT EM <12-1/4">(358')(492'-2616')
595.00	3.990	65.520	594.90	-0.55	2.49	5.27	1652733.67	14313058.55	39°24'54.185"N	80°57'23.003"W	5.83	64.699	3.44	3.44	-4.70	
687.00	7.540	62.620	686.42	-1.59	6.60	13.55	1652741.95	14313062.65	39°24'54.225"N	80°57'22.897"W	15.07	64.041	3.87	3.86	-3.15	
780.00	9.310	57.050	778.41	-4.07	13.50	25.28	1652753.67	14313069.55	39°24'54.293"N	80°57'22.748"W	28.66	61.907	2.09	1.90	-5.99	
871.00	10.310	53.230	868.08	-8.09	22.37	37.98	1652766.37	14313078.42	39°24'54.381"N	80°57'22.586"W	44.08	59.499	1.31	1.10	-4.20	
968.00	11.870	52.560	963.27	-13.61	33.64	52.86	1652781.24	14313089.68	39°24'54.492"N	80°57'22.396"W	62.65	57.530	1.61	1.61	-0.69	
1062.00	12.680	54.580	1055.12	-19.28	45.49	68.94	1652797.32	14313101.53	39°24'54.609"N	80°57'22.191"W	82.60	56.580	0.98	0.86	2.15	
1157.00	14.740	59.230	1147.41	-24.34	57.72	87.82	1652816.19	14313113.76	39°24'54.730"N	80°57'21.951"W	105.09	56.687	2.46	2.17	4.89	
1252.00	17.410	59.360	1238.69	-29.26	71.15	110.44	1652838.80	14313127.18	39°24'54.863"N	80°57'21.662"W	131.37	57.210	2.81	2.81	0.14	
1347.00	19.410	59.100	1328.82	-34.91	86.50	136.22	1652864.56	14313142.52	39°24'55.014"N	80°57'21.334"W	161.36	57.584	2.11	2.11	-0.27	
1442.00	19.830	57.090	1418.31	-41.54	103.36	163.29	1652891.63	14313159.38	39°24'55.181"N	80°57'20.989"W	193.25	57.667	0.84	0.44	-2.12	
1537.00	20.220	54.630	1507.57	-49.54	121.62	190.21	1652918.53	14313177.63	39°24'55.361"N	80°57'20.646"W	225.76	57.405	0.98	0.41	-2.59	
1632.00	21.620	55.010	1596.30	-58.46	141.16	217.93	1652946.25	14313197.16	39°24'55.554"N	80°57'20.292"W	259.65	57.068	1.48	1.47	0.40	
1726.00	23.610	57.070	1683.07	-67.20	161.32	247.92	1652976.22	14313217.32	39°24'55.753"N	80°57'19.910"W	295.79	56.948	2.28	2.12	2.19	
1821.00	26.820	59.910	1769.01	-75.27	182.42	282.44	1653010.73	14313238.40	39°24'55.962"N	80°57'19.470"W	336.23	57.143	3.61	3.38	2.99	
1916.00	27.410	62.100	1853.57	-82.09	203.40	320.31	1653048.59	14313259.37	39°24'56.169"N	80°57'18.988"W	379.43	57.585	1.22	0.62	2.31	



Actual Wellpath Report

Orvis Unit 2H AWP Proj: 17111'

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Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #12
Area	Tyler County, WV	Well	Orvis Unit 2H
Field	Tyler	Wellbore	Orvis Unit 2H AWB
Facility	Sine Pad		

WELLPATH DATA (212 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
2011.00	26.320	63.200	1938.32	-87.65	223.12	358.44	1653086.70	14313279.09	39°24'56.364"N	80°57'18.502"W	422.21	58.098	1.26	-1.15	1.16	
2105.00	25.810	62.500	2022.76	-92.85	241.97	395.19	1653123.43	14313297.93	39°24'56.550"N	80°57'18.033"W	463.38	58.522	0.63	-0.54	-0.74	
2200.00	26.510	62.080	2108.02	-98.53	261.45	432.27	1653160.50	14313317.40	39°24'56.742"N	80°57'17.561"W	505.18	58.833	0.76	0.74	-0.44	
2295.00	26.950	61.160	2192.87	-104.81	281.76	469.86	1653198.07	14313337.70	39°24'56.942"N	80°57'17.082"W	547.87	59.050	0.64	0.46	-0.97	
2390.00	26.570	59.270	2277.70	-112.14	303.00	506.98	1653235.18	14313358.94	39°24'57.152"N	80°57'16.608"W	590.63	59.135	0.98	-0.40	-1.99	
2485.00	26.210	57.170	2362.80	-120.81	325.23	542.87	1653271.06	14313381.16	39°24'57.372"N	80°57'16.151"W	632.84	59.075	1.05	-0.38	-2.21	
2579.00	26.540	58.020	2447.02	-129.84	347.61	578.13	1653306.30	14313403.53	39°24'57.593"N	80°57'15.702"W	674.59	58.983	0.53	0.35	0.90	
2626.00	26.760	58.690	2489.02	-134.12	358.67	596.08	1653324.24	14313414.58	39°24'57.702"N	80°57'15.473"W	695.67	58.964	0.79	0.47	1.43	
2752.00	27.910	56.120	2600.96	-146.84	389.85	644.80	1653372.94	14313445.75	39°24'58.010"N	80°57'14.852"W	753.49	58.843	1.31	0.91	-2.04	WFT EM <8-3/4">(2616')(2742'-6099')
2847.00	28.070	58.170	2684.85	-156.81	414.03	682.25	1653410.38	14313469.92	39°24'58.249"N	80°57'14.375"W	798.05	58.748	1.03	0.17	2.16	
2942.00	28.380	60.540	2768.55	-165.17	436.92	720.90	1653449.01	14313492.81	39°24'58.475"N	80°57'13.882"W	842.97	58.781	1.22	0.33	2.49	
3036.00	29.060	62.910	2850.99	-171.72	458.31	760.68	1653488.77	14313514.18	39°24'58.686"N	80°57'13.375"W	888.07	58.931	1.41	0.72	2.52	
3131.00	29.400	62.880	2933.89	-177.52	479.45	801.97	1653530.05	14313535.31	39°24'58.895"N	80°57'12.849"W	934.36	59.128	0.36	0.36	-0.03	
3226.00	29.830	60.930	3016.49	-184.20	501.56	843.38	1653571.44	14313557.41	39°24'59.113"N	80°57'12.321"W	981.25	59.260	1.11	0.45	-2.05	
3326.00	30.270	59.200	3103.05	-192.91	526.55	886.77	1653614.81	14313582.39	39°24'59.360"N	80°57'11.768"W	1031.31	59.299	0.97	0.44	-1.73	
3421.00	29.320	59.690	3185.49	-201.63	550.55	927.41	1653655.44	14313606.38	39°24'59.597"N	80°57'11.250"W	1078.52	59.305	1.03	-1.00	0.52	
3516.00	28.910	58.640	3268.48	-210.38	574.24	967.10	1653695.12	14313630.06	39°24'59.831"N	80°57'10.744"W	1124.74	59.299	0.69	-0.43	-1.11	
3611.00	28.260	59.050	3351.90	-219.24	597.75	1006.00	1653734.00	14313653.57	39°25'00.063"N	80°57'10.248"W	1170.19	59.282	0.71	-0.68	0.43	
3706.00	26.500	58.900	3436.26	-227.65	620.27	1043.44	1653771.42	14313676.08	39°25'00.285"N	80°57'09.771"W	1213.88	59.271	1.85	-1.85	-0.16	
3801.00	26.150	57.170	3521.41	-236.44	642.57	1079.18	1653807.15	14313698.37	39°25'00.505"N	80°57'09.316"W	1255.99	59.230	0.89	-0.37	-1.82	
3896.00	26.460	56.780	3606.57	-245.98	665.51	1114.47	1653842.43	14313721.30	39°25'00.732"N	80°57'08.866"W	1298.06	59.156	0.37	0.33	-0.41	
3990.00	27.240	58.320	3690.44	-255.18	688.28	1150.30	1653878.24	14313744.06	39°25'00.957"N	80°57'08.409"W	1340.50	59.106	1.11	0.83	1.64	
4085.00	27.550	58.160	3774.78	-264.15	711.29	1187.47	1653915.39	14313767.06	39°25'01.184"N	80°57'07.935"W	1384.20	59.079	0.34	0.33	-0.17	
4180.00	27.510	58.820	3859.03	-272.98	734.24	1224.90	1653952.81	14313790.00	39°25'01.411"N	80°57'07.458"W	1428.11	59.060	0.32	-0.04	0.69	
4275.00	27.530	58.200	3943.28	-281.78	757.17	1262.33	1653990.23	14313812.92	39°25'01.637"N	80°57'06.981"W	1472.00	59.044	0.30	0.02	-0.65	
4369.00	27.620	58.300	4026.60	-290.70	780.07	1299.34	1654027.22	14313835.81	39°25'01.863"N	80°57'06.510"W	1515.51	59.021	0.11	0.10	0.11	
4464.00	27.860	58.120	4110.68	-299.80	803.36	1336.92	1654064.79	14313859.10	39°25'02.093"N	80°57'06.030"W	1559.73	58.998	0.27	0.25	-0.19	
4559.00	28.210	58.670	4194.53	-308.84	826.76	1374.95	1654102.80	14313882.49	39°25'02.324"N	80°57'05.546"W	1604.37	58.981	0.46	0.37	0.58	
4654.00	28.220	57.600	4278.25	-318.13	850.47	1413.09	1654140.93	14313906.19	39°25'02.558"N	80°57'05.060"W	1649.28	58.958	0.53	0.01	-1.13	
4749.00	28.340	58.380	4361.91	-327.56	874.33	1451.26	1654179.08	14313930.03	39°25'02.794"N	80°57'04.573"W	1694.28	58.933	0.41	0.13	0.82	



Actual Wellpath Report

Orvis Unit 2H AWP Proj: 17111'

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Field	Tyler	Wellbore	Orvis Unit 2H AWB
Facility	Sine Pad		

WELLPATH DATA (212 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
4844.00	27.920	58.710	4445.69	-336.52	897.70	1489.47	1654217.27	14313953.40	39°25'03.025"N	80°57'04.086"W	1739.07	58.923	0.47	-0.44	0.35	
4939.00	27.860	59.800	4529.65	-344.86	920.42	1527.66	1654255.45	14313976.11	39°25'03.249"N	80°57'03.599"W	1783.51	58.931	0.54	-0.06	1.15	
5034.00	27.430	59.850	4613.81	-352.71	942.57	1565.76	1654293.54	14313998.25	39°25'03.468"N	80°57'03.114"W	1827.58	58.953	0.45	-0.45	0.05	
5129.00	27.620	59.500	4698.05	-360.64	964.74	1603.66	1654331.42	14314020.41	39°25'03.687"N	80°57'02.631"W	1871.48	58.969	0.26	0.20	-0.37	
5224.00	27.380	60.710	4782.32	-368.24	986.60	1641.69	1654369.43	14314042.27	39°25'03.903"N	80°57'02.146"W	1915.34	58.995	0.64	-0.25	1.27	
5318.00	26.770	60.170	4866.02	-375.40	1007.71	1678.90	1654406.63	14314063.36	39°25'04.111"N	80°57'01.672"W	1958.11	59.027	0.70	-0.65	-0.57	
5413.00	27.040	59.670	4950.73	-382.99	1029.26	1716.10	1654443.81	14314084.90	39°25'04.324"N	80°57'01.198"W	2001.09	59.046	0.37	0.28	-0.53	
5508.00	27.210	59.430	5035.29	-390.90	1051.21	1753.44	1654481.14	14314106.84	39°25'04.541"N	80°57'00.722"W	2044.40	59.057	0.21	0.18	-0.25	
5603.00	27.380	59.550	5119.71	-398.91	1073.32	1790.97	1654518.65	14314128.95	39°25'04.759"N	80°57'00.243"W	2087.97	59.066	0.19	0.18	0.13	
5698.00	27.040	60.340	5204.20	-406.55	1095.08	1828.57	1654556.24	14314150.70	39°25'04.974"N	80°56'59.764"W	2131.40	59.084	0.52	-0.36	0.83	
5793.00	26.950	61.880	5288.85	-413.28	1115.91	1866.32	1654593.97	14314171.52	39°25'05.180"N	80°56'59.283"W	2174.49	59.124	0.74	-0.09	1.62	
5856.00	26.980	64.850	5345.00	-416.62	1128.72	1891.85	1654619.49	14314184.32	39°25'05.306"N	80°56'58.957"W	2202.97	59.179	2.14	0.05	4.71	
5888.00	26.780	71.680	5373.55	-417.08	1134.07	1905.27	1654632.90	14314189.67	39°25'05.359"N	80°56'58.786"W	2217.24	59.238	9.67	-0.62	21.34	
5919.00	27.600	77.130	5401.13	-416.00	1137.86	1918.90	1654646.53	14314193.47	39°25'05.396"N	80°56'58.613"W	2230.90	59.333	8.45	2.65	17.58	
5951.00	28.490	81.780	5429.37	-413.54	1140.61	1933.68	1654661.31	14314196.21	39°25'05.423"N	80°56'58.424"W	2245.02	59.465	7.37	2.78	14.53	
5983.00	28.500	86.380	5457.50	-409.85	1142.18	1948.86	1654676.48	14314197.78	39°25'05.439"N	80°56'58.231"W	2258.90	59.626	6.86	0.03	14.37	
6014.00	28.590	91.170	5484.74	-405.11	1142.50	1963.66	1654691.27	14314198.10	39°25'05.442"N	80°56'58.042"W	2271.84	59.808	7.39	0.29	15.45	
6046.00	28.560	96.650	5512.84	-398.93	1141.45	1978.91	1654706.52	14314197.05	39°25'05.431"N	80°56'57.848"W	2284.51	60.023	8.19	-0.09	17.13	
6078.00	28.360	101.870	5540.98	-391.50	1139.00	1993.95	1654721.55	14314194.60	39°25'05.407"N	80°56'57.656"W	2296.34	60.264	7.80	-0.62	16.31	
6109.00	28.930	105.740	5568.19	-383.25	1135.45	2008.37	1654735.97	14314191.06	39°25'05.372"N	80°56'57.473"W	2307.12	60.518	6.26	1.84	12.48	
6181.00	30.590	112.310	5630.71	-360.78	1123.77	2042.09	1654769.68	14314179.38	39°25'05.256"N	80°56'57.043"W	2330.88	61.176	5.08	2.31	9.13	BH AT Curve <8-1/2"> (6109')(6181'-17087')
6231.00	31.350	116.270	5673.58	-342.84	1113.18	2065.53	1654793.10	14314168.80	39°25'05.151"N	80°56'56.745"W	2346.40	61.678	4.35	1.52	7.92	
6279.00	33.360	121.760	5714.14	-323.47	1100.71	2087.96	1654815.52	14314156.32	39°25'05.028"N	80°56'56.459"W	2360.32	62.203	7.41	4.19	11.44	
6326.00	35.740	126.990	5752.85	-301.82	1085.64	2109.92	1654837.47	14314141.26	39°25'04.879"N	80°56'56.179"W	2372.84	62.772	8.09	5.06	11.13	
6374.00	38.820	131.480	5791.05	-276.86	1067.23	2132.39	1654859.94	14314122.86	39°25'04.697"N	80°56'55.893"W	2384.55	63.413	8.56	6.42	9.35	
6421.00	41.990	135.850	5826.84	-249.57	1046.19	2154.39	1654881.93	14314101.82	39°25'04.489"N	80°56'55.613"W	2394.97	64.099	9.04	6.74	9.30	
6468.00	45.560	139.870	5860.78	-219.48	1022.06	2176.17	1654903.69	14314077.71	39°25'04.250"N	80°56'55.336"W	2404.23	64.842	9.63	7.60	8.55	
6515.00	48.890	143.180	5892.70	-186.77	995.05	2197.60	1654925.12	14314050.71	39°25'03.983"N	80°56'55.063"W	2412.38	65.640	8.77	7.09	7.04	
6563.00	51.860	145.810	5923.31	-151.17	964.95	2219.05	1654946.56	14314020.62	39°25'03.686"N	80°56'54.789"W	2419.78	66.498	7.49	6.19	5.48	
6604.00†	54.562	147.923	5947.86	-119.21	937.45	2236.99	1654964.49	14313993.14	39°25'03.414"N	80°56'54.561"W	2425.48	67.263	7.77	6.59	5.15	Middlesex: 6604' MD



Actual Wellpath Report

Orvis Unit 2H AWP Proj: 17111'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION		Slot #12
Area	Tyler County, WV		Well
Field	Tyler		Orvis Unit 2H
Facility	Sine Pad		Wellbore
			Orvis Unit 2H AWB

WELLPATH DATA (212 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
6610.00	54.960	148.220	5951.33	-114.41	933.29	2239.58	1654967.08	14313988.98	39°25'03.373"N	80°56'54.528"W	2426.26	67.377	7.77	6.64	4.95	
6657.00	58.220	150.640	5977.20	-75.86	899.51	2259.52	1654987.01	14313955.21	39°25'03.039"N	80°56'54.274"W	2431.98	68.292	8.16	6.94	5.15	
6704.00	62.150	153.130	6000.57	-35.51	863.55	2278.71	1655006.20	14313919.26	39°25'02.683"N	80°56'54.030"W	2436.85	69.245	9.54	8.36	5.30	
6752.00	65.580	155.670	6021.71	7.36	824.69	2297.31	1655024.79	14313880.42	39°25'02.299"N	80°56'53.793"W	2440.85	70.253	8.58	7.15	5.29	
6790.00†	68.342	157.782	6036.59	42.26	792.57	2311.12	1655038.59	14313848.31	39°25'01.981"N	80°56'53.618"W	2443.25	71.071	8.89	7.27	5.56	Burkett: 6790' MD
6799.00	69.000	158.270	6039.86	50.64	784.80	2314.26	1655041.73	14313840.54	39°25'01.904"N	80°56'53.578"W	2443.71	71.267	8.89	7.31	5.42	
6846.00	71.480	160.310	6055.75	94.87	743.43	2329.89	1655057.36	14313799.19	39°25'01.495"N	80°56'53.379"W	2445.63	72.303	6.67	5.28	4.34	
6860.00†	72.287	160.524	6060.10	108.17	730.89	2334.35	1655061.82	14313786.66	39°25'01.372"N	80°56'53.322"W	2446.10	72.615	5.94	5.76	1.53	Tully: 6860' MD
6893.00	74.190	161.020	6069.62	139.76	701.06	2344.76	1655072.22	14313756.83	39°25'01.077"N	80°56'53.190"W	2447.32	73.354	5.94	5.77	1.50	
6898.00†	74.370	161.028	6070.97	144.58	696.51	2346.32	1655073.78	14313752.28	39°25'01.032"N	80°56'53.170"W	2447.52	73.466	3.61	3.60	0.17	Marcellus POE: 6898' MD
6941.00	75.920	161.100	6082.00	186.13	657.19	2359.81	1655087.26	14313712.99	39°25'00.643"N	80°56'52.998"W	2449.61	74.438	3.61	3.60	0.17	
6988.00	79.480	161.420	6092.01	232.04	613.71	2374.56	1655102.01	14313669.53	39°25'00.213"N	80°56'52.811"W	2452.59	75.509	7.60	7.57	0.68	
7035.00	84.110	161.770	6098.71	278.53	569.59	2389.24	1655116.68	14313625.42	39°24'59.777"N	80°56'52.624"W	2456.20	76.591	9.88	9.85	0.74	
7082.00	88.280	161.630	6101.83	325.39	525.07	2403.96	1655131.40	14313580.92	39°24'59.337"N	80°56'52.437"W	2460.64	77.679	8.88	8.87	-0.30	
7129.00	88.980	161.720	6102.96	372.36	480.47	2418.74	1655146.17	14313536.33	39°24'58.896"N	80°56'52.249"W	2466.00	78.765	1.50	1.49	0.19	
7224.00	88.710	160.700	6104.87	467.32	390.55	2449.33	1655176.75	14313446.45	39°24'58.007"N	80°56'51.860"W	2480.27	80.940	1.11	-0.28	-1.07	
7319.00	88.890	159.600	6106.86	562.30	301.22	2481.58	1655208.98	14313357.15	39°24'57.124"N	80°56'51.449"W	2499.79	83.079	1.17	0.19	-1.16	
7413.00	88.680	158.480	6108.85	656.26	213.46	2515.20	1655242.59	14313269.43	39°24'56.256"N	80°56'51.022"W	2524.24	85.149	1.21	-0.22	-1.19	
7508.00	88.650	157.590	6111.07	751.17	125.38	2550.72	1655278.10	14313181.39	39°24'55.386"N	80°56'50.570"W	2553.80	87.186	0.94	-0.03	-0.94	
7603.00	88.430	156.760	6113.49	846.02	37.85	2587.56	1655314.92	14313093.89	39°24'54.520"N	80°56'50.101"W	2587.84	89.162	0.90	-0.23	-0.87	
7698.00	88.550	157.680	6115.99	940.87	-49.71	2624.33	1655351.68	14313006.37	39°24'53.655"N	80°56'49.633"W	2624.80	91.085	0.98	0.13	0.97	
7792.00	89.170	159.410	6117.86	1034.81	-137.18	2658.71	1655386.04	14312918.94	39°24'52.790"N	80°56'49.196"W	2662.24	92.954	1.95	0.66	1.84	
7887.00	89.200	161.200	6119.21	1129.80	-226.61	2690.72	1655418.04	14312829.54	39°24'51.906"N	80°56'48.789"W	2700.24	94.814	1.88	0.03	1.88	
7981.00	89.140	162.600	6120.57	1223.74	-315.95	2719.92	1655447.23	14312740.24	39°24'51.023"N	80°56'48.417"W	2738.21	96.626	1.49	-0.06	1.49	
8075.00	89.110	161.910	6122.01	1317.66	-405.46	2748.56	1655475.86	14312650.76	39°24'50.138"N	80°56'48.053"W	2778.31	98.392	0.73	-0.03	-0.73	
8171.00	89.230	159.180	6123.40	1413.64	-495.96	2780.53	1655507.82	14312560.30	39°24'49.243"N	80°56'47.646"W	2824.42	100.113	2.85	0.12	-2.84	
8265.00	89.230	158.300	6124.66	1507.60	-583.56	2814.61	1655541.88	14312472.74	39°24'48.377"N	80°56'47.213"W	2874.47	101.713	0.94	0.00	-0.94	
8360.00	89.320	158.760	6125.87	1602.56	-671.96	2849.38	1655576.64	14312384.37	39°24'47.504"N	80°56'46.770"W	2927.54	103.269	0.49	0.09	0.48	
8454.00	89.260	158.740	6127.03	1696.53	-759.56	2883.45	1655610.69	14312296.81	39°24'46.638"N	80°56'46.337"W	2981.81	104.758	0.07	-0.06	-0.02	
8548.00	89.200	157.790	6128.29	1790.47	-846.87	2918.25	1655645.48	14312209.53	39°24'45.774"N	80°56'45.894"W	3038.65	106.183	1.01	-0.06	-1.01	



Actual Wellpath Report

Orvis Unit 2H AWP Proj: 17111'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #12
Area	Tyler County, WV		Well	Orvis Unit 2H
Field	Tyler		Wellbore	Orvis Unit 2H AWB
Facility	Sine Pad			

WELLPATH DATA (212 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
8643.00	88.830	157.790	6129.93	1885.38	-934.81	2954.16	1655681.37	14312121.63	39°24'44.905"N	80°56'45.437"W	3098.53	107.559	0.39	-0.39	0.00	
8738.00	88.980	157.870	6131.74	1980.29	-1022.77	2990.00	1655717.20	14312033.70	39°24'44.035"N	80°56'44.981"W	3160.09	108.884	0.18	0.16	0.08	
8832.00	88.710	156.720	6133.64	2074.16	-1109.46	3026.27	1655753.46	14311947.04	39°24'43.178"N	80°56'44.520"W	3223.24	110.133	1.26	-0.29	-1.22	
8927.00	89.010	158.070	6135.53	2169.03	-1197.14	3062.78	1655789.95	14311859.40	39°24'42.312"N	80°56'44.056"W	3288.43	111.349	1.46	0.32	1.42	
9021.00	88.580	160.310	6137.51	2262.99	-1284.99	3096.17	1655823.33	14311771.59	39°24'41.443"N	80°56'43.631"W	3352.23	112.540	2.43	-0.46	2.38	
9116.00	88.920	162.260	6139.58	2357.95	-1374.94	3126.64	1655853.79	14311681.67	39°24'40.554"N	80°56'43.243"W	3415.60	113.737	2.08	0.36	2.05	
9210.00	88.800	164.860	6141.45	2451.75	-1465.07	3153.24	1655880.37	14311591.58	39°24'39.663"N	80°56'42.905"W	3476.97	114.921	2.77	-0.13	2.77	
9305.00	89.260	167.260	6143.06	2546.21	-1557.25	3176.12	1655903.24	14311499.43	39°24'38.752"N	80°56'42.614"W	3537.34	116.119	2.57	0.48	2.53	
9400.00	89.350	167.610	6144.21	2640.42	-1649.97	3196.78	1655923.90	14311406.75	39°24'37.835"N	80°56'42.352"W	3597.47	117.300	0.38	0.09	0.37	
9495.00	89.780	165.030	6144.93	2734.85	-1742.26	3219.25	1655946.36	14311314.50	39°24'36.923"N	80°56'42.066"W	3660.47	118.422	2.75	0.45	-2.72	
9589.00	91.140	161.660	6144.18	2828.67	-1832.30	3246.18	1655973.28	14311224.49	39°24'36.033"N	80°56'41.724"W	3727.60	119.442	3.87	1.45	-3.59	
9684.00	90.220	156.930	6143.05	2923.63	-1921.13	3279.76	1656006.84	14311135.70	39°24'35.155"N	80°56'41.297"W	3801.00	120.360	5.07	-0.97	-4.98	
9779.00	89.880	155.000	6142.96	3018.38	-2007.89	3318.45	1656045.52	14311048.97	39°24'34.297"N	80°56'40.804"W	3878.63	121.177	2.06	-0.36	-2.03	
9874.00	89.690	155.120	6143.32	3113.02	-2094.03	3358.51	1656085.56	14310962.87	39°24'33.445"N	80°56'40.295"W	3957.85	121.944	0.24	-0.20	0.13	
9968.00	89.570	154.230	6143.93	3206.59	-2179.00	3398.72	1656125.75	14310877.94	39°24'32.605"N	80°56'39.783"W	4037.24	122.665	0.96	-0.13	-0.95	
10063.00	89.540	154.230	6144.67	3301.10	-2264.55	3440.02	1656167.04	14310792.42	39°24'31.760"N	80°56'39.258"W	4118.48	123.357	0.03	-0.03	0.00	
10157.00	89.660	154.950	6145.32	3394.66	-2349.45	3480.35	1656207.35	14310707.55	39°24'30.920"N	80°56'38.745"W	4199.14	124.022	0.78	0.13	0.77	
10251.00	89.450	155.350	6146.05	3488.31	-2434.74	3519.85	1656246.84	14310622.29	39°24'30.077"N	80°56'38.242"W	4279.88	124.672	0.48	-0.22	0.43	
10346.00	89.510	156.600	6146.91	3583.06	-2521.51	3558.53	1656285.50	14310535.56	39°24'29.219"N	80°56'37.750"W	4361.32	125.321	1.32	0.06	1.32	
10441.00	89.480	157.860	6147.75	3677.94	-2609.10	3595.29	1656322.25	14310448.01	39°24'28.353"N	80°56'37.282"W	4442.24	125.968	1.33	-0.03	1.33	
10536.00	89.170	160.010	6148.87	3772.91	-2697.74	3629.43	1656356.38	14310359.40	39°24'27.477"N	80°56'36.848"W	4522.23	126.623	2.29	-0.33	2.26	
10630.00	89.320	161.310	6150.11	3866.89	-2786.43	3660.56	1656387.49	14310270.75	39°24'26.600"N	80°56'36.452"W	4600.42	127.278	1.39	0.16	1.38	
10724.00	88.770	162.490	6151.68	3960.83	-2875.76	3689.76	1656416.68	14310181.45	39°24'25.717"N	80°56'36.081"W	4678.07	127.932	1.38	-0.59	1.26	
10819.00	89.010	165.910	6153.52	4055.55	-2967.14	3715.62	1656442.53	14310090.11	39°24'24.814"N	80°56'35.752"W	4754.97	128.609	3.61	0.25	3.60	
10913.00	90.090	166.480	6154.26	4149.01	-3058.42	3738.05	1656464.95	14309998.87	39°24'23.912"N	80°56'35.467"W	4829.80	129.290	1.30	1.15	0.61	
11008.00	89.910	162.280	6154.26	4243.73	-3149.89	3763.62	1656490.51	14309907.43	39°24'23.007"N	80°56'35.142"W	4907.82	129.927	4.43	-0.19	-4.42	
11103.00	89.540	159.980	6154.71	4338.70	-3239.78	3794.34	1656521.22	14309817.58	39°24'22.119"N	80°56'34.751"W	4989.31	130.492	2.45	-0.39	-2.42	
11198.00	89.720	161.170	6155.33	4433.69	-3329.37	3825.94	1656552.80	14309728.03	39°24'21.233"N	80°56'34.350"W	5071.73	131.030	1.27	0.19	1.25	
11293.00	89.410	161.160	6156.05	4528.67	-3419.28	3856.61	1656583.46	14309638.16	39°24'20.344"N	80°56'33.960"W	5154.11	131.560	0.33	-0.33	-0.01	
11388.00	89.480	161.350	6156.97	4623.65	-3509.23	3887.13	1656613.97	14309548.24	39°24'19.455"N	80°56'33.571"W	5236.84	132.075	0.21	0.07	0.20	



Actual Wellpath Report

Orvis Unit 2H AWP Proj: 17111'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #12
Area	Tyler County, WV	Well	Orvis Unit 2H
Field	Tyler	Wellbore	Orvis Unit 2H AWB
Facility	Sine Pad		

WELLPATH DATA (212 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
11483.00	90.060	165.860	6157.35	4718.44	-3600.35	3913.94	1656640.77	14309457.16	39°24'18.554"N	80°56'33.231"W	5318.03	132.610	4.79	0.61	4.75	
11578.00	90.180	163.840	6157.15	4813.11	-3692.04	3938.77	1656665.59	14309365.50	39°24'17.648"N	80°56'32.915"W	5398.61	133.148	2.13	0.13	-2.13	
11672.00	90.180	160.430	6156.85	4907.04	-3781.49	3967.60	1656694.41	14309276.08	39°24'16.764"N	80°56'32.549"W	5481.02	133.624	3.63	0.00	-3.63	
11766.00	89.940	157.830	6156.76	5001.01	-3869.32	4001.08	1656727.88	14309188.30	39°24'15.895"N	80°56'32.123"W	5565.99	134.041	2.78	-0.26	-2.77	
11861.00	90.250	159.470	6156.60	5095.98	-3957.80	4035.67	1656762.45	14309099.85	39°24'15.021"N	80°56'31.683"W	5652.50	134.442	1.76	0.33	1.73	
11955.00	90.120	161.240	6156.29	5189.98	-4046.32	4067.27	1656794.04	14309011.36	39°24'14.146"N	80°56'31.281"W	5737.19	134.852	1.89	-0.14	1.88	
12050.00	90.490	161.690	6155.79	5284.95	-4136.39	4097.47	1656824.22	14308921.33	39°24'13.255"N	80°56'30.897"W	5822.28	135.271	0.61	0.39	0.47	
12145.00	91.020	158.560	6154.54	5379.93	-4225.71	4129.76	1656856.50	14308832.04	39°24'12.372"N	80°56'30.486"W	5908.60	135.658	3.34	0.56	-3.29	
12240.00	90.060	155.960	6153.64	5474.80	-4313.32	4166.47	1656893.20	14308744.48	39°24'11.506"N	80°56'30.019"W	5997.02	135.992	2.92	-1.01	-2.74	
12334.00	90.180	156.700	6153.44	5568.60	-4399.41	4204.21	1656930.93	14308658.42	39°24'10.655"N	80°56'29.539"W	6085.24	136.300	0.80	0.13	0.79	
12429.00	90.090	158.290	6153.22	5663.50	-4487.17	4240.57	1656967.27	14308570.69	39°24'09.787"N	80°56'29.077"W	6173.91	136.618	1.68	-0.09	1.67	
12523.00	90.150	158.300	6153.02	5757.45	-4574.51	4275.34	1657002.02	14308483.39	39°24'08.924"N	80°56'28.635"W	6261.36	136.936	0.06	0.06	0.01	
12618.00	89.970	156.780	6152.92	5852.35	-4662.30	4311.63	1657038.30	14308395.64	39°24'08.056"N	80°56'28.173"W	6350.37	137.238	1.61	-0.19	-1.60	
12713.00	90.120	156.080	6152.85	5947.16	-4749.37	4349.62	1657076.27	14308308.60	39°24'07.195"N	80°56'27.690"W	6440.16	137.516	0.75	0.16	-0.74	
12807.00	90.060	157.610	6152.70	6041.01	-4835.80	4386.58	1657113.22	14308222.21	39°24'06.341"N	80°56'27.220"W	6528.93	137.789	1.63	-0.06	1.63	
12902.00	90.090	160.050	6152.58	6135.98	-4924.38	4420.88	1657147.51	14308133.66	39°24'05.465"N	80°56'26.784"W	6617.68	138.084	2.57	0.03	2.57	
12996.00	90.030	162.790	6152.48	6229.94	-5013.47	4450.83	1657177.45	14308044.60	39°24'04.584"N	80°56'26.403"W	6704.09	138.402	2.92	-0.06	2.91	
13091.00	90.180	166.220	6152.30	6324.65	-5105.00	4476.21	1657202.81	14307953.11	39°24'03.679"N	80°56'26.080"W	6789.51	138.755	3.61	0.16	3.61	
13185.00	90.220	167.450	6151.98	6417.99	-5196.53	4497.62	1657224.21	14307861.62	39°24'02.775"N	80°56'25.808"W	6872.59	139.124	1.31	0.04	1.31	
13280.00	90.370	165.080	6151.49	6512.43	-5288.81	4520.17	1657246.76	14307769.38	39°24'01.862"N	80°56'25.522"W	6957.26	139.481	2.50	0.16	-2.49	
13374.00	90.580	160.430	6150.71	6606.30	-5378.55	4548.03	1657274.60	14307679.67	39°24'00.975"N	80°56'25.168"W	7043.68	139.783	4.95	0.22	-4.95	
13469.00	90.150	156.580	6150.10	6701.24	-5466.93	4582.83	1657309.39	14307591.33	39°24'00.102"N	80°56'24.725"W	7133.70	140.027	4.08	-0.45	-4.05	
13564.00	90.180	156.360	6149.83	6796.05	-5554.03	4620.76	1657347.30	14307504.26	39°23'59.240"N	80°56'24.243"W	7224.86	140.241	0.23	0.03	-0.23	
13658.00	90.120	157.850	6149.58	6889.92	-5640.62	4657.33	1657383.86	14307417.71	39°23'58.384"N	80°56'23.778"W	7314.87	140.454	1.59	-0.06	1.59	
13753.00	90.150	158.740	6149.36	6984.88	-5728.88	4692.46	1657418.98	14307329.48	39°23'57.512"N	80°56'23.331"W	7405.35	140.679	0.94	0.03	0.94	
13848.00	89.970	160.560	6149.26	7079.87	-5817.95	4725.50	1657452.00	14307240.45	39°23'56.631"N	80°56'22.911"W	7495.25	140.916	1.93	-0.19	1.92	
13943.00	89.940	162.440	6149.33	7174.84	-5908.04	4755.64	1657482.13	14307150.40	39°23'55.741"N	80°56'22.528"W	7584.26	141.168	1.98	-0.03	1.98	
14037.00	89.910	164.220	6149.46	7268.68	-5998.08	4782.60	1657509.08	14307060.39	39°23'54.851"N	80°56'22.185"W	7671.39	141.433	1.89	-0.03	1.89	
14132.00	89.660	165.020	6149.81	7363.38	-6089.68	4807.80	1657534.27	14306968.83	39°23'53.945"N	80°56'21.865"W	7758.81	141.709	0.88	-0.26	0.84	
14226.00	89.750	162.990	6150.30	7457.15	-6180.03	4833.70	1657560.16	14306878.51	39°23'53.052"N	80°56'21.536"W	7845.85	141.969	2.16	0.10	-2.16	



Actual Wellpath Report

Orvis Unit 2H AWP Proj: 17111'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #12
Area	Tyler County, WV		Well	Orvis Unit 2H
Field	Tyler		Wellbore	Orvis Unit 2H AWB
Facility	Sine Pad			

WELLPATH DATA (212 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
14321.00	89.720	161.600	6150.74	7552.08	-6270.53	4862.59	1657589.04	14306788.05	39°23'52.157"N	80°56'21.168"W	7935.00	142.208	1.46	-0.03	-1.46	
14416.00	89.380	159.280	6151.48	7647.07	-6360.04	4894.39	1657620.83	14306698.58	39°23'51.272"N	80°56'20.764"W	8025.28	142.420	2.47	-0.36	-2.44	
14510.00	89.380	155.330	6152.50	7740.93	-6446.74	4930.65	1657657.07	14306611.91	39°23'50.415"N	80°56'20.303"W	8116.14	142.590	4.20	0.00	-4.20	
14604.00	89.320	154.180	6153.57	7834.52	-6531.75	4970.74	1657697.14	14306526.93	39°23'49.575"N	80°56'19.793"W	8208.05	142.728	1.22	-0.06	-1.22	
14699.00	89.940	156.390	6154.18	7929.18	-6618.04	5010.45	1657736.84	14306440.67	39°23'48.722"N	80°56'19.288"W	8300.79	142.871	2.42	0.65	2.33	
14794.00	89.910	158.120	6154.31	8024.06	-6705.65	5047.18	1657773.55	14306353.10	39°23'47.856"N	80°56'18.821"W	8392.84	143.032	1.82	-0.03	1.82	
14888.00	89.910	158.200	6154.45	8118.01	-6792.91	5082.15	1657808.51	14306265.88	39°23'46.993"N	80°56'18.376"W	8483.62	143.198	0.09	0.00	0.09	
14983.00	90.030	158.250	6154.50	8212.96	-6881.13	5117.39	1657843.74	14306177.70	39°23'46.121"N	80°56'17.928"W	8575.41	143.362	0.14	0.13	0.05	
15078.00	89.970	159.330	6154.50	8307.93	-6969.69	5151.76	1657878.09	14306089.17	39°23'45.245"N	80°56'17.491"W	8667.02	143.529	1.14	-0.06	1.14	
15172.00	89.970	160.250	6154.55	8401.93	-7057.90	5184.23	1657910.55	14306000.99	39°23'44.373"N	80°56'17.078"W	8757.30	143.702	0.98	0.00	0.98	
15267.00	90.000	161.450	6154.58	8496.92	-7147.64	5215.40	1657941.70	14305911.29	39°23'43.486"N	80°56'16.682"W	8848.12	143.883	1.26	0.03	1.26	
15362.00	90.030	161.590	6154.55	8591.89	-7237.74	5245.51	1657971.80	14305821.22	39°23'42.595"N	80°56'16.299"W	8938.70	144.068	0.15	0.03	0.15	
15456.00	89.970	163.300	6154.55	8685.81	-7327.36	5273.86	1658000.14	14305731.64	39°23'41.709"N	80°56'15.939"W	9027.95	144.256	1.82	-0.06	1.82	
15551.00	90.000	163.750	6154.58	8780.64	-7418.46	5300.80	1658027.07	14305640.58	39°23'40.809"N	80°56'15.596"W	9117.68	144.453	0.47	0.03	0.47	
15645.00	90.120	160.910	6154.48	8874.55	-7508.02	5329.33	1658055.59	14305551.06	39°23'39.923"N	80°56'15.234"W	9207.18	144.632	3.02	0.13	-3.02	
15739.00	89.970	160.960	6154.40	8968.54	-7596.86	5360.04	1658086.28	14305462.25	39°23'39.045"N	80°56'14.844"W	9297.44	144.795	0.17	-0.16	0.05	
15834.00	90.030	160.310	6154.40	9063.54	-7686.49	5391.54	1658117.77	14305372.66	39°23'38.159"N	80°56'14.443"W	9388.86	144.953	0.69	0.06	-0.68	
15928.00	90.120	159.950	6154.28	9157.54	-7774.89	5423.49	1658149.71	14305284.29	39°23'37.285"N	80°56'14.037"W	9479.62	145.102	0.39	0.10	-0.38	
16022.00	90.090	157.450	6154.11	9251.50	-7862.46	5457.63	1658183.84	14305196.75	39°23'36.419"N	80°56'13.603"W	9571.00	145.234	2.66	-0.03	-2.66	
16117.00	90.030	160.650	6154.01	9346.47	-7951.17	5491.59	1658217.79	14305108.08	39°23'35.542"N	80°56'13.171"W	9663.27	145.369	3.37	-0.06	3.37	
16212.00	90.030	160.490	6153.96	9441.47	-8040.76	5523.19	1658249.38	14305018.53	39°23'34.657"N	80°56'12.769"W	9754.97	145.515	0.17	0.00	-0.17	
16306.00	90.030	158.720	6153.91	9535.46	-8128.86	5555.95	1658282.12	14304930.46	39°23'33.786"N	80°56'12.353"W	9846.17	145.648	1.88	0.00	-1.88	
16400.00	89.880	158.350	6153.98	9629.43	-8216.34	5590.35	1658316.50	14304843.02	39°23'32.921"N	80°56'11.915"W	9937.82	145.769	0.42	-0.16	-0.39	
16495.00	89.660	156.710	6154.37	9724.33	-8304.13	5626.66	1658352.80	14304755.27	39°23'32.053"N	80°56'11.454"W	10030.84	145.879	1.74	-0.23	-1.73	
16590.00	89.690	157.770	6154.90	9819.21	-8391.73	5663.41	1658389.53	14304667.70	39°23'31.187"N	80°56'10.986"W	10124.00	145.985	1.12	0.03	1.12	
16684.00	89.660	157.090	6155.44	9913.11	-8478.53	5699.48	1658425.60	14304580.94	39°23'30.329"N	80°56'10.528"W	10216.14	146.090	0.72	-0.03	-0.72	
16779.00	89.720	158.530	6155.95	10008.03	-8566.49	5735.36	1658461.46	14304493.01	39°23'29.459"N	80°56'10.072"W	10309.18	146.197	1.52	0.06	1.52	
16874.00	89.540	162.080	6156.57	10103.01	-8655.91	5767.37	1658493.46	14304403.62	39°23'28.575"N	80°56'09.665"W	10401.32	146.325	3.74	-0.19	3.74	
16971.00	89.750	164.950	6157.17	10199.83	-8748.92	5794.89	1658520.97	14304310.66	39°23'27.656"N	80°56'09.315"W	10494.01	146.481	2.97	0.22	2.96	
17066.00	89.850	164.930	6157.50	10294.48	-8840.65	5819.58	1658545.64	14304218.96	39°23'26.749"N	80°56'09.001"W	10584.17	146.644	0.11	0.11	-0.02	



Actual Wellpath Report

Orvis Unit 2H AWP Proj: 17111'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #12
Area	Tyler County, WV	Well	Orvis Unit 2H
Field	Tyler	Wellbore	Orvis Unit 2H AWB
Facility	Sine Pad		

WELLPATH DATA (212 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
17087.00	89.850	164.480	6157.55	10315.42	-8860.91	5825.12	1658551.18	14304198.71	39°23'26.549"N	80°56'08.931"W	10604.14	146.679	2.14	0.00	-2.14	
17111.00	89.850	164.480	6157.62	10339.35	-8884.03	5831.54	1658557.60	14304175.60	39°23'26.320"N	80°56'08.849"W	10626.99	146.719	0.00	0.00	0.00	Projected MD at TD: 17111'

HOLE & CASING SECTIONS - Ref Wellbore: Orvis Unit 2H AWB Ref Wellpath: Orvis Unit 2H AWP Proj: 17111'

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
20in Conductor	25.00	105.00	80.00	25.00	105.00	0.00	0.00	0.09	0.15
17.5in Open Hole	105.00	394.30	289.30	105.00	394.30	0.09	0.15	0.51	0.82
13.375in Casing Surface	25.00	394.30	369.30	25.00	394.30	0.00	0.00	0.51	0.82
12.25in Open Hole	394.30	2721.30	2327.00	394.30	2573.79	0.51	0.82	381.94	632.88
9.625in Casing Production	25.00	2721.30	2696.30	25.00	2573.79	0.00	0.00	381.94	632.88
8.75in Open Hole	2721.30	6199.00	3477.70	2573.79	5646.18	381.94	632.88	1120.17	2050.56
8.5in Open Hole	6199.00	17111.00	10912.00	5646.18	6157.62	1120.17	2050.56	-8884.03	5831.54
5.5in Casing Production	25.00	17111.00	17086.00	25.00	6157.62	0.00	0.00	-8884.03	5831.54

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Orvis Unit 2H - POE - Rev-1	6067.00	728.23	2340.54	1655068.00	14313784.00	39°25'01.345"N	80°56'53.243"W	point
Orvis Unit 2H - BHL - Rev-1	6097.00	-8903.64	5830.94	1658557.00	14304156.00	39°23'26.126"N	80°56'08.857"W	point
Orvis Unit 2H - LP - Rev-1	6097.00	541.27	2408.29	1655135.72	14313597.12	39°24'59.497"N	80°56'52.381"W	point



Actual Wellpath Report

Orvis Unit 2H AWP Proj: 17111'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #12
Area	Tyler County, WV	Well	Orvis Unit 2H
Field	Tyler	Wellbore	Orvis Unit 2H AWB
Facility	Sine Pad		

WELLPATH COMPOSITION - Ref Wellbore: Orvis Unit 2H AWB Ref Wellpath: Orvis Unit 2H AWP Proj: 17111'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	368.00	Gyrodatta relative depth - Drop gyro or Multi-shot	01_Gyrodatta MS Gyro <17-1/2">(100'-358')	Orvis Unit 2H AWB
368.00	2626.00	ISCWSA MWD, Rev. 4 (Standard)	02_WFT EM <12-1/4">(358')(492'-2616')	Orvis Unit 2H AWB
2626.00	6109.00	ISCWSA MWD, Rev. 4 (Standard)	03_WFT EM <8-3/4">(2616')(2742'-6099')	Orvis Unit 2H AWB
6109.00	17087.00	BHI AutoTrak Curve (Short)	04_BH AT Curve <8-1/2"> (6109')(6181'-17087')	Orvis Unit 2H AWB
17087.00	17111.00	Blind Drilling (std)	Projection to bit	Orvis Unit 2H AWB



Actual Wellpath Report

Orvis Unit 2H AWP Proj: 17111'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #12
Area	Tyler County, WV	Well	Orvis Unit 2H
Field	Tyler	Wellbore	Orvis Unit 2H AWB
Facility	Sine Pad		

COMMENTS

Wellpath general comments

API: 47-095-02532-0000

BHI Job #: 109602803

Rig: Patterson 342

Duration: 01/20/2019-01/24/2019

Gyrodata MS Gyro <17-1/2">(100'-358')

WFT EM <12-1/4">(358')(492'-2616')

WFT EM <8-3/4">(2616')(2742'-6099')

BH AT Curve <8-1/2"> (6109')(6181'-17087')

Middlesex: 6604' MD

Burkett: 6790' MD

Tully: 6860' MD

Marcellus POE: 6898' MD

Projected MD at TD: 17111'