



ANTERO RESOURCES CORPORATION

Location: Tyler County, WV
 Slot: Slot #03
 Field: Tyler
 Well: Olive Unit 2H
 Facility: Lemuel Pad
 Wellbore: Olive Unit 2H PWB



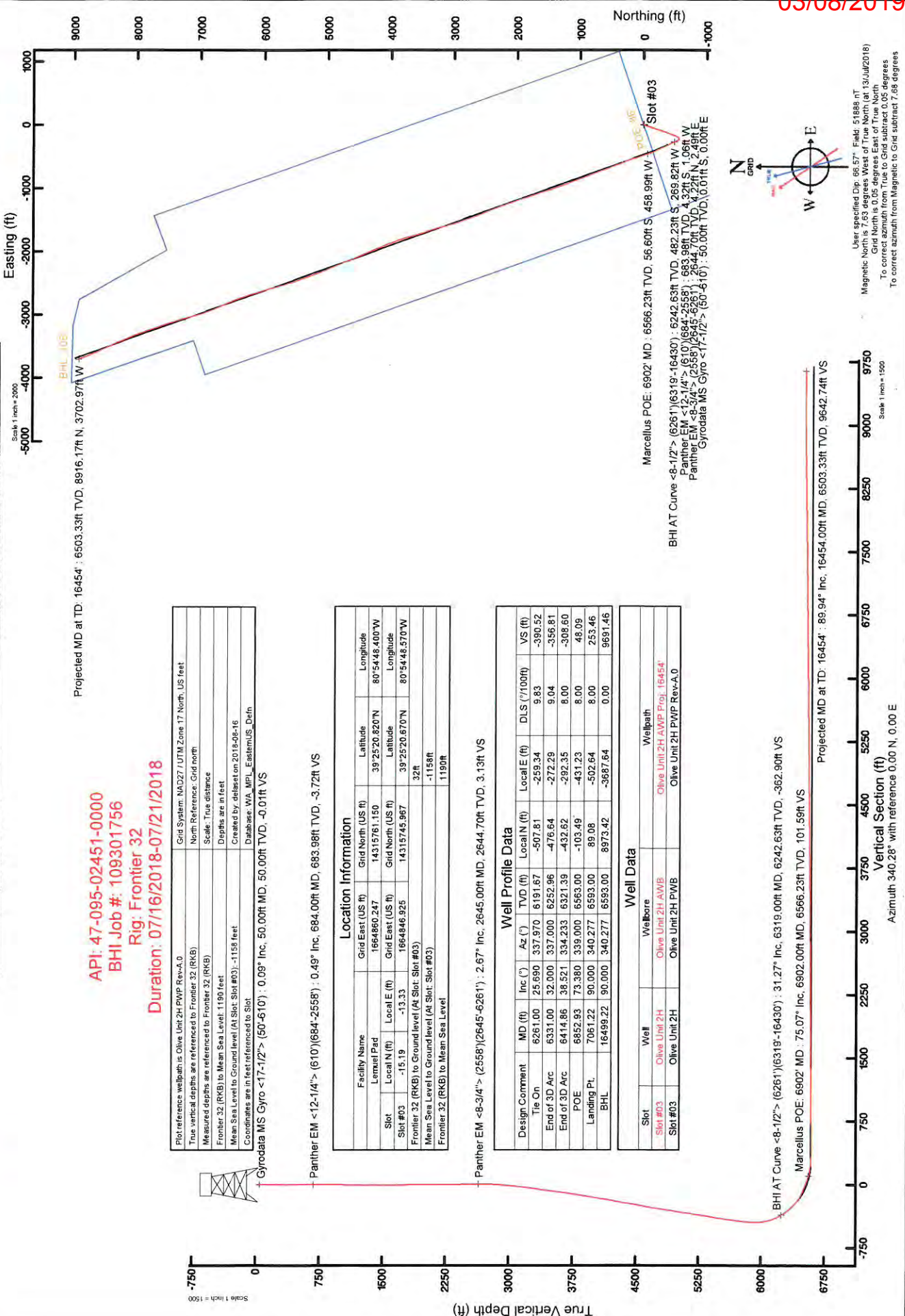
API: 47-095-02451-0000
 BHI Job #: 109301756
 Rig: Frontier 32
 Duration: 07/16/2018-07/21/2018

Plot reference wellpath is Olive Unit 2H PWB Rev-A.0	Grid System: NAD27 UTM Zone 17 North, US feet
True vertical depths are referenced to Frontier 32 (RKB)	North Reference: Grid north
Measured depths are referenced to Frontier 32 (RKB)	Scale: True distance
Frontier 32 (RKB) to Mean Sea Level: 1190 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot: Slot #03): -1158 feet	Created by: delarston.2019-09-16
Coordinates are in feet referenced to Slot	Database: WA_MPL_EastemUS_Dein

Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
Lemuel Pad	1664860.247	14315761.150	80°54'46.400"W
Slot #03	-15.19	-13.33	39°25'20.820"N
Frontier 32 (RKB) to Ground level (At Slot: Slot #03)	1664846.925	14315745.967	80°54'48.570"W
Mean Sea Level to Ground level (At Slot: Slot #03)			32ft
Frontier 32 (RKB) to Mean Sea Level			-1158ft
			1190ft

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	6261.00	25.690	337.970	6191.67	-507.81	-259.34	9.83	-390.52
End of 3D Arc	6331.00	32.000	337.000	6252.96	-476.64	-272.29	9.04	-356.81
End of 3D Arc	6414.86	38.521	334.233	6321.39	-432.62	-292.35	8.00	-308.60
POE	6852.93	73.380	339.000	6563.00	-103.49	-431.23	8.00	-48.09
Landing Pt.	7051.22	90.000	340.277	6593.00	89.08	-502.64	8.00	253.46
BHL	16499.22	90.000	340.277	6593.00	8973.42	-3687.64	0.00	6691.46

Well Data		
Slot	Well	Wellbore
Slot #03	Olive Unit 2H	Olive Unit 2H AWP/B
Slot #03	Olive Unit 2H	Olive Unit 2H PWB
Slot #03	Olive Unit 2H	Olive Unit 2H PWB Rev-A.0



03/08/2019

User specified Dip: 68.57° Field: 51888.0°
 Magnetic North is 7.63 degrees West of True North (at 13/Jul/2018)
 Grid North is 0.05 degrees East of True North
 To correct azimuth from True to Grid subtract 0.05 degrees
 To correct azimuth from Magnetic to Grid subtract 7.68 degrees

Scale 1 inch = 1500

Vertical Section (ft)

Scale 1 inch = 1500



Actual Wellpath Report

Olive Unit 2H AWP Proj: 16454'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Tyler County, WV	Well	Olive Unit 2H
Field	Tyler	Wellbore	Olive Unit 2H AWB
Facility	Lemuel 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	16/Aug/2018 at 11:11
Convergence at slot	0.05° East	Database/Source file	WA_MPL_EasternUS_Defn/Olive_Unit_2H_AWP_Proj_16454_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-15.19	-13.33	1664846.93	14315745.97	39°25'20.670"N	80°54'48.570"W
Facility Reference Pt			1664860.25	14315761.15	39°25'20.820"N	80°54'48.400"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM

Calculation method	Minimum curvature	Frontier 32 (RKB) to Facility Vertical Datum	32.00ft
Horizontal Reference Pt	Slot	Frontier 32 (RKB) to Mean Sea Level	1190.00ft
Vertical Reference Pt	Frontier 32 (RKB)	Frontier 32 (RKB) to Ground Level at Slot (Slot #03)	32.00ft
MD Reference Pt	Frontier 32 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	340.28°



Actual Wellpath Report

Olive Unit 2H AWP Proj: 16454'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot #	Slot #03
Area	Tyler County, WV	Well	Olive Unit 2H
Field	Tyler	Wellbore	Olive Unit 2H AWB
Facility	Lemuel Pad		

WELLPATH DATA (214 stations) † = interpolated/extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
0.00	0.000	173.880	0.00	0.00	0.00	0.00	1664846.93	14315745.97	39°25'20.670"N	80°54'48.570"W	0.00	0.000	0.00	0.00	0.00	
32.00	0.000	173.880	32.00	0.00	0.00	0.00	1664846.93	14315745.97	39°25'20.670"N	80°54'48.570"W	0.00	0.000	0.00	0.00	0.00	
50.00	0.090	173.880	50.00	-0.01	-0.01	0.00	1664846.93	14315745.95	39°25'20.670"N	80°54'48.570"W	0.01	173.880	0.50	966.00	966.00	Gyrodatta MS Gyro <17-1/2"> (50'-610')
75.00	0.140	171.180	75.00	-0.06	-0.06	0.01	1664846.93	14315745.90	39°25'20.669"N	80°54'48.570"W	0.06	172.598	0.20	0.20	-10.80	
100.00	0.190	183.240	100.00	-0.13	-0.14	0.01	1664846.94	14315745.83	39°25'20.669"N	80°54'48.570"W	0.14	175.511	0.24	0.20	48.24	
125.00	0.250	183.790	125.00	-0.22	-0.23	0.00	1664846.93	14315745.74	39°25'20.668"N	80°54'48.570"W	0.23	178.841	0.24	0.24	2.20	
150.00	0.320	186.130	150.00	-0.31	-0.34	0.00	1664846.92	14315745.63	39°25'20.667"N	80°54'48.570"W	0.34	180.732	0.09	-0.08	9.36	
175.00	0.340	184.680	175.00	-0.43	-0.46	-0.02	1664846.91	14315745.51	39°25'20.665"N	80°54'48.570"W	0.46	181.958	0.44	0.44	-5.80	
200.00	0.330	197.670	200.00	-0.55	-0.60	-0.04	1664846.88	14315745.37	39°25'20.664"N	80°54'48.571"W	0.60	184.144	0.31	-0.04	51.96	
225.00	0.320	185.800	225.00	-0.67	-0.74	-0.07	1664846.85	14315745.23	39°25'20.663"N	80°54'48.571"W	0.74	185.597	0.27	-0.04	-47.48	
250.00	0.530	182.920	250.00	-0.84	-0.92	-0.09	1664846.84	14315745.04	39°25'20.661"N	80°54'48.571"W	0.93	185.279	0.84	0.84	-11.52	
275.00	0.650	189.970	275.00	-1.07	-1.18	-0.12	1664846.81	14315744.79	39°25'20.658"N	80°54'48.571"W	1.19	185.610	0.56	0.48	28.20	
300.00	0.680	193.980	300.00	-1.32	-1.46	-0.18	1664846.75	14315744.50	39°25'20.656"N	80°54'48.572"W	1.47	186.868	0.22	0.12	16.04	
325.00	0.750	192.930	324.99	-1.58	-1.77	-0.25	1664846.68	14315744.20	39°25'20.653"N	80°54'48.573"W	1.78	188.013	0.28	0.28	-4.20	
340.00	0.840	193.320	339.99	-1.75	-1.97	-0.30	1664846.63	14315744.00	39°25'20.651"N	80°54'48.574"W	1.99	188.548	0.60	0.60	2.60	
350.00	0.330	182.080	349.99	-1.84	-2.07	-0.31	1664846.61	14315743.90	39°25'20.650"N	80°54'48.574"W	2.09	188.626	5.20	-5.10	-112.40	
375.00	0.450	185.120	374.99	-2.00	-2.24	-0.33	1664846.60	14315743.73	39°25'20.648"N	80°54'48.574"W	2.26	188.266	0.49	0.48	12.16	
400.00	0.500	186.600	399.99	-2.19	-2.45	-0.35	1664846.58	14315743.52	39°25'20.646"N	80°54'48.574"W	2.47	188.067	0.21	0.20	5.92	
425.00	0.480	191.550	424.99	-2.37	-2.66	-0.38	1664846.55	14315743.31	39°25'20.644"N	80°54'48.575"W	2.68	188.144	0.19	-0.08	19.80	
450.00	0.570	198.510	449.99	-2.56	-2.88	-0.44	1664846.49	14315743.09	39°25'20.642"N	80°54'48.576"W	2.91	188.707	0.44	0.36	27.84	
475.00	0.500	201.600	474.99	-2.74	-3.10	-0.52	1664846.41	14315742.87	39°25'20.639"N	80°54'48.577"W	3.14	189.537	0.30	-0.28	12.36	
500.00	0.350	197.720	499.99	-2.88	-3.27	-0.58	1664846.34	14315742.70	39°25'20.638"N	80°54'48.577"W	3.32	190.118	0.61	-0.60	-15.52	
525.00	0.490	191.040	524.98	-3.03	-3.45	-0.63	1664846.30	14315742.52	39°25'20.636"N	80°54'48.578"W	3.50	190.311	0.59	0.56	-26.72	
550.00	0.320	193.710	549.98	-3.18	-3.62	-0.66	1664846.26	14315742.35	39°25'20.634"N	80°54'48.579"W	3.68	190.397	0.68	-0.68	10.68	
575.00	0.280	203.700	574.98	-3.29	-3.74	-0.71	1664846.22	14315742.22	39°25'20.633"N	80°54'48.579"W	3.81	190.669	0.26	-0.16	39.96	
600.00	0.290	212.720	600.18	-3.37	-3.85	-0.76	1664846.16	14315742.11	39°25'20.632"N	80°54'48.580"W	3.93	191.220	0.18	0.04	35.79	
610.00	0.290	208.800	609.98	-3.40	-3.90	-0.79	1664846.14	14315742.07	39°25'20.631"N	80°54'48.580"W	3.98	191.459	0.20	0.00	-40.00	
684.00	0.490	213.630	683.98	-3.72	-4.32	-1.06	1664845.87	14315741.64	39°25'20.627"N	80°54'48.584"W	4.45	193.715	0.27	0.27	6.53	Panther EM <12-1/4"> (610')(684'-2558')
774.00	0.710	235.700	773.98	-4.09	-4.96	-1.73	1664845.20	14315741.01	39°25'20.621"N	80°54'48.592"W	5.25	199.222	0.35	0.24	24.52	
869.00	0.860	235.920	868.97	-4.41	-5.70	-2.82	1664844.11	14315740.27	39°25'20.614"N	80°54'48.606"W	6.36	206.321	0.18	0.18	0.23	



Actual Wellpath Report

Olive Unit 2H AWP Proj: 16454'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Tyler County, WV	Well	Olive Unit 2H
Field	Tyler	Wellbore	Olive Unit 2H AWB
Facility	Lemuel Pad		

WELLPATH DATA (214 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 [1/100ft]	Build Rate [1/100ft]	Turn Rate [1/100ft]	Comments
984.00	0.090	94.120	963.96	-4.63	-6.11	-3.35	1664843.58	14315739.86	39°25'20.610"N	80°54'48.613"W	6.97	208.715	1.00	-0.83	-149.26	
1059.00	0.400	75.830	1058.96	-4.69	-6.04	-2.95	1664843.97	14315739.93	39°25'20.610"N	80°54'48.608"W	6.72	206.065	0.33	0.33	-19.25	
1154.00	0.620	68.600	1153.96	-4.70	-5.77	-2.15	1664844.77	14315740.20	39°25'20.613"N	80°54'48.598"W	6.16	200.468	0.24	0.23	-7.61	
1248.00	1.020	76.000	1247.95	-4.77	-5.38	-0.87	1664846.06	14315740.59	39°25'20.617"N	80°54'48.581"W	5.45	189.164	0.44	0.43	7.87	
1344.00	1.020	67.100	1343.93	-4.81	-4.84	0.75	1664847.67	14315741.13	39°25'20.622"N	80°54'48.561"W	4.90	171.219	0.16	0.00	-9.27	
1439.00	1.100	73.620	1438.92	-4.82	-4.26	2.40	1664849.33	14315741.71	39°25'20.628"N	80°54'48.539"W	4.89	150.565	0.15	0.08	6.86	
1534.00	1.020	83.630	1533.90	-5.07	-3.91	4.12	1664851.04	14315742.06	39°25'20.631"N	80°54'48.518"W	5.67	133.489	0.21	-0.08	10.54	
1629.00	0.310	57.100	1628.90	-5.20	-3.67	5.17	1664852.10	14315742.30	39°25'20.634"N	80°54'48.504"W	6.34	125.368	0.80	-0.75	-27.93	
1724.00	0.220	329.440	1723.89	-4.96	-3.38	5.30	1664852.22	14315742.59	39°25'20.637"N	80°54'48.503"W	6.28	122.510	0.39	-0.09	-92.27	
1819.00	0.220	318.640	1818.89	-4.62	-3.08	5.08	1664852.01	14315742.89	39°25'20.639"N	80°54'48.505"W	5.94	121.225	0.04	0.00	-11.37	
1914.00	0.220	264.220	1913.89	-4.40	-2.96	4.78	1664851.70	14315743.01	39°25'20.641"N	80°54'48.509"W	5.62	121.787	0.21	0.00	-57.28	
2010.00	0.310	57.940	2009.89	-4.30	-2.84	4.82	1664851.74	14315743.12	39°25'20.642"N	80°54'48.509"W	5.59	120.550	0.54	0.09	160.12	
2105.00	0.710	73.010	2104.89	-4.28	-2.54	5.60	1664852.52	14315743.43	39°25'20.645"N	80°54'48.499"W	6.15	114.363	0.44	0.42	15.86	
2200.00	1.190	60.400	2199.88	-4.13	-1.88	7.02	1664853.34	14315744.09	39°25'20.651"N	80°54'48.481"W	7.27	104.963	0.55	0.51	-13.27	
2295.00	1.500	24.820	2294.85	-3.08	-0.26	8.39	1664855.32	14315745.71	39°25'20.667"N	80°54'48.463"W	8.40	91.762	0.92	0.33	-37.66	
2391.00	1.590	351.120	2390.82	-0.87	2.20	8.71	1664856.63	14315748.17	39°25'20.692"N	80°54'48.459"W	8.99	75.829	0.93	0.09	-34.90	
2486.00	1.190	301.320	2485.79	1.19	4.02	7.67	1664854.59	14315749.98	39°25'20.710"N	80°54'48.472"W	8.65	62.358	1.29	-0.42	-52.42	
2588.00	1.810	268.710	2587.77	2.13	4.38	5.89	1664852.81	14315750.34	39°25'20.713"N	80°54'48.495"W	7.34	53.381	1.43	0.86	-45.29	
2645.00	2.670	266.460	2644.70	3.13	4.22	2.49	1664849.42	14315750.19	39°25'20.712"N	80°54'48.538"W	4.90	30.579	0.99	0.99	-2.59	Panther EM <-8.3/4'> (2558)(2645-6261)
2740.00	3.070	231.930	2739.59	2.95	2.52	-1.72	1664845.21	14315748.48	39°25'20.695"N	80°54'48.592"W	3.05	325.700	1.84	0.42	-36.35	
2835.00	3.830	197.810	2834.43	-0.37	-2.07	-4.69	1664842.24	14315743.89	39°25'20.650"N	80°54'48.630"W	5.13	246.153	2.26	0.80	-35.92	
2930.00	5.720	199.010	2929.09	-6.58	-9.57	-7.20	1664839.73	14315738.40	39°25'20.575"N	80°54'48.662"W	11.98	216.965	1.99	1.99	1.26	
3025.00	6.970	200.340	3023.51	-14.68	-19.45	-10.75	1664836.18	14315726.52	39°25'20.478"N	80°54'48.707"W	22.22	208.924	1.32	1.32	1.40	
3121.00	8.330	193.930	3118.65	-24.93	-31.66	-14.45	1664832.48	14315714.32	39°25'20.357"N	80°54'48.754"W	34.80	204.527	1.67	1.42	-6.68	
3220.00	9.240	196.500	3216.49	-37.31	-46.25	-18.43	1664828.50	14315699.74	39°25'20.213"N	80°54'48.805"W	49.78	201.730	1.00	0.92	2.60	
3314.00	9.660	200.210	3309.22	-49.45	-60.88	-23.30	1664823.64	14315685.11	39°25'20.068"N	80°54'48.868"W	65.19	200.942	0.79	0.45	3.95	
3410.00	9.300	190.480	3403.91	-62.33	-76.07	-27.49	1664819.44	14315669.93	39°25'19.918"N	80°54'48.921"W	80.89	199.871	1.71	-0.37	-10.14	
3504.00	9.520	200.390	3496.65	-74.84	-90.83	-31.58	1664815.35	14315655.18	39°25'19.773"N	80°54'48.974"W	96.16	199.174	1.74	0.23	10.54	
3599.00	10.000	199.720	3590.28	-87.22	-105.95	-43.10	1664809.84	14315640.05	39°25'19.623"N	80°54'49.044"W	112.26	199.300	0.52	0.51	-0.71	
3694.00	11.590	200.830	3683.59	-100.84	-122.64	-43.28	1664803.66	14315623.38	39°25'19.468"N	80°54'49.123"W	130.05	199.439	1.69	1.67	1.17	



Actual Wellpath Report

Olive Unit 2H AWP Proj: 16454'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Tyler County, WV	Well	Olive Unit 2H
Field	Tyler	Wellbore	Olive Unit 2H AWB
Facility	Lemuel Pad		

WELLPATH DATA (214 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
3789.00	11.940	202.460	3776.60	-115.38	-140.64	-50.43	1664796.52	14315605.38	39°25'19.280"N	80°54'49.214"W	149.41	199.726	0.51	0.37	1.72	
3884.00	12.900	201.030	3869.37	-130.69	-159.62	-57.99	1664788.96	14315586.41	39°25'19.093"N	80°54'49.311"W	169.83	199.966	1.06	1.01	-1.51	
3978.00	13.140	199.680	3960.96	-146.90	-179.48	-65.35	1664781.60	14315566.56	39°25'18.897"N	80°54'49.405"W	191.00	200.008	0.41	0.26	-1.44	
4074.00	11.910	197.240	4054.67	-163.25	-199.21	-71.96	1664774.99	14315546.84	39°25'18.702"N	80°54'49.489"W	211.81	199.862	1.39	-1.28	-2.54	
4169.00	11.560	195.010	4147.69	-178.90	-217.77	-77.33	1664769.62	14315528.29	39°25'18.518"N	80°54'49.558"W	231.09	199.551	0.60	-0.37	-2.35	
4264.00	11.490	193.100	4240.77	-194.68	-236.18	-81.94	1664765.01	14315509.88	39°25'18.337"N	80°54'49.617"W	249.99	199.135	0.41	-0.07	-2.01	
4359.00	12.200	196.790	4333.75	-210.70	-255.00	-86.99	1664759.97	14315491.07	39°25'18.150"N	80°54'49.682"W	269.43	198.836	1.09	0.75	3.88	
4454.00	12.640	201.530	4426.53	-226.58	-274.28	-93.70	1664753.26	14315471.79	39°25'17.960"N	80°54'49.767"W	289.85	198.862	1.17	0.46	4.99	
4550.00	13.240	198.470	4520.09	-243.12	-294.48	-101.04	1664745.93	14315451.60	39°25'17.760"N	80°54'49.861"W	311.33	198.938	0.95	0.62	-3.19	
4645.00	12.630	196.130	4612.68	-260.09	-314.78	-107.37	1664739.60	14315431.32	39°25'17.560"N	80°54'49.942"W	332.59	198.835	0.85	-0.64	-2.46	
4740.00	12.010	197.570	4705.49	-276.37	-334.18	-113.24	1664733.73	14315411.92	39°25'17.368"N	80°54'50.017"W	352.84	198.720	0.73	-0.65	1.52	
4835.00	11.180	201.920	4798.55	-291.12	-352.15	-119.66	1664727.31	14315393.96	39°25'17.191"N	80°54'50.099"W	371.92	198.768	1.27	-0.87	4.58	
4930.00	11.890	199.010	4891.64	-305.63	-369.94	-126.29	1664720.69	14315376.17	39°25'17.015"N	80°54'50.184"W	390.91	198.849	0.97	0.75	-3.06	
5025.00	11.750	204.090	4984.62	-320.25	-388.03	-133.43	1664713.55	14315358.10	39°25'16.836"N	80°54'50.275"W	410.33	198.976	1.10	-0.15	5.35	
5121.00	11.540	204.050	5078.65	-334.24	-405.72	-141.33	1664705.65	14315340.41	39°25'16.661"N	80°54'50.376"W	429.63	199.205	0.22	-0.22	-0.04	
5216.00	11.940	199.760	5171.66	-348.68	-423.65	-148.52	1664698.46	14315322.49	39°25'16.484"N	80°54'50.468"W	448.93	199.320	1.01	0.42	-4.52	
5311.00	10.810	200.460	5264.80	-363.08	-441.24	-154.96	1664692.03	14315304.90	39°25'16.310"N	80°54'50.550"W	467.66	199.351	1.20	-1.19	0.74	
5406.00	11.960	201.120	5357.92	-377.33	-458.77	-161.62	1664685.37	14315287.38	39°25'16.137"N	80°54'50.635"W	486.41	199.407	1.22	1.21	0.69	
5501.00	12.460	200.190	5450.77	-392.64	-477.57	-168.71	1664678.29	14315268.59	39°25'15.952"N	80°54'50.726"W	506.49	199.456	0.57	0.53	-0.98	
5596.00	11.160	201.430	5543.76	-407.42	-495.75	-175.60	1664671.39	14315250.42	39°25'15.772"N	80°54'50.814"W	525.93	199.505	1.39	-1.37	1.31	
5692.00	10.260	204.000	5638.09	-420.60	-512.21	-182.47	1664664.52	14315233.96	39°25'15.609"N	80°54'50.901"W	543.74	199.608	1.06	-0.94	2.88	
5786.00	11.720	212.820	5730.37	-432.46	-527.88	-191.05	1664655.95	14315218.30	39°25'15.454"N	80°54'51.011"W	561.39	199.897	2.36	1.55	9.38	
5881.00	12.730	221.340	5774.35	-437.64	-535.45	-196.81	1664650.20	14315202.74	39°25'15.380"N	80°54'51.084"W	570.47	200.181	4.59	2.24	18.93	
5976.00	12.100	232.030	5823.19	-441.94	-542.80	-204.58	1664642.43	14315203.38	39°25'15.307"N	80°54'51.183"W	580.08	200.651	4.78	-1.26	21.50	
5976.00	9.930	234.380	5887.36	-444.47	-547.96	-211.46	1664635.55	14315198.23	39°25'15.256"N	80°54'51.271"W	587.35	201.102	4.92	-4.82	5.09	
5977.00	8.380	239.080	5917.71	-446.40	-552.43	-218.22	1664628.79	14315193.76	39°25'15.212"N	80°54'51.357"W	593.97	201.555	3.37	-3.04	9.22	
6022.00	7.400	257.550	5962.29	-446.67	-554.74	-223.87	1664623.15	14315191.45	39°25'15.189"N	80°54'51.429"W	598.21	201.976	6.01	-2.18	41.04	
6072.00	9.130	287.090	6011.79	-443.88	-554.27	-230.80	1664616.21	14315191.92	39°25'15.194"N	80°54'51.518"W	600.40	202.607	9.04	3.46	59.08	
6117.00	13.080	314.100	6055.97	-437.17	-549.67	-237.88	1664609.14	14315196.52	39°25'15.240"N	80°54'51.608"W	598.94	203.401	14.29	8.78	60.02	
6166.00	17.560	330.740	6103.24	-424.89	-539.35	-245.44	1664601.54	14315206.83	39°25'15.342"N	80°54'51.705"W	592.59	204.472	12.72	9.14	33.96	



Actual Wellpath Report

Olive Unit 2H AWP Proj: 16454'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Tyler County, WV	Well	Olive Unit 2H
Field	Tyler	Wellbore	Olive Unit 2H AWB
Facility	Lemuel Pad		

WELLPATH DATA (214 stations) † = interpolated/extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (F/100ft)	Build Rate (F/100ft)	Turn Rate (F/100ft)	Comments
6211.00	20.780	337.440	6145.74	-410.22	-526.06	-251.87	1664595.16	14315220.12	39°25'15.473"N	80°54'51.786"W	583.24	205.584	8.66	7.16	14.89	
6261.00	25.690	337.970	6191.67	-390.52	-507.81	-259.34	1664587.69	14315238.36	39°25'15.654"N	80°54'51.881"W	570.20	207.054	9.83	9.82	1.06	
6319.00	31.270	337.510	6242.63	-362.90	-482.23	-269.82	1664577.21	14315263.93	39°25'15.906"N	80°54'52.014"W	552.58	209.228	9.63	9.62	-0.79	BHI AT Curve -8-1/2" > (6261)-(6319)-16430)
6366.00	33.950	336.320	6282.22	-337.62	-458.93	-279.76	1664567.28	14315287.22	39°25'16.137"N	80°54'52.140"W	537.48	211.366	5.86	5.70	-2.53	
6414.00	39.200	333.920	6320.76	-309.15	-433.01	-291.82	1664555.22	14315313.13	39°25'16.393"N	80°54'52.294"W	522.17	213.977	11.33	10.94	-5.00	
6461.00	42.390	332.880	6356.33	-278.67	-405.56	-305.58	1664541.47	14315340.57	39°25'16.664"N	80°54'52.489"W	507.80	216.997	6.94	6.79	-2.21	
6509.00	46.740	333.420	6390.52	-245.26	-375.52	-320.78	1664526.27	14315370.60	39°25'16.962"N	80°54'52.662"W	493.88	220.505	9.10	9.06	1.13	
6556.00	51.770	334.110	6421.19	-209.89	-343.58	-336.51	1664510.55	14315402.52	39°25'17.272"N	80°54'52.862"W	480.92	224.404	10.76	10.70	1.47	
6561.00†	52.359	334.216	6424.26	-205.97	-340.04	-338.23	1664508.83	14315408.07	39°25'17.317"N	80°54'52.884"W	479.60	224.847	11.91	11.79	2.11	Middlesex: 6561' MD
6605.00	57.550	335.080	6449.52	-170.13	-307.49	-353.64	1664493.43	14315438.60	39°25'17.634"N	80°54'53.080"W	468.62	228.993	11.91	11.80	1.96	
6652.00	61.380	335.620	6473.40	-129.81	-270.70	-370.51	1664476.56	14315475.37	39°25'17.998"N	80°54'53.295"W	458.87	233.848	8.21	8.15	1.15	
6700.00	65.780	335.800	6494.75	-86.97	-231.53	-388.19	1664468.89	14315514.53	39°25'18.385"N	80°54'53.519"W	451.99	239.187	9.17	9.17	0.37	
6747.00	68.010	336.980	6513.19	-43.84	-191.92	-405.50	1664441.59	14315554.12	39°25'18.777"N	80°54'53.739"W	448.63	244.672	5.28	4.74	2.51	
6749.00†	68.016	337.020	6513.94	-41.99	-190.21	-406.23	1664440.86	14315555.83	39°25'18.794"N	80°54'53.749"W	448.55	244.909	1.90	0.29	2.02	Burkett: 6749' MD
6795.00	68.150	337.950	6531.11	0.64	-150.79	-422.57	1664424.53	14315595.24	39°25'19.184"N	80°54'53.966"W	448.67	250.361	1.90	0.29	2.02	
6820.00†	68.867	338.490	6540.27	23.88	-129.19	-431.20	1664415.90	14315616.83	39°25'19.397"N	80°54'54.066"W	450.13	253.321	3.50	2.87	2.16	Jully: 6820' MD
6842.00	69.500	338.960	6548.09	44.44	-110.03	-438.66	1664408.44	14315635.98	39°25'19.587"N	80°54'54.161"W	452.25	255.919	3.50	2.88	2.14	
6890.00	74.170	339.270	6563.05	90.02	-67.43	-454.91	1664392.20	14315678.57	39°25'20.008"N	80°54'54.368"W	459.88	261.569	9.75	9.73	0.65	
6902.00†	75.069	339.422	6566.23	101.59	-56.60	-458.99	1664376.29	14315689.39	39°25'20.115"N	80°54'54.419"W	462.47	262.970	7.59	7.49	1.27	Marcellus POE: 6902' MD
6937.00	77.690	339.860	6574.47	135.60	-24.71	-470.82	1664360.36	14315721.26	39°25'20.430"N	80°54'54.570"W	471.47	266.995	7.59	7.49	1.25	
6985.00	81.470	340.660	6583.15	182.80	19.71	-486.76	1664345.13	14315765.67	39°25'20.869"N	80°54'54.772"W	487.16	272.319	8.04	7.88	1.67	
7032.00	84.420	341.210	6588.92	229.44	63.79	-502.00	1664330.07	14315809.74	39°25'21.305"N	80°54'54.966"W	506.04	277.242	6.38	6.28	1.17	
7080.00	87.600	342.110	6592.26	277.30	109.24	-517.06	1664315.16	14315855.16	39°25'21.755"N	80°54'55.157"W	528.48	281.929	6.88	6.62	1.88	
7100.00	89.260	342.330	6592.81	297.28	128.28	-523.17	1664303.97	14315874.19	39°25'21.943"N	80°54'55.235"W	538.66	283.777	8.37	8.30	1.10	
7175.00	89.850	341.260	6593.39	372.25	199.52	-546.60	1664300.55	14315945.41	39°25'22.647"N	80°54'55.533"W	581.87	290.053	1.63	0.79	-1.43	
7271.00	89.820	338.590	6593.67	468.24	289.68	-579.55	1664267.61	14316035.53	39°25'23.538"N	80°54'55.951"W	647.91	296.558	2.78	-0.03	-2.78	
7366.00	90.220	338.690	6593.64	563.20	378.15	-614.15	1664233.02	14316123.97	39°25'24.473"N	80°54'56.391"W	721.23	301.622	0.43	0.42	0.11	
7461.00	90.180	339.210	6593.31	658.18	466.81	-648.27	1664198.92	14316212.59	39°25'25.290"N	80°54'56.825"W	798.85	305.757	0.55	-0.04	0.55	
7556.00	90.250	339.500	6592.95	733.16	555.71	-681.76	1664165.43	14316301.45	39°25'26.169"N	80°54'57.251"W	879.55	309.184	0.31	0.07	0.31	
7651.00	90.430	339.880	6592.39	848.16	644.80	-714.74	1664132.47	14316390.51	39°25'27.050"N	80°54'57.670"W	962.61	312.055	0.44	0.19	0.40	



Actual Wellpath Report

Olive Unit 2H AWP Proj: 16454'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #03
ANTERO RESOURCES CORPORATION	Well	Olive Unit 2H
Tyler County, WV	Wellbore	Olive Unit 2H AWB
Tyler		
Lemuel Pad		

WELLPATH DATA (214 stations)

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
7746.00	90.430	339.350	6591.67	943.15	733.85	-747.83	1664039.40	14316479.52	39°25'27.930"N	80°54'58.091"W	1047.75	314.459	0.56	0.00	-0.56	
7841.00	90.460	339.480	6590.93	1038.13	822.78	-781.23	1664066.01	14316588.42	39°25'28.809"N	80°54'58.515"W	1134.59	316.484	0.14	0.03	0.14	
7936.00	90.430	339.150	6590.20	1133.12	911.65	-814.78	1664032.47	14316657.26	39°25'29.688"N	80°54'58.942"W	1222.70	318.211	0.35	-0.03	-0.35	
8031.00	90.460	339.320	6589.46	1228.10	1000.48	-848.46	1663998.80	14316746.05	39°25'30.566"N	80°54'59.370"W	1311.81	319.700	0.18	0.03	0.18	
8126.00	90.550	339.190	6588.62	1323.08	1089.32	-882.11	1663985.17	14316834.85	39°25'31.444"N	80°54'59.798"W	1401.69	321.000	0.17	0.09	-0.14	
8221.00	90.460	339.560	6587.78	1418.06	1178.23	-915.58	1663931.72	14316923.72	39°25'32.323"N	80°55'00.223"W	1492.14	322.150	0.40	-0.09	0.39	
8316.00	90.460	339.280	6587.02	1513.05	1267.16	-948.97	1663896.34	14317012.62	39°25'33.203"N	80°55'00.647"W	1583.11	323.171	0.29	0.00	-0.29	
8504.00	90.430	341.150	6585.64	1701.04	1444.24	-1012.07	1663835.26	14317101.81	39°25'34.085"N	80°55'01.062"W	1674.30	324.108	1.36	-0.06	1.36	
8599.00	90.250	342.120	6585.07	1796.01	1534.40	-1042.00	1663805.35	14317279.75	39°25'35.845"N	80°55'01.830"W	1854.76	325.820	1.04	-0.19	1.02	
8694.00	90.310	342.060	6584.61	1890.96	1624.79	-1071.21	1663776.14	14317370.11	39°25'36.739"N	80°55'02.582"W	1946.14	326.604	0.09	0.06	-0.06	
8789.00	90.550	341.190	6583.89	1985.93	1714.95	-1101.16	1663746.21	14317460.23	39°25'37.630"N	80°55'02.201"W	2038.04	327.296	0.95	0.25	-0.92	
8884.00	90.520	341.580	6583.01	2080.91	1804.97	-1131.48	1663715.90	14317550.22	39°25'38.520"N	80°55'02.967"W	2130.30	327.918	0.41	-0.03	0.41	
8979.00	90.310	342.320	6582.32	2175.86	1895.29	-1160.92	1663686.48	14317640.50	39°25'39.413"N	80°55'03.341"W	2222.58	328.511	0.81	-0.22	0.78	
9073.00	90.400	341.420	6581.74	2269.82	1984.63	-1190.17	1663657.24	14317729.80	39°25'40.296"N	80°55'03.713"W	2314.14	329.049	0.96	0.10	-0.96	
9168.00	90.340	340.870	6581.12	2364.81	2074.53	-1220.87	1663626.55	14317819.66	39°25'41.185"N	80°55'04.103"W	2407.11	329.523	0.58	-0.06	-0.58	
9263.00	90.430	340.950	6580.48	2459.80	2164.30	-1251.94	1663595.49	14317909.40	39°25'42.072"N	80°55'04.498"W	2500.31	329.953	0.13	0.09	0.08	
9358.00	90.080	340.190	6580.05	2554.80	2253.89	-1283.54	1663563.90	14317998.95	39°25'42.958"N	80°55'04.899"W	2593.74	330.339	0.88	-0.36	-0.80	
9453.00	90.400	339.440	6579.65	2649.79	2343.05	-1316.32	1663531.14	14318088.08	39°25'43.840"N	80°55'05.316"W	2687.48	330.673	0.85	0.33	-0.79	
9548.00	90.400	338.370	6578.98	2744.76	2431.68	-1350.51	1663496.96	14318176.67	39°25'44.716"N	80°55'05.751"W	2781.54	330.953	1.13	0.00	-1.13	
9643.00	90.370	337.130	6578.35	2839.67	2519.60	-1386.48	1663461.00	14318264.56	39°25'45.585"N	80°55'06.208"W	2875.89	331.177	1.31	-0.03	-1.31	
9738.00	90.430	337.630	6577.68	2934.54	2607.29	-1423.01	1663424.48	14318352.21	39°25'46.452"N	80°55'06.673"W	2970.34	331.375	0.53	0.06	0.53	
9833.00	90.400	339.590	6576.99	3029.49	2695.74	-1457.66	1663389.85	14318440.63	39°25'47.327"N	80°55'07.113"W	3064.60	331.599	2.06	-0.03	2.06	
9928.00	90.520	340.510	6576.23	3124.49	2785.04	-1490.07	1663357.45	14318529.89	39°25'48.210"N	80°55'07.525"W	3158.60	331.852	0.98	0.13	0.97	
10023.00	90.430	342.060	6575.44	3219.47	2875.01	-1520.55	1663326.98	14318619.82	39°25'49.099"N	80°55'07.913"W	3252.35	332.126	1.63	-0.09	1.63	
10118.00	90.430	342.260	6574.73	3314.42	2965.44	-1549.66	1663297.89	14318710.22	39°25'49.993"N	80°55'08.283"W	3345.93	332.410	0.21	0.00	0.21	
10213.00	90.580	343.570	6573.89	3409.31	3056.24	-1577.56	1663269.99	14318800.98	39°25'50.891"N	80°55'08.637"W	3439.38	332.698	1.39	0.16	1.38	
10308.00	90.650	344.440	6572.87	3504.10	3147.56	-1603.74	1663241.83	14318892.26	39°25'51.794"N	80°55'08.970"W	3532.58	333.000	0.92	0.07	0.92	
10403.00	90.770	344.940	6571.70	3598.81	3239.18	-1628.82	1663218.76	14318983.85	39°25'52.699"N	80°55'09.288"W	3625.65	333.304	0.54	0.13	0.53	
10498.00	90.650	343.610	6570.52	3693.57	3330.61	-1654.57	1663193.02	14319075.24	39°25'53.603"N	80°55'09.616"W	3718.95	333.583	1.41	-0.13	-1.40	



Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #03
ANTERO RESOURCES CORPORATION	Well	Olive Unit 2H
Tyler County, WV	Wellbore	Olive Unit 2H AWP
Tyler		
Lemuel Pad		

WELLPATH DATA (214 stations)

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
10593.00	90.680	338.180	6569.42	3788.53	3420.34	-1685.65	1663161.96	14319184.94	39°25'54.490"N	80°55'10.011"W	3813.15	333.765	5.72	0.03	-5.72	
10689.00	90.770	343.710	6568.20	3884.47	3511.04	-1716.97	1663130.64	14319255.60	39°25'55.387"N	80°55'10.409"W	3908.37	333.940	5.76	0.09	5.76	
10784.00	90.770	344.440	6566.92	3979.26	3602.38	-1743.04	1663104.59	14319346.90	39°25'56.290"N	80°55'10.740"W	4001.92	334.180	0.77	0.00	0.77	
10879.00	90.680	344.190	6565.72	4074.01	3693.84	-1768.72	1663078.92	14319438.32	39°25'57.194"N	80°55'11.066"W	4095.46	334.414	0.28	-0.09	-0.26	
10973.00	90.920	343.490	6564.41	4167.82	3784.12	-1794.88	1663052.77	14319528.56	39°25'58.087"N	80°55'11.399"W	4188.21	334.624	0.79	0.26	-0.74	
11068.00	90.830	340.680	6562.96	4262.75	3874.49	-1824.09	1663023.56	14319618.90	39°25'58.980"N	80°55'11.770"W	4282.40	334.789	2.96	-0.09	-2.96	
11163.00	90.680	339.140	6561.71	4357.74	3963.70	-1856.72	1662990.95	14319706.67	39°25'59.862"N	80°55'12.185"W	4377.02	334.900	1.63	-0.16	-1.62	
11258.00	90.710	338.750	6560.55	4452.71	4052.35	-1890.85	1662956.84	14319798.69	39°26'00.739"N	80°55'12.619"W	4471.78	334.986	0.41	0.03	-0.41	
11353.00	90.770	338.570	6559.33	4547.66	4140.83	-1925.42	1662922.28	14319885.13	39°26'01.613"N	80°55'13.059"W	4566.58	335.062	0.20	0.06	-0.19	
11448.00	90.710	337.580	6558.10	4642.58	4228.95	-1960.89	1662886.83	14319973.22	39°26'02.485"N	80°55'13.509"W	4661.45	335.124	1.04	-0.06	-1.04	
11543.00	90.710	336.690	6556.92	4737.43	4316.48	-1997.80	1662849.93	14320060.71	39°26'03.350"N	80°55'13.979"W	4756.38	335.164	0.94	0.00	-0.94	
11637.00	90.120	336.600	6555.24	4831.24	4402.77	-2035.06	1662812.68	14320146.97	39°26'04.203"N	80°55'14.453"W	4850.35	335.193	0.63	-0.63	-0.10	
11732.00	90.830	337.760	6555.45	4926.09	4490.33	-2071.90	1662775.86	14320234.50	39°26'05.069"N	80°55'14.921"W	4945.29	335.231	1.43	0.75	1.22	
11828.00	90.740	338.230	6554.14	5022.01	4579.33	-2107.87	1662739.90	14320323.46	39°26'05.949"N	80°55'15.379"W	5041.17	335.283	0.50	-0.09	0.49	
11923.00	90.740	338.070	6552.91	5116.94	4667.50	-2143.22	1662704.56	14320411.59	39°26'06.821"N	80°55'15.828"W	5136.04	335.336	0.17	0.00	-0.17	
12018.00	90.710	337.780	6551.71	5211.85	4755.53	-2178.92	1662668.88	14320499.58	39°26'07.691"N	80°55'16.282"W	5230.94	335.383	0.31	-0.03	-0.31	
12112.00	90.710	337.740	6550.55	5305.75	4842.53	-2214.50	1662633.32	14320586.55	39°26'08.551"N	80°55'16.735"W	5324.85	335.425	0.04	0.00	-0.04	
12208.00	90.490	337.620	6549.54	5401.65	4931.33	-2250.95	1662598.88	14320675.32	39°26'09.429"N	80°55'17.198"W	5420.77	335.465	0.26	-0.23	-0.13	
12303.00	90.650	337.300	6548.60	5496.53	5019.07	-2287.37	1662560.48	14320763.02	39°26'10.297"N	80°55'17.661"W	5515.71	335.500	0.38	0.17	-0.34	
12398.00	90.580	337.200	6547.58	5591.39	5106.67	-2324.10	1662525.75	14320850.59	39°26'11.163"N	80°55'18.129"W	5610.66	335.529	0.13	-0.07	-0.11	
12493.00	90.680	338.620	6546.53	5686.30	5194.69	-2359.83	1662488.05	14320938.57	39°26'12.033"N	80°55'18.583"W	5705.57	335.569	1.50	0.11	1.49	
12588.00	90.650	339.940	6545.43	5781.27	5283.54	-2393.43	1662454.45	14321027.38	39°26'12.911"N	80°55'19.010"W	5800.37	335.630	1.39	-0.03	1.39	
12683.00	90.680	340.580	6544.33	5876.27	5372.95	-2425.52	1662422.38	14321116.76	39°26'13.795"N	80°55'19.418"W	5895.06	335.704	0.67	0.03	0.67	
12777.00	90.580	341.900	6543.29	5970.25	5461.95	-2455.75	1662392.16	14321205.72	39°26'14.675"N	80°55'19.803"W	5988.62	335.791	1.41	-0.11	1.40	
12872.00	90.830	343.130	6542.12	6065.17	5552.55	-2484.29	1662363.64	14321296.29	39°26'15.571"N	80°55'20.165"W	6082.97	335.896	1.32	0.26	1.29	
12967.00	90.770	343.150	6540.80	6160.04	5643.46	-2511.84	1662336.10	14321387.16	39°26'16.470"N	80°55'20.515"W	6177.21	336.007	0.07	-0.06	0.02	
13062.00	90.770	344.110	6539.52	6254.87	5734.60	-2538.61	1662309.33	14321478.26	39°26'17.371"N	80°55'20.856"W	6271.37	336.122	1.01	0.00	1.01	
13157.00	90.650	343.510	6538.34	6349.68	5825.82	-2565.10	1662282.86	14321569.45	39°26'18.272"N	80°55'21.192"W	6365.53	336.236	0.64	-0.13	-0.63	
13252.00	90.710	343.000	6537.22	6444.54	5916.79	-2592.46	1662255.50	14321660.38	39°26'19.172"N	80°55'21.540"W	6459.82	336.339	0.54	0.06	-0.54	
13348.00	90.680	342.850	6536.05	6540.43	6008.55	-2620.65	1662227.33	14321752.10	39°26'20.079"N	80°55'21.898"W	6555.19	336.435	0.16	-0.03	-0.16	



Actual Wellpath Report

Olive Unit 2H AWP Proj: 16454'

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03/08/2019

REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Tyler County, WV	Well	Olive Unit 2H
Field	Tyler	Wellbore	Olive Unit 2H AWB
Facility	Lemuel Pad		

WELLPATH DATA (214 stations)

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
13443.00	90.710	342.680	6534.90	6635.34	6099.28	-2648.80	1662199.19	14321842.79	39°26'20.976"N	80°55'22.256"W	6649.61	336.626	0.18	0.03	-0.18	
13538.00	90.430	342.250	6533.95	6730.26	6189.86	-2677.42	1662170.58	14321933.34	39°26'21.871"N	80°55'22.620"W	6744.10	336.609	0.54	-0.29	-0.45	
13633.00	90.710	341.360	6533.01	6825.22	6280.10	-2707.08	1662140.93	14322023.55	39°26'22.763"N	80°55'22.997"W	6838.71	336.681	0.98	0.29	-0.94	
13728.00	90.680	339.730	6531.86	6920.21	6369.67	-2738.72	1662109.31	14322113.08	39°26'23.649"N	80°55'23.399"W	6933.49	336.734	1.72	-0.03	-1.72	
13823.00	90.680	339.180	6530.73	7015.20	6458.62	-2772.05	1662075.98	14322201.99	39°26'24.528"N	80°55'23.823"W	7028.37	336.771	0.58	0.00	-0.58	
13919.00	90.680	336.760	6529.59	7111.10	6547.60	-2808.06	1662039.99	14322290.94	39°26'25.408"N	80°55'24.281"W	7124.34	336.787	2.52	0.00	-2.52	
14013.00	90.680	335.120	6528.47	7204.82	6633.42	-2846.38	1662001.69	14322376.73	39°26'26.257"N	80°55'24.769"W	7218.32	336.776	1.74	0.00	-1.74	
14108.00	90.830	336.630	6527.22	7299.53	6720.11	-2885.20	1661962.62	14322463.38	39°26'27.114"N	80°55'25.262"W	7313.30	336.764	1.60	0.18	1.59	
14203.00	90.740	338.470	6525.92	7394.41	6807.90	-2921.47	1661926.62	14322551.14	39°26'27.992"N	80°55'25.724"W	7408.27	336.774	1.94	-0.09	1.94	
14298.00	90.680	340.260	6524.74	7489.39	6896.80	-2954.95	1661893.16	14322639.99	39°26'28.861"N	80°55'26.150"W	7503.17	336.807	1.89	-0.08	1.88	
14393.00	90.770	342.220	6523.54	7584.36	6986.74	-2985.50	1661858.62	14322729.90	39°26'29.750"N	80°55'26.538"W	7597.87	336.863	2.07	0.09	2.06	
14487.00	90.770	343.800	6522.28	7678.25	7076.62	-3012.96	1661835.17	14322819.75	39°26'30.638"N	80°55'26.887"W	7691.33	336.938	1.68	0.00	1.68	
14582.00	90.710	344.420	6521.05	7773.02	7167.99	-3038.97	1661809.17	14322911.08	39°26'31.542"N	80°55'27.218"W	7785.59	337.025	0.66	-0.06	0.65	
14676.00	90.710	344.080	6519.89	7866.79	7258.45	-3064.48	1661783.67	14323001.50	39°26'32.436"N	80°55'27.542"W	7878.84	337.111	0.36	0.00	-0.36	
14771.00	90.800	342.860	6518.63	7961.63	7349.51	-3091.51	1661756.66	14323092.53	39°26'33.336"N	80°55'27.885"W	7973.25	337.186	1.29	0.09	-1.28	
14866.00	90.740	341.170	6517.36	8056.58	7439.86	-3120.84	1661727.34	14323182.84	39°26'34.229"N	80°55'28.258"W	8067.91	337.243	1.78	-0.06	-1.78	
14961.00	90.860	341.310	6516.03	8151.56	7529.80	-3151.39	1661696.80	14323272.75	39°26'35.119"N	80°55'28.647"W	8162.67	337.290	0.19	0.13	0.15	
15056.00	90.740	340.710	6514.70	8246.54	7619.62	-3182.30	1661665.90	14323362.53	39°26'36.007"N	80°55'29.040"W	8257.46	337.332	0.64	-0.13	-0.63	
15149.00	90.740	340.190	6513.50	8339.53	7707.26	-3213.42	1661634.80	14323450.13	39°26'36.873"N	80°55'29.435"W	8350.32	337.367	0.56	0.00	-0.56	
15245.00	91.140	340.720	6511.93	8435.52	7797.71	-3245.53	1661602.70	14323540.55	39°26'37.767"N	80°55'29.844"W	8446.17	337.402	0.69	0.42	0.55	
15340.00	91.140	341.540	6510.04	8530.49	7887.59	-3276.25	1661571.99	14323630.39	39°26'38.656"N	80°55'30.234"W	8540.95	337.444	0.86	0.00	0.86	
15435.00	90.920	339.710	6508.33	8625.47	7977.19	-3307.76	1661540.50	14323719.95	39°26'39.542"N	80°55'30.635"W	8635.79	337.479	1.94	-0.23	-1.93	
15530.00	90.950	338.430	6506.78	8720.43	8065.91	-3341.69	1661506.58	14323808.64	39°26'40.419"N	80°55'31.067"W	8730.73	337.496	1.35	0.03	-1.35	
15625.00	90.950	337.790	6505.20	8815.35	8154.04	-3377.10	1661471.18	14323896.74	39°26'41.290"N	80°55'31.517"W	8825.72	337.502	0.67	0.00	-0.67	
15719.00	90.710	337.210	6503.84	8909.23	8240.88	-3413.07	1661435.22	14323983.54	39°26'42.149"N	80°55'31.975"W	8919.71	337.502	0.67	-0.26	-0.62	
15814.00	90.340	335.990	6502.97	9004.02	8328.06	-3450.80	1661397.51	14324070.69	39°26'43.011"N	80°55'32.455"W	9014.69	337.493	1.34	-0.39	-1.28	
15908.00	89.940	336.120	6502.74	9097.77	8413.97	-3488.95	1661359.38	14324156.56	39°26'43.860"N	80°55'32.940"W	9108.66	337.478	0.45	-0.43	0.14	
16003.00	89.970	336.530	6502.82	9192.54	8500.97	-3527.09	1661321.25	14324243.53	39°26'44.720"N	80°55'33.425"W	9203.64	337.466	0.43	0.03	0.43	
16100.00	89.940	335.670	6502.89	9289.28	8589.66	-3566.39	1661281.96	14324332.18	39°26'45.597"N	80°55'33.925"W	9300.61	337.452	0.89	-0.03	-0.89	
16196.00	89.850	336.660	6503.03	9385.03	8677.47	-3605.19	1661243.19	14324419.95	39°26'46.465"N	80°55'34.419"W	9396.59	337.439	1.04	-0.09	-1.03	



Actual Wellpath Report

Olive Unit 2H AWP Proj: 16454'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #03
ANTERO RESOURCES CORPORATION	Well	Olive Unit 2H
Tyler County, WV	Wellbore	Olive Unit 2H AWP
Tyler		
Lemuel Pad		

WELLPATH DATA (214 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
16291.00	89.970	336.770	6503.22	9479.85	8764.73	-3642.74	1661205.65	14324507.18	39°26'47.328"N	80°55'34.897"W	9491.58	337.432	0.17	0.13	0.12	
16387.00	89.970	338.590	6503.27	9575.75	8853.53	-3679.20	1661169.20	14324595.95	39°26'48.206"N	80°55'35.361"W	9587.57	337.434	1.90	0.00	1.90	
16430.00	89.940	339.510	6503.30	9618.74	8893.69	-3694.57	1661153.84	14324636.09	39°26'48.603"N	80°55'35.556"W	9630.56	337.441	2.14	-0.07	2.14	
16454.00	89.940	339.510	6503.33	9642.74	8916.17	-3702.97	1661145.44	14324658.56	39°26'48.825"N	80°55'35.663"W	9654.54	337.446	0.00	0.00	0.00	Projected MD at TD: 16454'

HOLE & CASING SECTIONS - Ref Wellbore: Olive Unit 2H AWP Proj: 16454'

String/Diameter	Start MD [ft]		End MD [ft]		Interval [ft]	Start TVD [ft]		End TVD [ft]		Start N/S [ft]		End N/S [ft]		Start E/W [ft]		End E/W [ft]	
	Start	End	Start	End		Start	End	Start	End	Start	End	Start	End	Start	End		
20in Conductor	32.00	112.00	80.00	112.00	80.00	32.00	112.00	112.00	112.00	0.00	-0.18	0.00	-0.18	0.00	0.00	0.00	0.01
17.5in Open Hole	112.00	618.60	506.60	618.60	506.60	112.00	618.60	618.58	618.58	-0.18	0.00	0.01	-0.18	0.01	0.01	0.01	-0.81
13.375in Casing Surface	32.00	618.60	586.60	618.60	586.60	32.00	618.60	618.58	618.58	0.00	0.00	0.00	-3.94	0.00	0.00	0.00	-0.81
12.25in Open Hole	618.60	2602.00	1983.40	2602.00	1983.40	618.58	2601.74	2601.74	2601.74	-3.94	0.00	-0.81	4.32	0.00	-0.81	4.34	4.34
9.625in Casing Intermediate	32.00	2602.00	2570.00	2602.00	2570.00	32.00	2601.74	2601.74	2601.74	0.00	4.32	0.00	-476.42	4.34	4.34	4.34	-272.24
8.75in Open Hole	2602.00	6331.00	3729.00	6331.00	3729.00	2601.74	6252.85	6252.85	6252.85	-476.42	-272.24	-272.24	8916.17	-272.24	-272.24	-272.24	-3702.97
8.5in Open Hole	6331.00	16454.00	10123.00	16454.00	10123.00	6252.85	6503.33	6503.33	6503.33	0.00	0.00	0.00	8916.17	0.00	0.00	0.00	-3702.97
5.5in Casing Production	32.00	16454.00	16422.00	16454.00	16422.00	32.00	6503.33	6503.33	6503.33	0.00	0.00	0.00	8916.17	0.00	0.00	0.00	-3702.97



Actual Wellpath Report

Olive Unit 2H AWP Proj: 16454'
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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #03
ANTERO RESOURCES CORPORATION	Well	Olive Unit 2H
Area Tyler County, WV	Wellbore	Olive Unit 2H AWB
Field Tyler		
Facility Lemuel Pad		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Olive Unit 2H POE Rev-4	6563.00	-103.49	-431.23	1664415.87	14315642.52	39°25'19.651"N	80°54'54.066"W	point
Olive Unit 2H BHL Rev-4	6593.00	8973.42	-3687.64	1661160.77	14324715.79	39°26'49.391"N	80°55'35.467"W	point
Olive Unit 2H LP Rev-4	6593.00	89.08	-502.64	1664344.49	14315835.01	39°25'21.555"N	80°54'54.974"W	point

WELLPATH COMPOSITION - Ref Wellbore: Olive Unit 2H AWB Ref Wellpath: Olive Unit 2H AWP Proj: 16454'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
32.00	610.00	Gyrodata standard - Drop gyro or Multi-shot	01 Gyrodata MS Gyro <17-1/2">{(50'-610')}	Olive Unit 2H AWB
610.00	2568.00	ISCWSA MWD, Rev. 4 (Standard)	02 Panther EM <12-1/4">{(610')(684'-2658')}	Olive Unit 2H AWB
2568.00	6261.00	ISCWSA MWD, Rev. 4 (Standard)	03 Panther EM <8-3/4">{(2568')(2645'-6261')}	Olive Unit 2H AWB
6261.00	16430.00	BHI AutoTrak Curve (Short)	04 BH AT Curve <8-1/2">{(6261')(6319'-16430')}	Olive Unit 2H AWB
16430.00	16454.00	Blind Drilling (sta)	Projection to bit	Olive Unit 2H AWB



Actual Wellpath Report

Olive Unit 2H AWP Proj: 16454'
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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #03
ANTERO RESOURCES CORPORATION	Well	Olive Unit 2H
Area: Tyler County, WV	Wellbore	Olive Unit 2H AWB
Field: Tyler		
Facility: Lemuel Pad		

COMMENTS

Wellpath general comments
 API: 47-095-02451-0000
 BHI Job #: 109301756
 Rig: Frontier 32
 Duration: 07/16/2018-07/21/2018
 Gyrodatta MS Gyro <17-1/2"> (50'-610')
 Panther EM <12-1/4"> (610')(684'-2558')
 Panther EM <8-3/4"> (2558')(2645'-6261')
 BHI AT Curve <8-1/2"> (6261')(6319'-16430')
 Middlesex: 6561' MD
 Burkett: 6749' MD
 Tully: 6820' MD
 Marcellus POE: 6902' MD
 Projected MD at TD: 16454'