



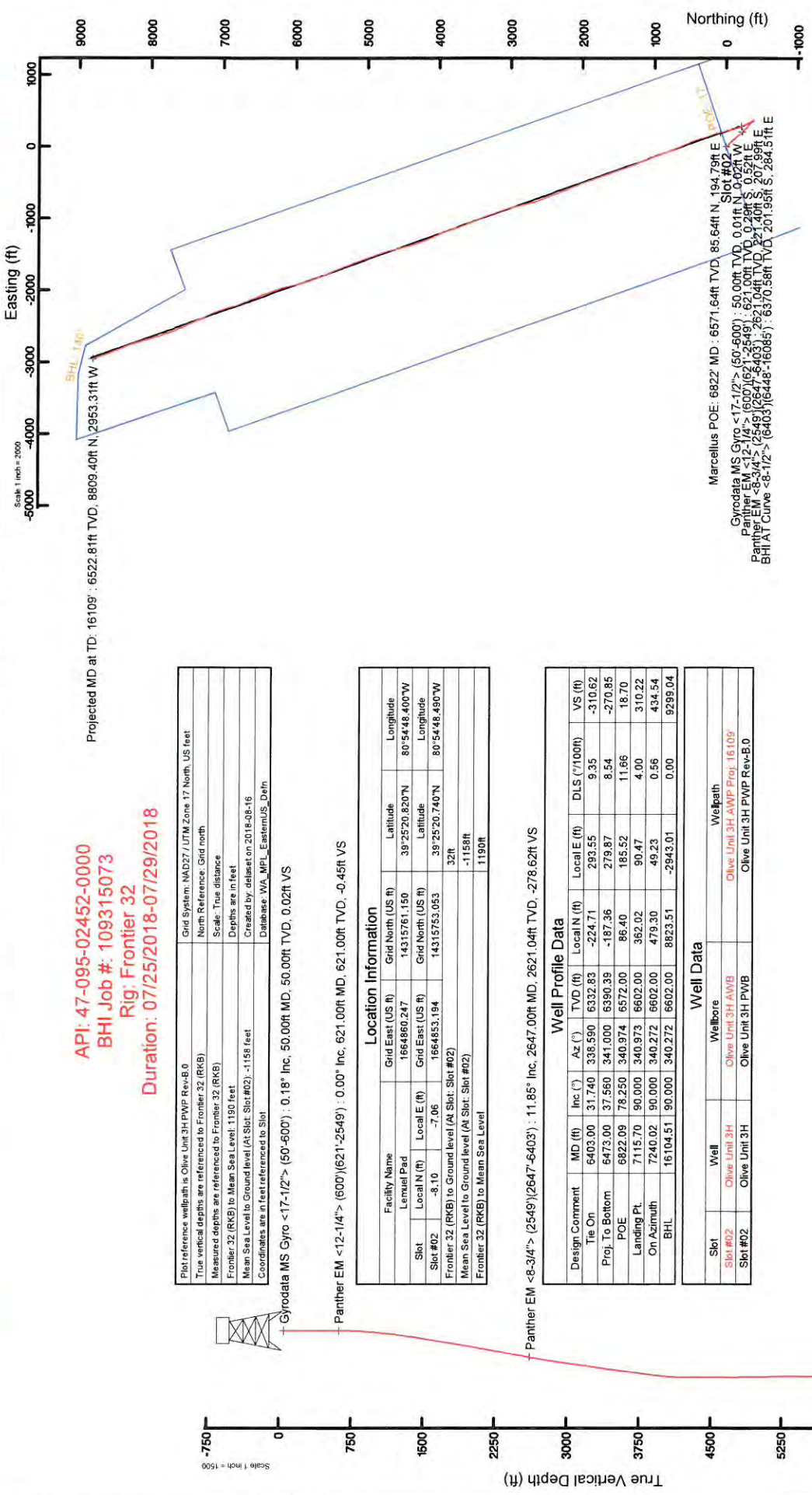
# ANTERO RESOURCES CORPORATION

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

Slot: Slot #02  
 Well: Olive Unit 3H  
 Wellbore: Olive Unit 3H PWB



API: 47-095-02452-0000  
 BHI Job #: 109315073  
 Rig: Frontier 32  
 Duration: 07/25/2018-07/29/2018



Reference wellbore is Olive Unit 3H PWB Rev-B.0  
 True vertical depths are referenced to Frontier 32 (RKB)  
 Measured depths are referenced to Frontier 32 (RKB)  
 Frontier 32 (RKB) to Mean Sea Level: 1190 feet  
 Mean Sea Level to Ground level (At Slot: Slot #02): -1158 feet  
 Coordinates are in feet referenced to Slot  
 Database: WA\_MPL\_EasternUS\_Dein

Location Information

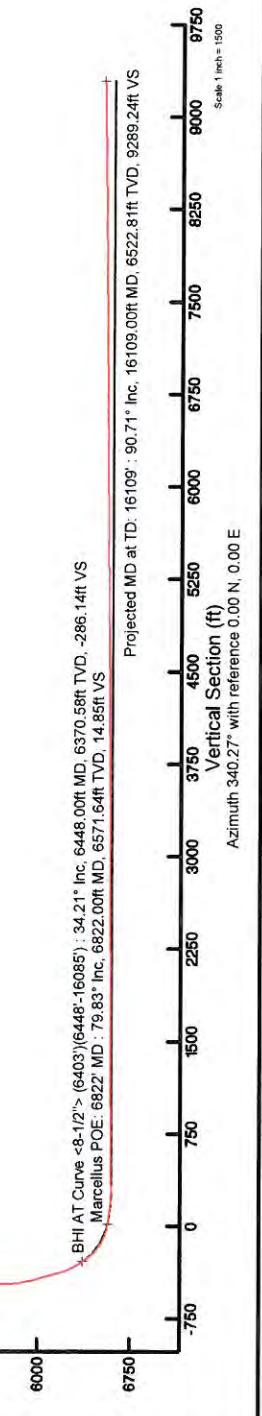
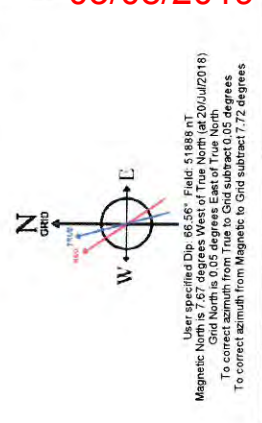
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Lemuel Pad	1664860.247	14315761.150	39°25'20.820"N	80°54'48.400"W
Slot #02	Local E (ft)	Grid East (US ft)	Latitude	Longitude
Frontier 32 (RKB) to Ground level (At Slot: Slot #02)	-3.10	1664853.194	39°25'20.740"N	80°54'48.490"W
Mean Sea Level to Ground level (At Slot: Slot #02)	-7.06	14315753.053	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	6403.00	31.740	338.590	6332.83	-224.71	283.55	9.35	-310.62
Proj. To Bottom	6473.00	37.550	341.000	6390.39	-187.36	279.87	8.34	-270.85
POE	6822.09	78.250	340.974	6572.00	86.40	185.52	11.66	18.70
Landing Pt.	7115.70	90.000	340.973	6602.00	382.02	90.47	4.00	310.22
On Azimuth	7240.02	90.000	340.272	6602.00	479.30	49.23	0.56	434.54
BHL	16104.51	90.000	340.272	6602.00	8823.51	-2849.01	0.00	9289.04

Well Data

Slot	Well	Wellbore	Wellpath
Slot #02	Olive Unit 3H	Olive Unit 3H AWB	Olive Unit 3H AWB Proj: 16109
Slot #02	Olive Unit 3H	Olive Unit 3H PWB	Olive Unit 3H PWB Rev-B.0



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User specified Dip: 86.56° Field: 51886 mT  
 Magnetic North: 86.56° North (Jul2016)  
 Grid North: 0.05 degrees East of True  
 To correct azimuth from True to Grid subtract 0.05 degrees  
 To correct azimuth from Magnetic to Grid subtract 7.72 degrees

Projected MD at TD: 16109' : 90.71° inc, 16109.00ft MD, 6522.81ft TVD, 9289.24ft VS  
 BHI AT Curve <8-1/2"> (6403)(6448-16085) : 34.21° inc, 6448.00ft MD, 6370.58ft TVD, -286.14ft VS  
 Marcellus POE: 6822' MD : 79.83° inc, 6822.00ft MD, 6571.64ft TVD, 14.85ft VS



# Actual Wellpath Report

Olive Unit 3H AWP Proj: 16109'

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03/08/2019

REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Lemuel Pad
Slot	Slot #02
Well	Olive Unit 3H
Wellbore	Olive Unit 3H AWB

REPORT SETUP INFORMATION	
Projection System	NAD27 / UTM Zone 17 North, US feet
North Reference	Grid
Scale	0.999601
Convergence at slot	0.05° East
Software System	WellArchitect® 5.1
User	Delaset
Report Generated	16/Aug/2018 at 11:45
Database/Source file	WA_MPL_EasternUS_Defn/Olive_Unit_3H_AWP_Proj_16109_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-8.10	-7.06	1664853.19	14315753.05	39°25'20.740"N	80°54'48.490"W
Facility Reference Pt			1664860.25	14315761.15	39°25'20.320"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
Horizontal Reference Pt	Slot
Vertical Reference Pt	Frontier 32 (RKB)
MD Reference Pt	Frontier 32 (RKB)
Field Vertical Reference	Mean Sea Level
	Frontier 32 (RKB) to Facility Vertical Datum
	Frontier 32 (RKB) to Mean Sea Level
	Frontier 32 (RKB) to Ground Level at Slot (Slot #02)
	Section Origin
	Section Azimuth
	32.00ft
	1190.00ft
	32.00ft
	N 0.00, E 0.00 ft
	340.27°





# Actual Wellpath Report

Olive Unit 3H AWP Proj: 16109'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Tyler County, WV	Well	Olive Unit 3H
Field	Tyler	Wellbore	Olive Unit 3H AWB
Facility	Lemuel Pad		

WELLPATH DATA (209 stations) † = interpolated/extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
0.00	0.00	300.920	0.00	0.00	0.00	0.00	1664853.19	14315753.05	39°25'20.740"N	80°54'48.490"W	0.00	0.000	0.00	0.00	0.00	
32.00	0.00	300.920	32.00	0.00	0.00	0.00	1664853.19	14315753.05	39°25'20.740"N	80°54'48.490"W	0.00	0.000	0.00	0.00	0.00	
50.00	0.180	300.920	50.00	0.02	0.01	-0.02	1664853.17	14315753.07	39°25'20.740"N	80°54'48.490"W	0.03	300.920	1.00	1.00	-328.22	Syrodata MS Gyro <17-1/2"> (50'-600')
75.00	0.280	314.510	75.00	0.11	0.08	-0.10	1664853.09	14315753.13	39°25'20.741"N	80°54'48.491"W	0.13	307.372	0.45	0.40	54.36	
100.00	0.290	319.830	100.00	0.22	0.17	-0.19	1664853.01	14315753.22	39°25'20.742"N	80°54'48.492"W	0.25	312.226	0.11	0.04	21.28	
125.00	0.260	331.390	125.00	0.34	0.27	-0.25	1664852.94	14315753.32	39°25'20.743"N	80°54'48.493"W	0.37	316.429	0.25	-0.12	46.24	
132.00	0.240	340.150	132.00	0.37	0.29	-0.27	1664852.93	14315753.35	39°25'20.743"N	80°54'48.493"W	0.40	317.871	0.62	-0.29	125.14	
150.00	0.030	324.740	150.00	0.41	0.33	-0.28	1664852.91	14315753.39	39°25'20.743"N	80°54'48.494"W	0.44	319.819	1.17	-1.17	-85.61	
175.00	0.070	277.910	175.00	0.42	0.34	-0.30	1664852.89	14315753.38	39°25'20.743"N	80°54'48.493"W	0.45	318.605	0.22	0.16	-187.32	
200.00	0.060	73.650	200.00	0.43	0.35	-0.30	1664852.89	14315753.40	39°25'20.743"N	80°54'48.494"W	0.46	318.842	0.51	-0.04	622.96	
225.00	0.140	142.500	225.00	0.40	0.33	-0.27	1664852.92	14315753.32	39°25'20.743"N	80°54'48.493"W	0.43	320.180	0.52	0.32	275.40	
250.00	0.180	145.470	250.00	0.33	0.27	-0.23	1664852.96	14315753.32	39°25'20.743"N	80°54'48.493"W	0.36	319.398	0.16	0.16	11.88	
275.00	0.240	174.340	275.00	0.24	0.19	-0.20	1664852.99	14315753.24	39°25'20.742"N	80°54'48.493"W	0.28	312.285	0.48	0.24	115.48	
300.00	0.210	111.180	300.00	0.16	0.12	-0.16	1664853.04	14315753.17	39°25'20.741"N	80°54'48.492"W	0.20	306.819	0.95	-0.12	-252.64	
325.00	0.300	133.260	325.00	0.07	0.06	-0.07	1664853.13	14315753.11	39°25'20.741"N	80°54'48.491"W	0.09	310.158	0.53	0.36	88.32	
350.00	0.070	126.940	350.00	0.00	0.00	-0.01	1664853.19	14315753.05	39°25'20.740"N	80°54'48.490"W	0.01	283.739	0.92	-0.92	-25.28	
375.00	0.050	62.710	375.00	-0.01	0.00	0.02	1664853.21	14315753.05	39°25'20.740"N	80°54'48.490"W	0.02	99.707	0.26	-0.08	-256.92	
400.00	0.150	137.720	400.00	-0.04	-0.02	0.05	1664853.24	14315753.03	39°25'20.740"N	80°54'48.489"W	0.05	114.692	0.58	0.40	300.04	
425.00	0.080	104.980	425.00	-0.08	-0.05	0.09	1664853.28	14315753.00	39°25'20.739"N	80°54'48.489"W	0.10	120.329	0.37	-0.28	-130.96	
450.00	0.120	99.040	450.00	-0.10	-0.06	0.13	1664853.32	14315752.99	39°25'20.739"N	80°54'48.488"W	0.14	114.631	0.17	0.16	-23.76	
475.00	0.110	110.270	475.00	-0.13	-0.07	0.18	1664853.37	14315752.98	39°25'20.739"N	80°54'48.488"W	0.19	111.981	0.10	-0.04	44.92	
500.00	0.080	86.420	500.00	-0.15	-0.08	0.22	1664853.41	14315752.97	39°25'20.739"N	80°54'48.487"W	0.23	109.940	0.20	-0.12	-95.40	
525.00	0.190	113.790	525.00	-0.18	-0.09	0.27	1664853.47	14315752.96	39°25'20.739"N	80°54'48.487"W	0.29	109.110	0.50	0.44	109.48	
550.00	0.270	125.770	550.00	-0.26	-0.15	0.36	1664853.55	14315752.91	39°25'20.739"N	80°54'48.485"W	0.39	112.111	0.37	0.32	47.92	
575.00	0.180	153.790	575.00	-0.35	-0.22	0.42	1664853.62	14315752.84	39°25'20.738"N	80°54'48.485"W	0.48	116.940	0.56	-0.36	112.08	
600.00	0.220	119.580	600.00	-0.42	-0.27	0.48	1664853.68	14315752.78	39°25'20.737"N	80°54'48.484"W	0.56	119.599	0.49	0.16	-136.84	
621.00	0.000	352.000	621.00	-0.45	-0.29	0.52	1664853.71	14315752.76	39°25'20.737"N	80°54'48.483"W	0.60	119.597	1.05	-1.05	-569.43	Panther EM <12-1/4"> (600')(621'-2549')
684.00	0.800	129.110	684.00	-0.83	-0.57	0.86	1664854.05	14315752.48	39°25'20.734"N	80°54'48.479"W	1.03	123.636	1.27	1.27	204.94	
775.00	2.210	140.300	774.96	-3.02	-2.32	2.47	1664855.67	14315750.73	39°25'20.717"N	80°54'48.459"W	3.39	133.202	1.58	1.56	12.30	
870.00	3.890	141.930	869.82	-7.80	-6.27	5.63	1664858.82	14315746.79	39°25'20.678"N	80°54'48.418"W	8.43	138.072	1.77	1.77	1.72	





# Actual Wellpath Report

Olive Unit 3H AWP Proj: 16109'  
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03/08/2019

## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Tyler County, WV	Well	Olive Unit 3H
Field	Tyler	Wellbore	Olive Unit 3H AWP
Facility	Lemuel Pad		

## WELLPATH DATA (209 stations)

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
964.00	5.210	132.010	963.53	-14.59	-11.64	10.77	1664863.96	14315741.42	39°25'20.625"N	80°54'48.353"W	15.85	137.218	1.63	1.40	-10.55	
1059.00	6.580	131.310	1058.02	-23.15	-18.12	18.06	1664871.25	14315734.94	39°25'20.561"N	80°54'48.260"W	25.58	135.086	1.44	1.44	-0.74	
1154.00	7.910	130.820	1152.26	-33.60	-25.98	27.10	1664880.28	14315727.08	39°25'20.483"N	80°54'48.145"W	37.54	133.797	1.40	1.40	-0.52	
1249.00	8.880	130.340	1246.24	-45.65	-35.00	37.63	1664890.81	14315718.06	39°25'20.394"N	80°54'48.011"W	51.39	132.925	1.02	1.02	-0.51	
1344.00	9.500	130.910	1340.02	-58.84	-44.88	49.15	1664902.32	14315708.19	39°25'20.296"N	80°54'47.864"W	66.56	132.403	0.66	0.65	0.60	
1439.00	9.500	136.640	1433.72	-72.85	-55.72	60.45	1664913.63	14315697.36	39°25'20.189"N	80°54'47.720"W	82.21	132.664	1.00	0.00	6.03	
1534.00	10.820	137.430	1527.27	-88.03	-67.80	71.70	1664924.87	14315685.28	39°25'20.069"N	80°54'47.577"W	98.69	133.398	1.08	1.07	0.83	
1630.00	10.760	135.230	1621.62	-104.24	-80.63	83.96	1664937.12	14315672.45	39°25'19.942"N	80°54'47.421"W	116.41	133.843	0.50	0.27	-2.29	
1725.00	9.810	133.030	1715.09	-119.49	-92.46	96.13	1664949.29	14315660.63	39°25'19.825"N	80°54'47.266"W	133.38	133.886	1.10	-1.02	-2.32	
1820.00	9.900	141.220	1808.69	-134.40	-104.35	107.16	1664960.31	14315648.74	39°25'19.708"N	80°54'47.126"W	149.58	134.239	1.48	0.09	8.62	
1915.00	10.300	138.010	1902.22	-149.98	-117.03	117.96	1664971.11	14315636.07	39°25'19.582"N	80°54'46.988"W	166.16	134.774	0.73	0.42	-3.38	
2010.00	11.000	135.320	1995.59	-166.06	-129.79	130.01	1664983.16	14315623.32	39°25'19.456"N	80°54'46.835"W	183.71	134.950	0.90	0.74	-2.83	
2105.00	10.780	140.120	2088.88	-182.82	-143.05	142.08	1664995.22	14315610.06	39°25'19.325"N	80°54'46.681"W	201.62	135.194	0.98	-0.23	5.05	
2201.00	11.000	144.310	2183.15	-199.85	-157.38	153.18	1665006.32	14315595.74	39°25'19.183"N	80°54'46.540"W	219.62	135.774	0.86	0.23	4.36	
2295.00	10.380	144.710	2275.52	-216.83	-171.58	163.31	1665016.44	14315581.55	39°25'19.043"N	80°54'46.411"W	236.87	136.414	0.66	-0.66	0.43	
2391.00	10.610	143.210	2369.91	-233.41	-185.71	173.60	1665026.72	14315567.42	39°25'18.903"N	80°54'46.280"W	254.21	136.931	0.37	0.24	-1.56	
2486.00	10.690	137.300	2463.28	-249.89	-199.19	184.81	1665037.93	14315553.94	39°25'18.770"N	80°54'46.137"W	271.72	137.145	1.15	0.08	-6.22	
2549.00	11.620	133.730	2525.09	-260.94	-207.87	193.36	1665046.47	14315545.26	39°25'18.684"N	80°54'46.029"W	283.90	137.072	1.84	1.48	-5.67	
2647.00	11.850	131.790	2621.04	-278.62	-221.40	207.99	1665056.10	14315531.74	39°25'18.550"N	80°54'45.842"W	303.77	136.789	0.47	0.23	-1.98	Panther EM <8-3/4" > (2549)(2647-6403)
2742.00	10.170	136.490	2714.29	-294.87	-233.98	221.04	1665074.15	14315519.16	39°25'18.425"N	80°54'45.676"W	321.88	136.630	2.00	-1.77	4.95	
2836.00	9.550	133.210	2806.90	-309.41	-245.34	232.44	1665085.54	14315507.81	39°25'18.313"N	80°54'45.531"W	337.96	136.547	0.89	-0.66	-3.49	
2891.00	9.370	136.990	2900.61	-323.53	-256.39	243.46	1665096.55	14315496.76	39°25'18.204"N	80°54'45.391"W	353.56	136.483	0.68	-0.19	3.98	
3027.00	9.050	133.860	2995.37	-337.47	-267.34	254.23	1665107.32	14315485.82	39°25'18.095"N	80°54'45.254"W	368.92	136.440	0.62	-0.33	-3.26	
3122.00	8.750	141.300	3089.23	-351.00	-278.16	264.14	1665117.22	14315475.01	39°25'17.988"N	80°54'45.128"W	383.59	136.481	1.25	-0.32	7.83	
3221.00	8.440	134.090	3187.12	-364.64	-289.09	274.06	1665127.15	14315464.08	39°25'17.880"N	80°54'45.001"W	398.35	136.528	1.13	-0.31	-7.28	
3316.00	9.310	128.250	3280.99	-377.41	-298.70	285.11	1665138.19	14315454.48	39°25'17.785"N	80°54'44.861"W	412.92	136.334	1.32	0.92	-6.15	
3411.00	10.470	127.920	3374.57	-391.22	-308.76	297.95	1665151.02	14315444.42	39°25'17.686"N	80°54'44.697"W	429.08	136.021	1.22	1.22	-0.35	
3506.00	8.570	126.530	3468.26	-404.40	-318.28	310.45	1665163.52	14315434.90	39°25'17.591"N	80°54'44.538"W	444.61	135.713	2.01	-2.00	-1.46	
3600.00	7.830	136.200	3561.30	-416.07	-327.07	320.51	1665173.57	14315426.12	39°25'17.504"N	80°54'44.410"W	457.93	135.580	1.66	-0.79	10.29	
3695.00	9.290	129.880	3655.25	-428.59	-336.66	330.87	1665183.93	14315416.53	39°25'17.410"N	80°54'44.278"W	472.03	135.496	1.83	1.54	-6.65	





# Actual Wellpath Report

Olive Unit 3H AWP Proj: 16109'

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03/08/2019

## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot #02
ANTERO RESOURCES CORPORATION	Olive Unit 3H
Area	Well
Tyler	Wellbore
Field	Olive Unit 3H AWB
Facility	

## WELLPATH DATA (209 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
3790.00	9.580	120.050	3748.97	-441.24	-345.53	343.60	1665196.66	14315407.66	39°25'17.322"N	80°54'44.116"W	487.29	135.161	1.72	0.31	-10.35	
3885.00	8.630	132.310	3842.78	-453.58	-354.29	355.72	1665208.77	14315398.91	39°25'17.235"N	80°54'43.962"W	502.05	134.885	2.27	-1.00	12.91	
3980.00	7.310	143.400	3936.86	-465.66	-363.94	364.59	1665217.64	14315389.26	39°25'17.140"N	80°54'43.849"W	515.15	134.949	2.13	-1.39	11.67	
4075.00	4.990	148.380	4031.31	-475.48	-372.31	370.36	1665223.41	14315380.89	39°25'17.057"N	80°54'43.775"W	525.15	135.151	2.50	-2.44	5.24	
4170.00	2.460	147.580	4126.10	-481.52	-377.55	373.62	1665226.66	14315375.65	39°25'17.005"N	80°54'43.734"W	531.17	135.300	2.66	-2.66	-0.84	
4266.00	0.680	107.370	4222.06	-483.87	-379.46	375.27	1665228.31	14315373.74	39°25'16.986"N	80°54'43.713"W	533.68	135.318	2.07	-1.85	-41.89	
4360.00	0.750	78.270	4316.06	-484.29	-379.50	376.40	1665229.45	14315373.70	39°25'16.986"N	80°54'43.698"W	534.51	135.235	0.39	0.07	-30.96	
4456.00	0.850	85.180	4412.05	-484.56	-379.32	377.73	1665230.77	14315373.89	39°25'16.987"N	80°54'43.681"W	535.31	135.120	0.14	0.10	7.20	
4551.00	0.420	307.130	4507.05	-484.45	-379.05	378.15	1665231.20	14315374.16	39°25'16.990"N	80°54'43.676"W	535.42	135.068	1.26	-0.45	-145.32	
4646.00	1.400	277.720	4602.03	-483.63	-378.68	376.73	1665229.77	14315374.52	39°25'16.994"N	80°54'43.694"W	534.15	135.148	1.11	1.03	-30.96	
4742.00	1.600	275.360	4698.00	-482.52	-378.40	374.23	1665227.27	14315374.81	39°25'16.997"N	80°54'43.726"W	532.20	135.317	0.22	0.21	-2.46	
4837.00	1.200	285.210	4792.97	-481.39	-378.01	371.95	1665224.99	14315375.19	39°25'17.000"N	80°54'43.755"W	530.32	135.463	0.49	-0.42	10.37	
4932.00	1.070	283.870	4887.95	-480.33	-377.54	370.13	1665223.17	14315375.67	39°25'17.005"N	80°54'43.778"W	528.71	135.568	0.14	-0.14	-1.41	
5027.00	1.800	284.710	4982.92	-478.99	-376.95	367.82	1665220.87	14315376.26	39°25'17.011"N	80°54'43.808"W	526.67	135.702	0.77	0.77	0.88	
5122.00	2.200	280.530	5077.86	-477.23	-376.24	364.59	1665217.64	14315376.97	39°25'17.018"N	80°54'43.849"W	523.91	135.901	0.45	0.42	-4.40	
5218.00	1.760	277.290	5173.81	-475.63	-375.71	361.31	1665214.36	14315377.49	39°25'17.023"N	80°54'43.891"W	521.25	136.119	0.47	-0.46	-3.37	
5313.00	2.260	274.940	5268.75	-474.19	-375.37	358.00	1665211.05	14315377.84	39°25'17.027"N	80°54'43.933"W	518.71	136.356	0.53	0.53	-2.47	
5408.00	1.100	299.690	5363.71	-472.71	-374.75	355.34	1665208.39	14315378.45	39°25'17.033"N	80°54'43.967"W	516.44	136.523	1.41	-1.22	26.05	
5503.00	0.290	291.140	5458.70	-471.86	-374.21	354.33	1665207.38	14315378.99	39°25'17.038"N	80°54'43.980"W	515.35	136.584	0.86	-0.85	-9.00	
5598.00	0.330	295.960	5553.70	-471.51	-374.01	353.85	1665206.91	14315379.20	39°25'17.040"N	80°54'43.986"W	514.87	136.586	0.05	0.04	5.07	
5693.00	0.190	330.020	5648.70	-471.16	-373.75	353.53	1665205.58	14315379.45	39°25'17.043"N	80°54'43.990"W	514.46	136.593	0.21	-0.15	35.85	
5788.00	1.130	323.060	5743.69	-470.11	-372.87	352.89	1665205.94	14315380.34	39°25'17.051"N	80°54'43.998"W	513.38	136.577	0.99	0.99	-7.33	
5883.00	4.430	329.670	5788.63	-467.97	-371.01	351.74	1665204.80	14315382.19	39°25'17.070"N	80°54'44.012"W	511.25	136.527	7.36	7.33	14.68	
5928.00	8.420	331.720	5838.31	-462.45	-368.12	349.03	1665202.09	14315387.08	39°25'17.118"N	80°54'44.047"W	505.83	136.389	7.99	7.98	4.10	
5978.00	11.130	330.530	5882.65	-454.91	-359.43	345.33	1665198.39	14315393.76	39°25'17.184"N	80°54'44.094"W	498.45	136.146	6.04	6.02	-2.64	
6023.00	12.810	344.380	5931.57	-444.63	-349.89	341.47	1665194.52	14315403.30	39°25'17.279"N	80°54'44.143"W	488.90	135.688	6.63	3.36	27.70	
6073.00	14.540	345.380	5975.29	-434.02	-338.62	338.70	1665191.76	14315413.57	39°25'17.380"N	80°54'44.178"W	479.64	135.078	3.88	3.84	2.22	
6118.00	15.630	341.600	6023.57	-421.04	-327.16	334.99	1665188.05	14315426.03	39°25'17.503"N	80°54'44.225"W	468.24	134.322	2.94	2.18	-7.56	
6168.00	15.540	338.130	6066.92	-408.95	-315.81	330.83	1665183.89	14315437.37	39°25'17.616"N	80°54'44.278"W	457.37	133.669	2.08	-0.20	-7.71	
6168.00	13.700	337.790	6115.30	-396.34	-304.11	326.09	1665179.16	14315449.06	39°25'17.731"N	80°54'44.338"W	445.89	133.002	3.68	-3.68	-0.68	





# Actual Wellpath Report

Olive Unit 3H AWP Proj: 16109'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Tyler County, WV	Well	Olive Unit 3H
Field	Tyler	Wellbore	Olive Unit 3H AWB
Facility	Lemuel Pad		

WELLPATH DATA (209 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
6213.00	14.640	337.130	6158.93	-385.34	-293.94	321.87	1665174.94	14315459.23	39°25'17.832"N	80°54'44.392"W	435.89	132.403	2.12	2.09	-1.47	
6263.00	19.210	336.490	6206.75	-370.82	-280.57	316.13	1665169.20	14315472.60	39°25'17.964"N	80°54'44.465"W	422.68	131.589	9.15	9.14	-1.28	
6308.00	23.610	336.990	6248.63	-354.42	-265.47	309.65	1665162.72	14315487.68	39°25'18.113"N	80°54'44.548"W	407.87	130.608	9.79	9.78	1.11	
6358.00	27.540	339.030	6293.72	-332.86	-245.46	301.60	1665154.67	14315507.69	39°25'18.311"N	80°54'44.650"W	388.86	129.141	8.05	7.86	4.08	
6403.00	31.740	338.590	6332.83	-310.62	-224.71	293.55	1665146.63	14315528.43	39°25'18.516"N	80°54'44.752"W	369.69	127.434	9.35	9.33	-0.98	
6448.00	34.210	338.120	6370.58	-286.14	-201.95	284.51	1665137.59	14315551.18	39°25'18.741"N	80°54'44.867"W	348.90	125.368	5.52	5.49	-1.04	BH AT Curve <8-1/2"> (6403)(6448-16085)
6508.00	38.050	337.840	6419.03	-250.80	-169.16	271.25	1665124.33	14315583.96	39°25'19.065"N	80°54'45.036"W	319.67	121.949	6.41	6.40	-0.47	
6514.00†	38.951	338.062	6423.72	-247.07	-165.70	269.85	1665122.93	14315587.92	39°25'19.100"N	80°54'45.054"W	316.66	121.552	15.20	15.02	3.70	Middlesex: 6514' MD
6555.00	45.120	339.380	6454.16	-219.64	-140.13	259.91	1665113.00	14315612.98	39°25'19.353"N	80°54'45.180"W	295.27	118.331	15.20	15.05	3.21	
6603.00	52.050	341.910	6485.90	-183.67	-106.17	248.03	1665101.12	14315646.92	39°25'19.688"N	80°54'45.331"W	269.80	113.175	14.97	14.44	5.27	
6657.00†	58.740	343.980	6512.58	-145.06	-69.21	236.71	1665089.81	14315683.87	39°25'20.054"N	80°54'45.475"W	246.62	106.297	14.69	14.23	4.40	
6698.00	59.620	344.164	6516.16	-139.06	-63.43	235.06	1665088.16	14315689.65	39°25'20.111"N	80°54'45.495"W	243.47	105.100	12.77	12.57	2.63	Burkett: 6657' MD
6698.00	64.780	345.180	6535.28	-102.91	-28.46	225.49	1665078.59	14315724.60	39°25'20.457"N	80°54'45.617"W	227.28	97.193	12.77	12.58	2.48	
6716.00†	67.250	345.251	6542.59	-86.53	-12.56	221.29	1665074.40	14315740.50	39°25'20.614"N	80°54'45.670"W	221.65	93.248	13.73	13.72	0.39	Jully: 6716' MD
6745.00	71.230	345.360	6552.87	-59.52	13.67	214.41	1665067.52	14315766.71	39°25'20.873"N	80°54'45.768"W	214.85	86.353	13.73	13.72	0.38	
6793.00	77.280	344.510	6565.89	-13.50	58.25	202.41	1665055.52	14315811.28	39°25'21.314"N	80°54'45.910"W	210.62	73.944	12.72	12.60	-1.77	
6822.00†	79.828	344.392	6571.64	14.85	85.64	194.79	1665047.90	14315838.65	39°25'21.585"N	80°54'46.007"W	212.78	66.268	8.80	8.79	-0.41	Marcellus POE: 6822' MD
6840.00	81.410	344.320	6574.58	32.56	102.74	190.00	1665043.12	14315855.75	39°25'21.754"N	80°54'46.068"W	216.00	61.599	8.80	8.79	-0.40	
6888.00	81.850	343.100	6581.57	79.97	148.32	176.68	1665029.80	14315901.31	39°25'22.204"N	80°54'46.237"W	230.68	49.987	2.68	0.92	-2.54	
6935.00	83.120	342.800	6587.71	126.51	192.86	163.02	1665016.15	14315945.84	39°25'22.645"N	80°54'46.410"W	252.53	40.206	2.78	2.70	-0.64	
6984.00	84.110	342.000	6593.16	175.17	239.28	148.29	1665001.43	14315992.24	39°25'23.104"N	80°54'46.597"W	281.51	31.788	2.59	2.02	-1.63	
7031.00	86.740	342.010	6596.91	222.00	283.83	133.82	1664986.96	14316036.77	39°25'23.544"N	80°54'46.781"W	313.80	25.243	5.60	5.60	0.02	
7079.00	89.690	342.780	6598.41	269.93	329.56	119.31	1664972.46	14316082.48	39°25'23.996"N	80°54'46.966"W	350.49	19.902	6.35	6.15	1.60	
7174.00	91.200	341.380	6597.67	364.88	419.94	90.08	1664943.24	14316172.83	39°25'24.890"N	80°54'47.337"W	429.50	12.107	2.17	1.59	-1.47	
7269.00	90.430	337.670	6596.32	459.84	508.92	56.86	1664910.03	14316261.76	39°25'25.769"N	80°54'47.759"W	512.08	6.375	3.99	-0.81	-3.91	
7364.00	90.430	335.390	6595.60	554.63	596.05	19.03	1664872.22	14316348.86	39°25'26.631"N	80°54'48.240"W	596.35	1.829	2.40	0.00	-2.40	
7459.00	90.400	337.260	6594.91	649.40	683.05	-19.11	1664834.09	14316434.83	39°25'27.491"N	80°54'48.725"W	683.31	356.397	1.97	-0.03	1.97	
7554.00	90.220	338.510	6594.40	744.31	771.05	-54.88	1664798.34	14316523.80	39°25'28.361"N	80°54'49.180"W	773.00	355.929	1.33	-0.19	1.32	
7649.00	90.310	340.200	6593.96	839.30	859.95	-88.37	1664764.86	14316612.66	39°25'29.240"N	80°54'49.606"W	864.48	354.133	1.78	0.09	1.78	
7744.00	90.310	340.670	6593.45	934.30	949.46	-120.18	1664733.06	14316702.13	39°25'30.125"N	80°54'50.010"W	957.04	352.786	0.49	0.00	0.49	





# Actual Wellpath Report

Olive Unit 3H AWP Proj: 16109'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #02
ANTERO RESOURCES CORPORATION	Well	Olive Unit 3H
Tyler County, WV	Wellbore	Olive Unit 3H AWB
Tyler		
Lemuel Pad		

## WELLPATH DATA (209 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
7840.00	90.310	339.750	6592.93	1030.29	1039.79	-152.69	1664700.57	14316792.43	39°25'31.018"N	80°54'50.423"W	1050.94	351.646	0.96	0.00	-0.96	
7934.00	90.340	338.510	6592.39	1124.27	1127.62	-186.17	1664687.10	14316880.22	39°25'31.887"N	80°54'50.849"W	1142.89	350.625	1.32	0.03	-1.32	
8029.00	90.310	337.670	6591.86	1219.20	1215.76	-221.62	1664631.66	14316988.32	39°25'32.758"N	80°54'51.299"W	1235.79	349.669	0.88	-0.03	-0.88	
8124.00	90.310	338.660	6591.34	1314.13	1303.94	-256.95	1664596.34	14317086.47	39°25'33.630"N	80°54'51.748"W	1329.02	348.852	1.04	0.00	1.04	
8219.00	90.280	339.530	6590.85	1409.11	1392.68	-290.85	1664562.46	14317145.18	39°25'34.507"N	80°54'52.179"W	1422.73	348.204	0.92	-0.03	0.92	
8315.00	90.340	340.270	6590.33	1505.11	1482.83	-323.84	1664529.48	14317235.29	39°25'35.399"N	80°54'52.599"W	1517.78	347.680	0.77	0.06	0.77	
8410.00	90.310	340.970	6589.79	1600.10	1572.45	-355.36	1664487.56	14317324.87	39°25'36.285"N	80°54'52.999"W	1612.10	347.265	0.74	-0.03	0.74	
8505.00	89.880	341.660	6589.64	1695.09	1662.44	-385.79	1664487.56	14317414.83	39°25'37.174"N	80°54'53.386"W	1706.62	346.935	0.86	-0.45	0.74	
8600.00	89.940	341.660	6589.79	1790.06	1752.62	-415.67	1664437.69	14317504.97	39°25'38.066"N	80°54'53.766"W	1801.24	346.658	0.06	0.06	-0.01	
8695.00	89.970	340.220	6589.86	1885.05	1842.41	-446.70	1664406.68	14317594.72	39°25'38.954"N	80°54'54.160"W	1895.79	346.371	1.52	0.03	-1.52	
8790.00	90.400	339.640	6589.55	1980.05	1931.64	-479.30	1664374.09	14317683.92	39°25'39.836"N	80°54'54.574"W	1990.22	346.065	0.76	0.45	-0.61	
8885.00	90.250	338.390	6589.02	2075.02	2020.34	-513.32	1664340.08	14317772.58	39°25'40.713"N	80°54'55.007"W	2084.53	345.744	1.33	-0.16	-1.32	
8981.00	90.220	338.960	6588.62	2170.98	2109.76	-548.23	1664305.19	14317861.97	39°25'41.597"N	80°54'55.451"W	2179.83	345.434	0.59	-0.03	0.59	
9074.00	90.400	336.260	6588.12	2263.87	2195.74	-583.65	1664269.78	14317947.91	39°25'42.447"N	80°54'55.901"W	2271.99	345.114	2.91	0.19	-2.90	
9169.00	89.970	337.250	6587.81	2358.69	2283.03	-621.14	1664232.30	14318035.17	39°25'43.310"N	80°54'56.378"W	2366.02	344.780	1.14	-0.45	1.04	
9264.00	90.030	338.810	6587.81	2453.62	2371.13	-656.68	1664196.78	14318123.23	39°25'44.181"N	80°54'56.830"W	2460.38	344.520	1.64	0.06	1.64	
9359.00	90.150	338.890	6587.66	2548.59	2459.73	-690.96	1664162.51	14318211.79	39°25'45.057"N	80°54'57.265"W	2554.93	344.309	0.15	0.13	0.08	
9454.00	89.970	339.940	6587.56	2643.56	2548.37	-725.14	1664128.35	14318300.40	39°25'45.934"N	80°54'57.700"W	2649.53	344.116	0.20	-0.19	0.05	
9549.00	90.120	340.930	6587.49	2738.55	2637.60	-757.73	1664095.77	14318389.59	39°25'46.816"N	80°54'58.114"W	2744.28	343.972	2.10	0.16	2.09	
9644.00	90.250	344.770	6587.18	2833.44	2728.36	-785.73	1664067.77	14318480.31	39°25'47.713"N	80°54'58.470"W	2839.24	343.934	4.04	0.14	4.04	
9739.00	90.370	347.230	6586.67	2927.96	2820.52	-808.72	1664044.80	14318572.45	39°25'48.624"N	80°54'58.762"W	2934.17	344.001	2.59	0.13	2.59	
9834.00	90.310	348.950	6586.10	3022.28	2913.12	-829.94	1664023.59	14318665.01	39°25'49.540"N	80°54'59.031"W	3029.04	344.098	0.30	-0.06	-0.29	
9929.00	90.580	345.030	6585.37	3116.80	3005.29	-852.94	1664000.60	14318757.14	39°25'50.451"N	80°54'59.323"W	3123.98	344.155	2.04	0.28	-2.02	
10024.00	90.460	340.270	6584.50	3211.69	3095.94	-881.26	1663972.29	14318847.75	39°25'51.347"N	80°54'59.683"W	3218.92	344.111	5.01	-0.13	-5.01	
10119.00	90.060	339.000	6584.07	3306.68	3185.00	-914.32	1663939.25	14318936.77	39°25'52.227"N	80°55'00.103"W	3313.63	343.983	1.40	-0.42	-1.34	
10214.00	90.180	340.250	6583.67	3401.67	3274.05	-947.39	1663906.18	14319025.79	39°25'53.108"N	80°55'00.524"W	3408.36	343.861	1.32	0.13	1.32	
10309.00	90.680	340.930	6583.16	3496.67	3363.65	-978.96	1663874.63	14319115.35	39°25'53.994"N	80°55'00.925"W	3503.21	343.773	0.89	0.53	0.72	
10405.00	90.740	338.020	6582.64	3592.64	3453.54	-1012.61	1663840.99	14319205.20	39°25'54.882"N	80°55'01.353"W	3598.93	343.658	3.03	0.06	-3.03	
10500.00	90.520	337.710	6580.93	3687.55	3541.53	-1048.41	1663805.21	14319293.16	39°25'55.752"N	80°55'01.808"W	3693.45	343.510	0.40	-0.23	-0.33	
10594.00	90.400	337.640	6580.17	3781.45	3628.48	-1084.11	1663769.52	14319380.08	39°25'56.612"N	80°55'02.262"W	3786.97	343.365	0.15	-0.13	-0.07	





# Actual Wellpath Report

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## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #02
ANTERO RESOURCES CORPORATION	Well	Olive Unit 3H
Tyler County, WV	Wellbore	Olive Unit 3H AWP
Tyler		
Lemuel Pad		

## WELLPATH DATA (209 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 [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
10690.00	90.490	340.190	6579.43	3877.41	3718.04	-1118.64	1663735.00	14319489.60	39°25'57.498"N	80°55'02.701"W	3882.68	343.255	2.66	0.09	2.66	
10785.00	90.580	341.130	6578.54	3972.40	3807.68	-1150.10	1663703.55	14319559.20	39°25'58.384"N	80°55'03.101"W	3977.58	343.193	0.99	0.09	0.99	
10880.00	90.620	340.120	6577.54	4067.40	3897.29	-1181.62	1663672.05	14319648.78	39°25'59.270"N	80°55'03.502"W	4072.48	343.133	1.06	0.04	-1.06	
10974.00	90.650	337.620	6576.50	4161.36	3984.96	-1215.50	1663638.18	14319736.41	39°26'00.137"N	80°55'03.932"W	4166.21	343.037	2.66	0.03	-2.66	
11069.00	90.550	334.920	6575.51	4256.11	4071.91	-1253.72	1663599.97	14319823.33	39°26'00.996"N	80°55'04.418"W	4260.55	342.887	2.84	-0.11	-2.84	
11164.00	90.370	336.420	6574.74	4350.80	4158.47	-1292.86	1663560.85	14319909.86	39°26'01.852"N	80°55'04.916"W	4354.81	342.730	1.59	-0.19	1.58	
11259.00	90.490	340.020	6574.03	4445.72	4246.67	-1328.10	1663525.62	14320008.22	39°26'02.724"N	80°55'05.364"W	4449.50	342.633	3.79	0.13	3.79	
11354.00	90.490	343.620	6573.22	4540.67	4336.91	-1357.74	1663496.00	14320088.22	39°26'03.616"N	80°55'05.741"W	4544.48	342.616	3.79	0.00	3.79	
11449.00	90.580	346.020	6572.33	4635.35	4428.59	-1382.61	1663464.71	14320179.86	39°26'04.523"N	80°55'06.057"W	4639.40	342.662	2.53	0.09	2.53	
11544.00	91.080	346.250	6570.95	4729.85	4520.81	-1405.37	1663448.38	14320272.05	39°26'05.434"N	80°55'06.346"W	4734.21	342.731	0.58	0.53	0.24	
11639.00	90.830	344.570	6569.37	4824.45	4612.73	-1429.30	1663424.47	14320363.93	39°26'06.343"N	80°55'06.650"W	4829.10	342.784	1.79	-0.26	-1.77	
11734.00	91.110	344.100	6567.76	4919.20	4704.19	-1454.95	1663398.83	14320455.35	39°26'07.247"N	80°55'06.976"W	4924.05	342.814	0.58	0.29	-0.49	
11829.00	90.710	342.120	6566.25	5014.06	4795.07	-1482.54	1663371.25	14320546.20	39°26'08.146"N	80°55'07.326"W	5019.03	342.819	2.13	-0.42	-2.08	
11924.00	90.550	339.460	6565.21	5109.04	4884.77	-1513.80	1663340.01	14320635.86	39°26'09.032"N	80°55'07.724"W	5113.96	342.782	2.80	-0.17	-2.80	
12019.00	90.490	340.690	6564.35	5204.04	4974.08	-1546.17	1663307.65	14320725.13	39°26'09.915"N	80°55'08.135"W	5208.85	342.732	1.30	-0.06	1.29	
12114.00	90.370	339.170	6563.63	5299.03	5063.30	-1578.77	1663275.06	14320814.32	39°26'10.798"N	80°55'08.550"W	5303.73	342.682	1.60	-0.13	-1.60	
12209.00	90.520	339.450	6562.90	5394.01	5152.17	-1612.33	1663241.51	14320903.16	39°26'11.676"N	80°55'08.976"W	5398.57	342.623	0.33	0.16	0.29	
12304.00	90.520	338.690	6562.03	5488.99	5240.90	-1646.27	1663207.59	14320991.85	39°26'12.553"N	80°55'09.408"W	5493.38	342.562	0.80	0.00	-0.80	
12399.00	90.280	339.190	6561.37	5583.96	5329.55	-1680.40	1663173.46	14321080.47	39°26'13.430"N	80°55'09.842"W	5588.19	342.500	0.58	-0.25	0.53	
12494.00	90.550	339.670	6560.68	5678.95	5418.49	-1713.78	1663140.10	14321169.37	39°26'14.308"N	80°55'10.266"W	5683.06	342.449	0.58	0.28	0.51	
12589.00	90.620	338.440	6559.71	5773.92	5507.21	-1747.74	1663106.16	14321258.05	39°26'15.186"N	80°55'10.698"W	5777.88	342.393	1.30	0.07	-1.29	
12684.00	90.370	338.540	6558.89	5868.80	5594.96	-1784.11	1663069.80	14321345.77	39°26'16.054"N	80°55'11.161"W	5872.53	342.314	2.02	-0.26	-2.00	
12779.00	90.460	338.780	6558.20	5963.69	5682.83	-1820.20	1663033.72	14321433.60	39°26'16.923"N	80°55'11.620"W	5967.22	342.240	2.37	0.09	2.37	
12873.00	90.620	339.800	6557.32	6057.67	5770.75	-1853.44	1663000.50	14321521.49	39°26'17.792"N	80°55'12.042"W	6061.09	342.194	1.09	0.17	1.07	
12969.00	90.620	342.470	6556.28	6153.65	5861.58	-1884.47	1662969.48	14321612.28	39°26'18.690"N	80°55'12.437"W	6157.06	342.178	2.78	0.00	2.78	
13063.00	90.400	344.370	6555.44	6247.50	5951.67	-1911.29	1662942.67	14321702.33	39°26'19.581"N	80°55'12.778"W	6251.03	342.196	2.03	-0.23	2.02	
13159.00	90.490	345.690	6554.70	6343.16	6044.40	-1936.09	1662917.88	14321795.03	39°26'20.497"N	80°55'13.093"W	6346.91	342.239	1.38	0.09	1.38	
13254.00	90.580	346.980	6553.81	6437.62	6136.71	-1958.53	1662895.45	14321887.30	39°26'21.410"N	80°55'13.378"W	6441.67	342.300	1.36	0.09	1.36	
13349.00	90.580	342.810	6552.85	6532.29	6228.40	-1983.28	1662870.71	14321978.95	39°26'22.316"N	80°55'13.692"W	6536.54	342.337	4.39	0.00	-4.39	
13444.00	90.430	338.610	6552.01	6627.26	6318.04	-2014.66	1662839.35	14322068.56	39°26'23.203"N	80°55'14.091"W	6631.48	342.314	4.42	-0.16	-4.42	





# Actual Wellpath Report

Olive Unit 3H AWP Proj: 16109'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Tyler County, WV	Well	Olive Unit 3H
Field	Tyler	Wellbore	Olive Unit 3H AWB
Facility	Lemuel Pad		

## WELLPATH DATA (209 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
13539.00	90.580	340.010	6551.17	6722.24	6406.91	-2048.22	1662805.80	14322157.39	39°26'24.081"N	80°55'14.518"W	6726.35	342.271	1.48	0.16	1.47	
13634.00	90.620	338.850	6550.18	6817.22	6495.85	-2081.60	1662772.43	14322246.29	39°26'24.960"N	80°55'14.942"W	6821.22	342.232	1.22	0.04	-1.22	
13729.00	90.580	337.130	6549.18	6912.14	6583.92	-2117.19	1662736.85	14322334.33	39°26'25.831"N	80°55'15.395"W	6915.96	342.174	1.81	-0.04	-1.81	
13824.00	90.580	336.900	6548.22	7006.98	6671.37	-2154.29	1662699.77	14322421.75	39°26'26.696"N	80°55'15.867"W	7010.57	342.104	2.34	0.00	-0.24	
13920.00	90.400	339.140	6547.40	7102.90	6760.38	-2190.22	1662663.86	14322510.72	39°26'27.576"N	80°55'16.324"W	7106.32	342.049	2.34	-0.19	2.33	
14014.00	90.430	341.440	6546.72	7196.89	6848.87	-2221.92	1662632.17	14322599.17	39°26'28.451"N	80°55'16.727"W	7200.27	342.026	2.45	0.03	2.45	
14109.00	90.580	342.520	6545.88	7291.84	6939.20	-2251.30	1662602.07	14322689.80	39°26'29.344"N	80°55'17.100"W	7295.27	342.025	1.15	0.16	1.14	
14204.00	90.620	341.570	6544.89	7386.79	7029.57	-2280.59	1662573.52	14322779.80	39°26'30.237"N	80°55'17.473"W	7390.26	342.026	1.00	0.04	-1.00	
14299.00	90.520	338.320	6543.94	7481.77	7118.79	-2313.16	1662540.96	14322868.99	39°26'31.119"N	80°55'17.887"W	7485.18	341.999	3.42	-0.11	-3.42	
14394.00	90.550	335.380	6543.05	7576.59	7206.13	-2350.50	1662503.64	14322956.29	39°26'31.983"N	80°55'18.362"W	7579.79	341.935	3.09	0.03	-3.09	
14488.00	90.770	335.070	6541.97	7670.22	7291.47	-2389.89	1662464.26	14323041.60	39°26'32.827"N	80°55'18.863"W	7673.14	341.853	0.40	0.23	-0.33	
14583.00	90.550	336.010	6540.88	7764.89	7377.94	-2429.22	1662424.95	14323128.03	39°26'33.682"N	80°55'19.363"W	7767.57	341.776	1.02	-0.23	0.99	
14678.00	90.680	335.860	6539.86	7859.61	7464.68	-2467.96	1662386.23	14323214.74	39°26'34.539"N	80°55'19.856"W	7862.08	341.705	0.21	0.14	-0.16	
14773.00	90.550	336.090	6538.84	7954.34	7551.44	-2506.63	1662347.57	14323301.47	39°26'35.397"N	80°55'20.348"W	7956.60	341.637	0.28	-0.14	0.24	
14867.00	90.620	337.430	6537.88	8048.15	7637.81	-2543.72	1662310.49	14323387.80	39°26'36.251"N	80°55'20.820"W	8050.26	341.580	1.43	0.07	1.43	
14963.00	90.620	338.760	6536.84	8144.08	7726.87	-2579.53	1662274.70	14323476.82	39°26'37.131"N	80°55'21.275"W	8146.07	341.539	1.39	0.00	1.39	
15058.00	90.680	341.120	6535.76	8239.06	7816.10	-2612.11	1662242.13	14323566.01	39°26'38.014"N	80°55'21.690"W	8241.03	341.521	2.48	0.06	2.48	
15151.00	90.680	343.270	6534.96	8332.00	7904.63	-2640.55	1662213.71	14323654.51	39°26'38.889"N	80°55'22.051"W	8334.01	341.528	2.31	0.00	2.31	
15246.00	90.860	343.240	6533.38	8426.86	7995.59	-2667.92	1662186.35	14323745.44	39°26'39.788"N	80°55'22.399"W	8428.96	341.548	0.19	0.19	-0.03	
15342.00	90.740	343.920	6532.04	8522.69	8087.67	-2695.05	1662159.23	14323837.48	39°26'40.698"N	80°55'22.744"W	8524.99	341.570	0.72	-0.13	0.71	
15437.00	90.710	343.190	6530.84	8617.53	8178.77	-2721.94	1662132.34	14323928.54	39°26'41.599"N	80°55'23.086"W	8619.82	341.592	0.77	-0.03	-0.77	
15532.00	90.680	340.440	6529.71	8712.48	8269.01	-2751.59	1662102.71	14324018.75	39°26'42.491"N	80°55'23.463"W	8714.80	341.595	2.90	-0.06	-2.89	
15627.00	90.680	339.100	6528.61	8807.46	8358.15	-2784.43	1662069.88	14324107.84	39°26'43.372"N	80°55'23.880"W	8809.75	341.575	1.41	0.03	-1.41	
15721.00	90.650	338.360	6527.52	8901.42	8445.74	-2818.53	1662035.80	14324195.40	39°26'44.238"N	80°55'24.314"W	8903.63	341.545	0.79	-0.03	-0.79	
15817.00	90.650	337.550	6526.43	8997.34	8534.71	-2854.56	1661999.78	14324284.34	39°26'45.118"N	80°55'24.772"W	8999.43	341.507	0.84	0.00	-0.84	
15912.00	90.710	339.600	6525.30	9092.28	8623.14	-2889.26	1661965.10	14324372.73	39°26'45.992"N	80°55'25.214"W	9094.30	341.476	2.16	0.06	2.16	
16006.00	90.740	341.130	6524.11	9186.27	8711.66	-2920.84	1661933.53	14324461.22	39°26'46.867"N	80°55'25.615"W	9188.27	341.465	1.63	0.03	1.63	
16085.00	90.710	341.930	6523.11	9265.25	8786.58	-2945.87	1661908.51	14324549.11	39°26'47.608"N	80°55'25.933"W	9267.26	341.465	1.01	-0.04	1.01	
16109.00	90.710	341.930	6522.81	9289.24	8809.40	-2953.31	1661901.07	14324538.92	39°26'47.834"N	80°55'26.028"W	9291.26	341.467	0.00	0.00	0.00	Projected MD at TD: 16109'

## HOLE & CASING SECTIONS - Ref Wellbore: Olive Unit 3H AWB Ref Wellpath: Olive Unit 3H AWP Proj: 16109'

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	32.00	112.00	80.00	32.00	112.00	0.00	0.00	0.22	-0.22
17.5in Open Hole	112.00	604.90	492.90	112.00	604.90	0.22	-0.22	-0.28	0.50
13-3/8in Casing Surface	32.00	604.90	572.90	32.00	604.90	0.00	0.00	-0.28	0.50
12.25in Open Hole	604.90	2613.20	2008.30	604.90	2587.96	-0.28	0.50	-216.76	202.86
9.625in Casing Intermediate	32.00	2613.20	2581.20	32.00	2587.96	0.00	0.00	-216.76	202.86
8.75in Open Hole	2613.20	6473.00	3859.80	2587.96	6391.05	-216.76	202.86	-188.65	278.15
8.5in Open Hole	6473.00	16109.00	9636.00	6391.05	6522.81	-188.65	279.15	8809.40	-2953.31
5.5in Casing Production	32.00	16109.00	16077.00	32.00	6522.81	0.00	0.00	8809.40	-2953.31

03/08/2019



**TARGETS**

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Olive Unit 3H POE Rev-4	6572.00	86.40	185.52	1665038.64	14315839.42	39°25'21.592"N	80°54'46.125"W	point
Olive Unit 3H BHL Rev-4	6602.00	8899.30	-2970.19	1661884.20	14324648.79	39°26'48.722"N	80°55'26.242"W	point
Olive Unit 3H BHL Rev-5	6602.00	8823.51	-2943.01	1661911.37	14324573.02	39°26'47.973"N	80°55'25.897"W	point
Olive Unit 3H LP Rev-4	6602.00	362.02	90.47	1664943.63	14316114.93	39°25'24.317"N	80°54'47.333"W	point





# Actual Wellpath Report

Olive Unit 3H AWP Proj: 16109'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Tyler County, WV	Well	Olive Unit 3H
Field	Tyler	Wellbore	Olive Unit 3H AWB
Facility	Lemuel Pad		

## WELLPATH COMPOSITION - Ref Wellbore: Olive Unit 3H AWB Ref Wellpath: Olive Unit 3H AWP Proj: 16109'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
32.00	600.00	Gyrodata standard - Drop gyro or Multi-shot	01 Gyrodata MS Gyro <7.1/2">(50'-600')	Olive Unit 3H AWB
600.00	2549.00	ISCWSA MWD, Rev. 4 (Standard)	02 Panther EM <12-1/4">(600')(621'-2549')	Olive Unit 3H AWB
2549.00	6403.00	ISCWSA MWD, Rev. 4 (Standard)	03 Panther EM <8-3/4">(2549')(2647'-6403')	Olive Unit 3H AWB
6403.00	16085.00	BHI Auto Trak Curve (Short)	04 AT Curve <8-1/2">(6403')(6448'-16085')	Olive Unit 3H AWB
16085.00	16109.00	Blind Drilling (std)	Projection to bit	Olive Unit 3H AWB





# Actual Wellpath Report

Olive Unit 3H AWP Proj: 16109'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Tyler County, WV	Well	Olive Unit 3H
Field	Tyler	Wellbore	Olive Unit 3H AWB
Facility	Lemuel Pad		

COMMENTS
<p><b>Wellpath general comments</b>            API: 47-095-02452-0000            BHI Job #: 109315073            Rig: Frontier 32            Duration: 07/25/2018-07/29/2018            Gyrodatta MS Gyro &lt;17-1/2"&gt; (50'-600')            Panther EM &lt;12-1/4"&gt; (600')(621'-2549')            Panther EM &lt;8-3/4"&gt; (2549')(2647'-6403')            BHI AT Curve &lt;8-1/2"&gt; (6403')(6448'-16085')            Middlesex: 6514' MD            Burkett: 6657' MD            Tully: 6716' MD            Marcellus POE: 6822' MD            Projected MD at TD: 16109'</p>