

ANTERO RESOURCES CORPORATION

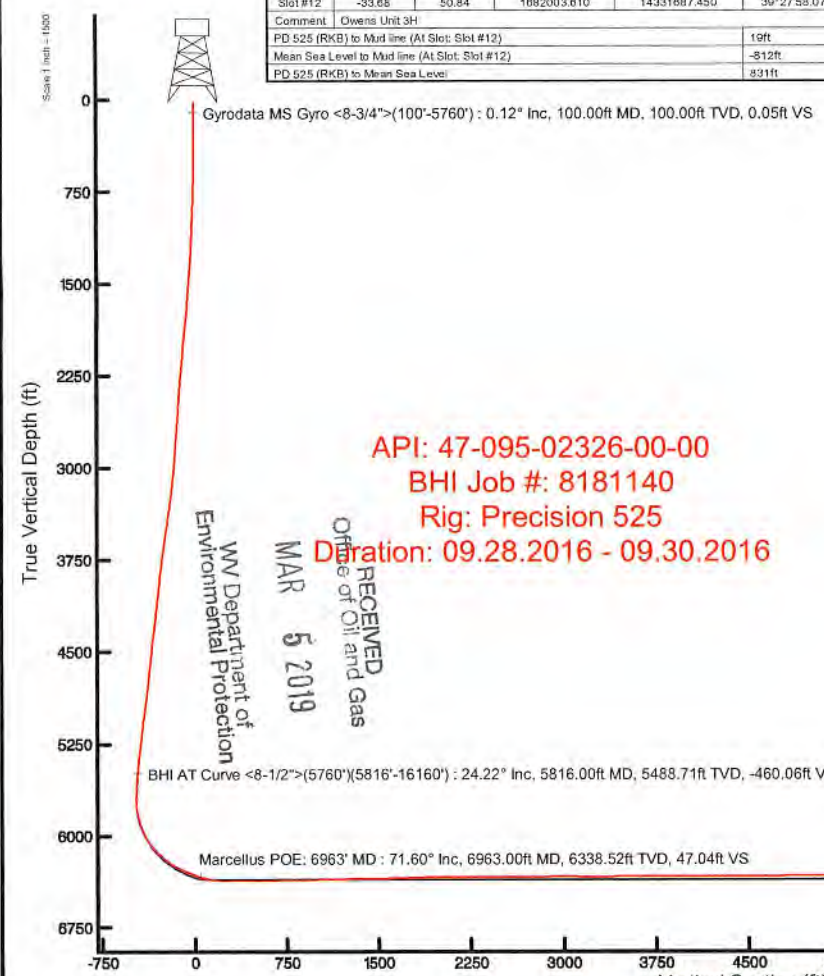
Location: Tyler County, WV
 Field: Tyler
 Facility: Weigle East Pad

Slot: Slot #12
 Well: Owens Unit 3H
 Wellbore: Owens Unit 3H PWB

Plot reference wellpath is Owens Unit 3H PWP Rev-A.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to PD 525 (RKB)	* = Wellpath was transformed from a different geoidetic datum
Measured depths are referenced to PD 525 (RKB)	North Reference: Grid north
PD 525 (RKB) to Mean Sea Level: 831 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: Slot #12): -612 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: herek on 2016-10-13
	Database: WA_MPL_EASTERNJS_Defn

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #12	Owens Unit 3H	Owens Unit 3H AWP	Owens Unit 3H AWP Proj: 16185
Slot #12	Owens Unit 3H	Owens Unit 3H PWB	Owens Unit 3H PWP Rev-A.0

Location Information							
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude			
Weigle East Pad	1681952.790	14331721.120	39°27'58.404"N	80°51'10.177"W			
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Slot #12	-33.65	50.84	1682003.610	14331667.450	39°27'58.070"N	80°51'09.530"W	
Comment: Owens Unit 3H							
PD 525 (RKB) to Mud line (At Slot: Slot #12)							10ft
Mean Sea Level to Mud line (At Slot: Slot #12)							-812ft
PD 525 (RKB) to Mean Sea Level							831ft

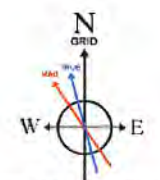


API: 47-095-02326-00-00
 BHI Job #: 8181140
 Rig: Precision 525
 Duration: 09.28.2016 - 09.30.2016

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Scale 1 Inch = 1500
 Easting (ft)
 -2250 -1500 -750 0 750 1500 2250

Projected MD at TD: 16185' : 6306.90ft TVD, 9358.91ft N, 1339.72ft W



User specified Dip: 66.84° Field: 53197 nT
 Magnetic North is 7.55 degrees West of True North (at 9/27/2016)
 Grid North is 0.09 degrees East of True North
 To correct azimuth from True to Grid subtract 0.09 degrees
 To correct azimuth from Magnetic to Grid subtract 7.64 degrees

Marcellus POE: 6963' MD : 6338.52ft TVD, 716.69ft N, 1828.56ft E
 BHI AT Curve $\langle 8-1/2 \rangle \langle 5760 \rangle \langle 5816 \rangle \langle 16160 \rangle$: 5488.71ft TVD, 141.70ft N, 1731.87ft E
 Gyrodatta MS Gyro $\langle 8-3/4 \rangle \langle 100 \rangle \langle 5760 \rangle$: 100.00ft TVD, 0.03ft N, 0.08ft W
 Slot #12
 Projected MD at TD: 16185' : 90.77° Inc, 16185.00ft MD, 6306.90ft TVD, 9251.69ft VS

Vertical Section (ft)
 Azimuth 339.97° with reference 0.00 N, 0.00 E

Scale 1 Inch = 1500



Actual Wellpath Report

Owens Unit 3H AWP Proj: 16185'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #12
Area	Tyler County, WV	Well	Owens Unit 3H
Field	Tyler	Wellbore	Owens Unit 3H AWB
Facility	Weigle East Pad		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Hareluk
Scale	0.999602	Report Generated	10/13/2016 at 3:38:51 PM
Convergence at slot	0.10° East	Database/Source file	WA_MPL_EASTERNUS_Defn/Owens_Unit_3H_AWP_Proj_16185_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-33.68	50.84	1682003.61	14331687.45	39°27'58.070"N	80°51'09.530"W
Facility Reference Pt			1681952.79	14331721.12	39°27'58.404"N	80°51'10.177"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM			
Calculation method	Minimum curvature	PD 525 (RKB) to Facility Vertical Datum	19.00ft
Horizontal Reference Pt	Slot	PD 525 (RKB) to Mean Sea Level	831.00ft
Vertical Reference Pt	PD 525 (RKB)	PD 525 (RKB) to Mud Line at Slot (Slot #12)	19.00ft
MD Reference Pt	PD 525 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	339.97°

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Owens Unit 3H AWP Proj: 16185'

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Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #12
Area	Tyler County, WV	Well	Owens Unit 3H
Field	Tyler	Wellbore	Owens Unit 3H AWB
Facility	Weigle East Pad		

WELLPATH DATA (196 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	288.600	0.00	0.00	0.00	0.00	1682003.61	14331687.45	39°27'58.070"N	80°51'09.530"W	0.00	0.000	0.00	0.00	0.00	
19.00	0.00	288.600	19.00	0.00	0.00	0.00	1682003.61	14331687.45	39°27'58.070"N	80°51'09.530"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.12	288.600	100.00	0.05	0.03	-0.08	1682003.53	14331687.48	39°27'58.070"N	80°51'09.531"W	0.08	288.600	0.15	0.15	-88.15	Gyrodata MS Gyro <8-3/4">(100'-5760')
200.00	0.05	292.280	200.00	0.15	0.08	-0.22	1682003.39	14331687.53	39°27'58.071"N	80°51'09.533"W	0.23	289.288	0.07	-0.07	3.68	
300.00	0.04	262.740	300.00	0.18	0.09	-0.30	1682003.32	14331687.54	39°27'58.071"N	80°51'09.534"W	0.31	286.810	0.02	-0.01	-29.54	
400.00	0.05	305.230	400.00	0.23	0.11	-0.37	1682003.24	14331687.56	39°27'58.071"N	80°51'09.535"W	0.38	286.743	0.03	0.01	42.49	
500.00	0.05	323.290	500.00	0.31	0.17	-0.43	1682003.18	14331687.62	39°27'58.072"N	80°51'09.535"W	0.46	291.713	0.02	0.00	18.06	
600.00	1.65	81.090	599.99	0.07	0.43	0.97	1682004.58	14331687.88	39°27'58.074"N	80°51'09.518"W	1.06	66.175	1.67	1.60	117.80	
700.00	4.12	86.030	699.85	-1.20	0.90	5.98	1682009.58	14331688.35	39°27'58.079"N	80°51'09.454"W	6.04	81.438	2.48	2.47	4.94	
800.00	6.36	86.260	799.43	-3.75	1.51	15.08	1682018.68	14331688.96	39°27'58.085"N	80°51'09.338"W	15.15	84.284	2.23	2.23	0.23	
900.00	6.93	86.480	898.76	-7.01	2.24	26.62	1682030.22	14331689.69	39°27'58.092"N	80°51'09.190"W	26.71	85.189	0.58	0.58	0.22	
1000.00	7.90	86.280	997.92	-10.66	3.06	39.50	1682043.09	14331690.51	39°27'58.100"N	80°51'09.026"W	39.62	85.575	0.97	0.97	-0.20	
1100.00	9.59	85.410	1096.75	-14.80	4.17	54.66	1682058.25	14331691.82	39°27'58.110"N	80°51'08.833"W	54.82	85.638	1.70	1.69	-0.87	
1200.00	11.34	87.320	1195.09	-19.95	5.30	72.79	1682076.37	14331692.74	39°27'58.121"N	80°51'08.602"W	72.98	85.839	1.78	1.75	1.91	
1300.00	13.73	90.210	1292.70	-26.99	5.71	94.48	1682098.05	14331693.16	39°27'58.125"N	80°51'08.325"W	94.65	86.540	2.47	2.39	2.89	
1400.00	15.50	89.650	1389.46	-35.60	5.75	119.71	1682123.27	14331693.20	39°27'58.125"N	80°51'08.003"W	119.85	87.250	1.78	1.77	-0.56	
1500.00	14.88	89.480	1485.96	-44.39	5.95	145.91	1682149.46	14331693.40	39°27'58.126"N	80°51'07.669"W	146.03	87.666	0.62	-0.62	-0.17	
1600.00	15.87	84.130	1582.39	-52.02	7.46	172.35	1682175.89	14331694.91	39°27'58.141"N	80°51'07.332"W	172.51	87.521	1.73	0.99	-5.35	
1700.00	16.22	81.840	1678.49	-58.24	10.84	199.78	1682203.31	14331698.29	39°27'58.174"N	80°51'06.982"W	200.07	86.893	0.72	0.35	-2.29	
1800.00	21.63	84.300	1773.05	-65.68	14.66	231.97	1682235.48	14331702.10	39°27'58.211"N	80°51'06.572"W	232.43	86.384	5.47	5.41	2.46	
1900.00	21.33	83.180	1866.11	-74.40	18.65	268.36	1682271.87	14331706.09	39°27'58.250"N	80°51'06.108"W	269.01	86.025	0.51	-0.30	-1.12	
2000.00	20.89	81.820	1959.40	-82.21	23.35	304.07	1682307.56	14331710.79	39°27'58.296"N	80°51'05.652"W	304.97	85.609	0.66	-0.44	-1.36	
2100.00	19.00	85.470	2053.40	-90.23	27.17	337.95	1682341.42	14331714.61	39°27'58.333"N	80°51'05.220"W	339.04	85.404	2.26	-1.89	3.65	
2200.00	17.97	85.010	2148.24	-98.58	29.80	369.55	1682373.01	14331717.23	39°27'58.359"N	80°51'04.817"W	370.75	85.390	1.04	-1.03	-0.46	
2300.00	17.88	88.340	2243.39	-107.42	31.58	400.26	1682403.71	14331719.02	39°27'58.376"N	80°51'04.426"W	401.50	85.488	1.03	-0.09	3.33	
2400.00	14.72	86.390	2339.36	-115.85	32.83	428.29	1682431.73	14331720.27	39°27'58.388"N	80°51'04.068"W	429.55	85.617	3.21	-3.16	-1.95	
2500.00	13.76	84.660	2436.28	-122.46	34.74	452.81	1682456.24	14331722.17	39°27'58.406"N	80°51'03.756"W	454.14	85.613	1.05	-0.96	-1.73	
2600.00	12.96	84.590	2533.58	-128.31	36.90	475.82	1682479.24	14331724.33	39°27'58.427"N	80°51'03.462"W	477.25	85.566	0.80	-0.80	-0.07	
2700.00	16.31	84.230	2630.32	-134.60	39.37	500.96	1682504.37	14331726.80	39°27'58.451"N	80°51'03.142"W	502.50	85.507	3.35	3.35	-0.36	
2800.00	17.79	84.140	2725.62	-141.80	42.34	530.13	1682533.53	14331729.77	39°27'58.480"N	80°51'02.770"W	531.82	85.434	1.48	1.48	-0.09	

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Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #12
Area	Tyler County, WV	Well	Owens Unit 3H
Field	Tyler	Wellbore	Owens Unit 3H AWB
Facility	Weigle East Pad		

WELLPATH DATA (196 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
2900.00	19.610	83.020	2820.64	-149.33	45.94	561.98	1682565.37	14331733.37	39°27'58.515"N	80°51'02.363"W	563.86	85.327	1.86	1.82	-1.12	
3000.00	20.380	81.640	2914.61	-156.64	50.51	595.87	1682599.24	14331737.94	39°27'58.560"N	80°51'01.931"W	598.00	85.155	0.90	0.77	-1.38	
3100.00	21.230	85.180	3008.09	-164.91	54.56	631.14	1682634.50	14331741.99	39°27'58.599"N	80°51'01.481"W	633.49	85.059	1.52	0.85	3.54	
3200.00	22.890	83.990	3100.77	-174.37	58.12	668.52	1682671.87	14331745.55	39°27'58.634"N	80°51'01.005"W	671.05	85.031	1.72	1.66	-1.19	
3300.00	23.410	82.790	3192.72	-183.49	62.65	707.57	1682710.90	14331750.08	39°27'58.678"N	80°51'00.507"W	710.34	84.940	0.70	0.52	-1.20	
3400.00	24.410	86.090	3284.14	-193.64	66.55	747.90	1682751.21	14331753.98	39°27'58.716"N	80°50'59.992"W	750.86	84.915	1.67	1.00	3.30	
3500.00	25.230	88.820	3374.90	-206.26	68.40	789.83	1682793.12	14331755.82	39°27'58.733"N	80°50'59.458"W	792.78	85.050	1.41	0.82	2.73	
3600.00	24.860	90.950	3465.50	-220.67	68.49	832.15	1682835.43	14331755.91	39°27'58.733"N	80°50'58.918"W	834.97	85.295	0.97	-0.37	2.13	
3700.00	24.380	90.070	3556.41	-235.29	68.12	873.81	1682877.07	14331755.54	39°27'58.729"N	80°50'58.387"W	876.46	85.542	0.60	-0.48	-0.88	
3800.00	24.610	84.810	3647.42	-247.72	69.98	915.19	1682918.43	14331757.40	39°27'58.747"N	80°50'57.859"W	917.86	85.628	2.19	0.23	-5.26	
3900.00	22.910	86.560	3738.94	-258.61	73.03	955.36	1682958.59	14331760.45	39°27'58.776"N	80°50'57.347"W	958.15	85.629	1.84	-1.70	1.75	
4000.00	24.440	87.000	3830.53	-270.23	75.28	995.45	1682998.66	14331762.70	39°27'58.798"N	80°50'56.836"W	998.29	85.675	1.54	1.53	0.44	
4100.00	25.690	83.290	3921.11	-281.28	78.90	1037.64	1683040.83	14331766.31	39°27'58.833"N	80°50'56.298"W	1040.63	85.652	2.01	1.25	-3.71	
4200.00	25.710	82.870	4011.22	-291.12	84.12	1080.69	1683083.87	14331771.54	39°27'58.884"N	80°50'55.749"W	1083.96	85.549	0.18	0.02	-0.42	
4300.00	25.000	84.500	4101.59	-301.26	88.84	1123.25	1683126.41	14331776.25	39°27'58.930"N	80°50'55.206"W	1126.75	85.478	1.00	-0.71	1.63	
4400.00	24.790	82.960	4192.30	-311.28	93.43	1165.09	1683168.23	14331780.85	39°27'58.974"N	80°50'54.672"W	1168.83	85.415	0.68	-0.21	-1.54	
4500.00	24.170	83.130	4283.31	-320.65	98.45	1206.22	1683209.35	14331785.86	39°27'59.023"N	80°50'54.148"W	1210.23	85.334	0.62	-0.62	0.17	
4600.00	22.730	88.020	4375.05	-331.30	101.57	1245.86	1683248.97	14331788.98	39°27'59.053"N	80°50'53.642"W	1249.99	85.339	2.42	-1.44	4.89	
4700.00	22.700	88.080	4467.30	-343.28	102.88	1284.45	1683287.55	14331790.29	39°27'59.066"N	80°50'53.150"W	1288.57	85.421	0.04	-0.03	0.06	
4800.00	23.890	85.010	4559.15	-354.53	105.29	1323.91	1683326.99	14331792.70	39°27'59.089"N	80°50'52.647"W	1328.09	85.453	1.70	1.19	-3.07	
4900.00	24.170	82.400	4650.48	-364.20	109.76	1364.38	1683367.44	14331797.16	39°27'59.132"N	80°50'52.131"W	1368.78	85.401	1.10	0.28	-2.61	
5000.00	22.360	84.980	4742.35	-373.53	114.13	1403.62	1683406.67	14331801.54	39°27'59.175"N	80°50'51.631"W	1408.25	85.351	2.08	-1.81	2.58	
5100.00	22.930	84.590	4834.64	-383.37	117.63	1441.96	1683445.00	14331805.04	39°27'59.209"N	80°50'51.142"W	1446.75	85.336	0.59	0.57	-0.39	
5200.00	24.880	86.340	4926.06	-394.22	120.81	1482.36	1683485.37	14331808.21	39°27'59.240"N	80°50'50.627"W	1487.27	85.341	2.07	1.95	1.75	
5300.00	24.210	90.970	5017.03	-407.50	121.81	1523.85	1683526.85	14331809.21	39°27'59.249"N	80°50'50.097"W	1528.71	85.430	2.04	-0.67	4.63	
5400.00	23.430	85.770	5108.52	-420.26	122.93	1564.19	1683567.17	14331810.33	39°27'59.259"N	80°50'49.583"W	1569.01	85.506	2.24	-0.78	-5.20	
5500.00	24.120	82.170	5200.04	-429.99	127.18	1604.26	1683607.23	14331814.58	39°27'59.301"N	80°50'49.072"W	1609.29	85.467	1.61	0.69	-3.60	
5600.00	24.760	85.970	5291.09	-440.08	131.43	1645.39	1683648.35	14331818.83	39°27'59.342"N	80°50'48.547"W	1650.63	85.433	1.70	0.64	3.80	
5700.00	23.340	85.340	5382.40	-451.11	134.51	1686.03	1683688.96	14331821.91	39°27'59.372"N	80°50'48.029"W	1691.39	85.438	1.44	-1.42	-0.63	
5760.00	23.440	78.960	5437.48	-456.12	137.77	1709.59	1683712.52	14331825.16	39°27'59.403"N	80°50'47.729"W	1715.13	85.393	4.22	0.17	-10.63	

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Area	Tyler County, WV	Well	Owens Unit 3H
Field	Tyler	Wellbore	Owens Unit 3H AWB
Facility	Weigle East Pad		

WELLPATH DATA (196 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	
5816.00	24.220	81.000	5488.71	-460.06	141.70	1731.87	1683734.79	14331829.09	39°27'59.442"N	80°50'47.445"W	1737.66	85.323	2.03	1.39	3.64	BHI AT Curve <8-1/2">(5760')(5816-16160)	
5861.00	22.210	79.800	5530.06	-463.28	144.65	1749.36	1683752.27	14331832.04	39°27'59.471"N	80°50'47.222"W	1755.33	85.273	4.59	-4.47	-2.67		
5915.00	22.160	82.680	5580.07	-467.26	147.75	1769.51	1683772.41	14331835.14	39°27'59.501"N	80°50'46.965"W	1775.66	85.227	2.02	-0.09	5.33		
5951.00	22.570	83.910	5613.36	-470.42	149.35	1783.11	1683786.01	14331836.74	39°27'59.517"N	80°50'46.791"W	1789.35	85.212	1.73	1.14	3.42		
6040.00	22.230	73.240	5695.68	-475.50	156.02	1816.23	1683819.11	14331843.41	39°27'59.582"N	80°50'46.369"W	1822.92	85.090	4.58	-0.38	-11.99		
6085.00	21.960	61.790	5737.39	-474.79	162.45	1831.80	1683834.68	14331849.84	39°27'59.645"N	80°50'46.170"W	1838.99	84.932	9.58	-0.60	-25.44		
6130.00	22.280	52.440	5779.09	-471.02	171.63	1845.98	1683848.85	14331859.02	39°27'59.736"N	80°50'45.989"W	1853.94	84.688	7.85	0.71	-20.78		
6175.00	23.120	43.160	5820.62	-464.46	183.28	1858.79	1683861.66	14331870.66	39°27'59.851"N	80°50'45.825"W	1867.81	84.369	8.17	1.87	-20.62		
6220.00	24.070	34.990	5861.87	-455.21	197.25	1870.10	1683872.96	14331884.62	39°27'59.989"N	80°50'45.681"W	1880.47	83.979	7.56	2.11	-18.16		
6265.00	25.550	26.620	5902.73	-443.29	213.45	1879.71	1683882.57	14331900.81	39°28'00.149"N	80°50'45.558"W	1891.79	83.522	8.46	3.29	-18.60		
6309.00	27.240	20.670	5942.15	-429.14	231.36	1887.52	1683890.38	14331918.72	39°28'00.325"N	80°50'45.458"W	1901.65	83.012	7.13	3.84	-13.52		
6354.00	29.580	16.050	5981.73	-412.35	251.67	1894.23	1683897.08	14331939.02	39°28'00.526"N	80°50'45.372"W	1910.88	82.432	7.13	5.20	-10.27		
6378.00†	31.504	12.738	6002.40	-402.28	263.48	1897.25	1683900.10	14331950.83	39°28'00.643"N	80°50'45.333"W	1915.46	82.094	10.65	8.02	-13.80	Sycamore: 6378' MD	
6399.00	33.250	10.130	6020.13	-392.69	274.50	1899.47	1683902.32	14331961.84	39°28'00.752"N	80°50'45.305"W	1919.21	81.777	10.65	8.32	-12.42		
6444.00	37.070	3.480	6056.93	-369.57	300.21	1902.47	1683905.32	14331987.54	39°28'01.006"N	80°50'45.266"W	1926.01	81.033	12.01	8.49	-14.78		
6489.00	40.340	359.870	6092.05	-343.43	328.32	1903.26	1683906.11	14332015.64	39°28'01.284"N	80°50'45.255"W	1931.37	80.213	8.83	7.27	-8.02		
6533.00	44.370	357.990	6124.56	-315.40	357.95	1902.69	1683905.54	14332045.26	39°28'01.576"N	80°50'45.262"W	1936.06	79.346	9.60	9.16	-4.27		
6578.00	47.750	356.810	6155.78	-284.48	390.31	1901.21	1683904.06	14332077.61	39°28'01.896"N	80°50'45.280"W	1940.86	78.399	7.74	7.51	-2.62		
6612.00†	49.854	355.189	6178.17	-259.90	415.83	1899.41	1683902.26	14332103.11	39°28'02.148"N	80°50'45.302"W	1944.40	77.651	7.18	6.19	-4.83	Middlesex: 6612' MD	
6623.00	50.540	354.660	6185.21	-251.73	424.25	1898.66	1683901.51	14332111.53	39°28'02.232"N	80°50'45.312"W	1945.48	77.404	7.18	6.23	-4.63		
6668.00	54.170	351.400	6212.70	-217.03	459.60	1894.32	1683897.17	14332146.86	39°28'02.581"N	80°50'45.366"W	1949.27	76.362	9.90	8.07	-7.24		
6713.00	58.490	349.150	6237.64	-180.19	496.49	1887.97	1683890.83	14332183.75	39°28'02.946"N	80°50'45.446"W	1952.17	75.266	10.46	9.60	-5.00		
6757.00	62.360	347.420	6259.36	-142.33	533.95	1880.20	1683883.05	14332221.19	39°28'03.316"N	80°50'45.545"W	1954.54	74.146	9.44	8.80	-3.93		
6781.00†	64.070	346.596	6270.17	-121.07	554.83	1875.38	1683878.24	14332242.06	39°28'03.523"N	80°50'45.606"W	1955.73	73.519	7.75	7.13	-3.42	Burkett: 6781' MD	
6802.00	65.570	345.900	6279.11	-102.18	573.29	1870.86	1683873.72	14332260.51	39°28'03.705"N	80°50'45.663"W	1956.73	72.963	7.75	7.14	-3.33		
6847.00	67.070	344.750	6297.18	-61.15	613.15	1860.42	1683863.28	14332300.36	39°28'04.099"N	80°50'45.795"W	1958.86	71.759	4.07	3.33	-2.56		
6850.00†	67.177	344.662	6298.35	-58.40	615.82	1859.69	1683862.56	14332303.02	39°28'04.126"N	80°50'45.804"W	1959.00	71.678	4.46	3.55	-2.92	Tully: 6850' MD	
6893.00	68.710	343.420	6314.49	-18.65	654.13	1848.73	1683851.60	14332341.32	39°28'04.505"N	80°50'45.943"W	1961.04	70.515	4.46	3.57	-2.89		
6938.00	70.100	341.680	6330.32	23.43	694.31	1836.10	1683838.97	14332381.49	39°28'04.902"N	80°50'46.104"W	1962.99	69.286	4.76	3.09	-3.87		
6963.00†	71.605	341.104	6338.52	47.04	716.69	1828.56	1683831.44	14332403.86	39°28'05.123"N	80°50'46.199"W	1964.00	68.596	6.40	6.02	-2.30	Marcellus POE: 6963' MD	

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Actual Wellpath Report

Owens Unit 3H AWP Proj: 16185'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #12
Area	Tyler County, WV	Well	Owens Unit 3H
Field	Tyler	Wellbore	Owens Unit 3H AWB
Facility	Weigle East Pad		

WELLPATH DATA (196 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
6983.00	72.810	340.650	6344.64	66.08	734.69	1822.32	1683825.20	14332421.84	39°28'05.301"N	80°50'46.278"W	1964.85	68.043	6.40	6.03	-2.27	
7027.00	77.720	339.870	6355.82	108.62	774.73	1807.95	1683810.84	14332461.87	39°28'05.697"N	80°50'46.461"W	1966.95	66.804	11.29	11.16	-1.77	
7072.00	84.020	339.360	6362.96	153.03	816.35	1792.48	1683795.37	14332503.47	39°28'06.109"N	80°50'46.657"W	1969.62	65.514	14.04	14.00	-1.13	
7117.00	89.720	339.290	6365.42	197.94	858.37	1776.62	1683779.52	14332545.48	39°28'06.524"N	80°50'46.858"W	1973.12	64.213	12.67	12.67	-0.16	
7207.00	90.060	337.050	6365.59	287.89	941.91	1743.16	1683746.07	14332628.99	39°28'07.351"N	80°50'47.283"W	1981.36	61.615	2.52	0.38	-2.49	
7297.00	90.030	335.280	6365.52	377.69	1024.23	1706.79	1683709.72	14332711.27	39°28'08.165"N	80°50'47.745"W	1990.53	59.032	1.97	-0.03	-1.97	
7386.00	89.940	336.150	6365.54	466.44	1105.36	1670.19	1683673.13	14332792.37	39°28'08.967"N	80°50'48.210"W	2002.83	56.503	0.98	-0.10	0.98	
7476.00	89.910	336.420	6365.66	556.25	1187.76	1633.99	1683636.95	14332874.73	39°28'09.782"N	80°50'48.670"W	2020.07	53.986	0.30	-0.03	0.30	
7565.00	90.400	340.780	6365.42	645.21	1270.60	1601.52	1683604.49	14332957.54	39°28'10.602"N	80°50'49.082"W	2044.34	51.573	4.93	0.55	4.90	
7655.00	91.080	339.080	6364.26	735.19	1355.13	1570.64	1683573.63	14333042.03	39°28'11.437"N	80°50'49.474"W	2074.44	49.213	2.03	0.76	-1.89	
7745.00	90.400	337.190	6363.09	825.14	1438.64	1537.13	1683540.13	14333125.51	39°28'12.263"N	80°50'49.900"W	2105.34	46.896	2.23	-0.76	-2.10	
7834.00	90.740	339.600	6362.21	914.09	1521.38	1504.36	1683507.37	14333208.22	39°28'13.082"N	80°50'50.316"W	2139.56	44.678	2.73	0.38	2.71	
7924.00	91.570	341.590	6360.39	1004.06	1606.24	1474.47	1683477.49	14333293.05	39°28'13.921"N	80°50'50.695"W	2180.38	42.551	2.40	0.92	2.21	
8013.00	91.290	338.860	6358.17	1093.03	1689.96	1444.37	1683447.40	14333376.73	39°28'14.749"N	80°50'51.077"W	2223.10	40.520	3.08	-0.31	-3.07	
8103.00	90.990	342.720	6356.38	1182.98	1774.92	1414.77	1683417.81	14333461.66	39°28'15.589"N	80°50'51.453"W	2269.78	38.558	4.30	-0.33	4.29	
8193.00	92.250	341.600	6353.84	1272.88	1860.55	1387.21	1683390.26	14333547.26	39°28'16.436"N	80°50'51.802"W	2320.78	36.708	1.87	1.40	-1.24	
8282.00	90.310	340.490	6351.85	1361.83	1944.70	1358.31	1683361.38	14333631.37	39°28'17.268"N	80°50'52.169"W	2372.10	34.933	2.51	-2.18	-1.25	
8372.00	90.340	343.660	6351.34	1451.76	2030.32	1330.61	1683333.69	14333716.95	39°28'18.115"N	80°50'52.520"W	2427.49	33.240	3.52	0.03	3.52	
8462.00	90.520	345.050	6350.66	1541.49	2116.98	1306.34	1683309.43	14333803.58	39°28'18.972"N	80°50'52.828"W	2487.59	31.678	1.56	0.20	1.54	
8551.00	91.820	345.420	6348.85	1630.09	2203.02	1283.67	1683286.76	14333889.59	39°28'19.822"N	80°50'53.115"W	2549.72	30.229	1.52	1.46	0.42	
8641.00	91.630	343.120	6346.14	1719.79	2289.60	1259.28	1683262.39	14333976.14	39°28'20.678"N	80°50'53.424"W	2613.06	28.811	2.56	-0.21	-2.56	
8731.00	93.110	339.830	6342.41	1809.67	2374.85	1230.72	1683233.83	14334061.35	39°28'21.521"N	80°50'53.787"W	2674.81	27.394	4.01	1.64	-3.66	
8820.00	91.140	339.430	6339.11	1898.60	2458.23	1199.76	1683202.89	14334144.69	39°28'22.346"N	80°50'54.180"W	2735.38	26.015	2.26	-2.21	-0.45	
8910.00	90.150	340.250	6338.10	1988.60	2542.70	1168.74	1683171.89	14334229.14	39°28'23.181"N	80°50'54.573"W	2798.45	24.686	1.43	-1.10	0.91	
9000.00	90.650	340.950	6337.47	2078.59	2627.59	1138.85	1683142.00	14334313.99	39°28'24.021"N	80°50'54.953"W	2863.78	23.433	0.96	0.56	0.78	
9089.00	90.060	338.600	6336.92	2167.58	2711.10	1108.09	1683111.25	14334397.46	39°28'24.847"N	80°50'55.343"W	2928.80	22.231	2.72	-0.66	-2.64	
9179.00	89.260	337.810	6337.45	2257.53	2794.66	1074.67	1683077.85	14334480.99	39°28'25.673"N	80°50'55.768"W	2994.17	21.034	1.25	-0.89	-0.88	
9269.00	89.630	338.830	6338.33	2347.49	2878.29	1041.42	1683044.62	14334564.59	39°28'26.500"N	80°50'56.190"W	3060.90	19.891	1.21	0.41	1.13	
9358.00	89.630	337.860	6338.90	2436.45	2961.00	1008.58	1683011.79	14334647.27	39°28'27.318"N	80°50'56.607"W	3128.06	18.810	1.09	0.00	-1.09	
9448.00	90.460	334.830	6338.83	2526.26	3043.43	972.48	1682975.70	14334729.67	39°28'28.134"N	80°50'57.065"W	3195.03	17.720	3.49	0.92	-3.37	

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Actual Wellpath Report

Owens Unit 3H AWP Proj: 16185'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #12
Area	Tyler County, WV		Well	Owens Unit 3H
Field	Tyler		Wellbore	Owens Unit 3H AWB
Facility	Weigle East Pad			

WELLPATH DATA (196 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	
9538.00	89.570	336.500	6338.81	2616.00	3125.43	935.39	1682938.63	14334811.63	39°28'28.945"N	80°50'57.537"W	3262.41	16.662	2.10	-0.99	1.86		
9627.00	89.820	339.850	6339.28	2704.94	3208.04	902.31	1682905.56	14334894.21	39°28'29.762"N	80°50'57.957"W	3332.52	15.709	3.77	0.28	3.76		
9717.00	90.980	340.390	6338.65	2794.94	3292.67	871.71	1682874.97	14334978.81	39°28'30.599"N	80°50'58.345"W	3406.11	14.828	1.42	1.29	0.60		
9807.00	93.170	338.030	6335.39	2884.86	3376.75	839.79	1682843.06	14335062.85	39°28'31.430"N	80°50'58.750"W	3479.61	13.966	3.58	2.43	-2.62		
9896.00	90.030	335.770	6332.91	2973.68	3458.56	804.89	1682808.18	14335144.63	39°28'32.239"N	80°50'59.194"W	3550.99	13.101	4.35	-3.53	-2.54		
9986.00	88.580	336.030	6334.00	3063.45	3540.71	768.14	1682771.45	14335226.74	39°28'33.052"N	80°50'59.661"W	3623.07	12.240	1.64	-1.61	0.29		
10076.00	88.860	340.370	6336.01	3153.36	3624.23	734.74	1682738.05	14335310.23	39°28'33.878"N	80°51'00.085"W	3697.96	11.460	4.83	0.31	4.82		
10166.00	89.480	343.590	6337.32	3243.28	3709.80	706.90	1682710.23	14335395.76	39°28'34.724"N	80°51'00.438"W	3776.55	10.788	3.64	0.69	3.58		
10255.00	91.080	343.390	6336.88	3332.11	3795.12	681.61	1682684.95	14335481.06	39°28'35.568"N	80°51'00.759"W	3855.85	10.182	1.81	1.80	-0.22		
10345.00	91.910	341.040	6334.53	3422.00	3880.79	654.13	1682657.48	14335566.68	39°28'36.415"N	80°51'01.107"W	3935.53	9.568	2.77	0.92	-2.61		
10435.00	89.820	341.360	6333.17	3511.97	3965.97	625.13	1682628.49	14335651.83	39°28'37.257"N	80°51'01.475"W	4014.94	8.958	2.35	-2.32	0.36		
10525.00	89.690	342.710	6333.56	3601.91	4051.58	597.38	1682600.75	14335737.41	39°28'38.104"N	80°51'01.827"W	4095.38	8.387	1.51	-0.14	1.50		
10614.00	89.880	344.540	6333.89	3690.72	4136.97	572.29	1682575.67	14335822.76	39°28'38.948"N	80°51'02.146"W	4176.36	7.876	2.07	0.21	2.06		
10704.00	90.400	340.860	6333.67	3780.60	4222.88	545.53	1682548.92	14335908.64	39°28'39.798"N	80°51'02.485"W	4257.97	7.361	4.13	0.58	-4.09		
10793.00	90.060	339.090	6333.32	3869.60	4306.49	515.05	1682518.46	14335992.22	39°28'40.624"N	80°51'02.872"W	4337.19	6.820	2.03	-0.38	-1.99		
10883.00	89.940	339.970	6333.32	3959.59	4390.81	483.58	1682486.99	14336076.50	39°28'41.458"N	80°51'03.271"W	4417.36	6.285	0.99	-0.13	0.98		
10973.00	90.490	338.390	6332.98	4049.58	4474.93	451.59	1682455.02	14336160.59	39°28'42.290"N	80°51'03.678"W	4497.66	5.763	1.86	0.61	-1.76		
11063.00	90.980	333.440	6331.82	4139.32	4557.06	414.88	1682418.32	14336242.69	39°28'43.103"N	80°51'04.144"W	4575.91	5.202	5.53	0.54	-5.50		
11153.00	89.750	333.140	6331.25	4228.71	4637.46	374.43	1682377.89	14336323.05	39°28'43.898"N	80°51'04.658"W	4652.55	4.616	1.41	-1.37	-0.33		
11242.00	89.820	337.540	6331.58	4317.39	4718.32	337.30	1682340.78	14336403.88	39°28'44.698"N	80°51'05.130"W	4730.36	4.089	4.94	0.08	4.94		
11332.00	89.820	339.590	6331.87	4407.36	4802.09	304.41	1682307.90	14336487.62	39°28'45.526"N	80°51'05.548"W	4811.73	3.627	2.28	0.00	2.28		
11422.00	89.630	341.930	6332.30	4497.35	4887.05	274.76	1682278.26	14336572.55	39°28'46.366"N	80°51'05.924"W	4894.77	3.218	2.61	-0.21	2.60		
11511.00	90.220	348.120	6332.41	4585.96	4972.99	251.77	1682255.28	14336658.45	39°28'47.216"N	80°51'06.215"W	4979.36	2.898	6.99	0.66	6.96		
11601.00	90.400	346.400	6331.93	4675.22	5060.77	231.93	1682235.44	14336746.20	39°28'48.084"N	80°51'06.467"W	5066.08	2.624	1.92	0.20	-1.91		
11691.00	91.540	342.060	6330.40	4764.94	5147.35	207.48	1682211.00	14336832.74	39°28'48.940"N	80°51'06.777"W	5151.53	2.308	4.99	1.27	-4.82		
11780.00	90.250	338.130	6329.01	4853.91	5231.00	177.18	1682180.72	14336916.36	39°28'49.767"N	80°51'07.161"W	5234.00	1.940	4.65	-1.45	-4.42		
11870.00	90.310	336.940	6328.57	4943.82	5314.17	142.80	1682146.35	14336999.49	39°28'50.590"N	80°51'07.598"W	5316.09	1.539	1.32	0.07	-1.32		
11960.00	90.030	337.310	6328.31	5033.71	5397.09	107.81	1682111.38	14337082.38	39°28'51.410"N	80°51'08.042"W	5398.17	1.144	0.52	-0.31	0.41		
12049.00	89.880	338.040	6328.38	5122.64	5479.42	74.00	1682077.58	14337164.68	39°28'52.224"N	80°51'08.472"W	5479.92	0.774	0.84	-0.17	0.82		
12139.00	90.310	338.890	6328.23	5212.61	5563.14	40.97	1682044.56	14337248.36	39°28'53.052"N	80°51'08.891"W	5563.29	0.422	1.06	0.48	0.94		

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Owens Unit 3H AWP Proj: 16185'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #12
Area	Tyler County, WV		Well	Owens Unit 3H
Field	Tyler		Wellbore	Owens Unit 3H AWB
Facility	Weigle East Pad			

WELLPATH DATA (196 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
12229.00	90.180	337.170	6327.84	5302.55	5646.60	7.30	1682010.91	14337331.79	39°28'53.877"N	80°51'09.319"W	5646.60	0.074	1.92	-0.14	-1.91	
12319.00	89.420	338.670	6328.16	5392.49	5729.99	-26.53	1681977.09	14337415.15	39°28'54.702"N	80°51'09.749"W	5730.05	359.735	1.87	-0.84	1.67	
12408.00	89.880	344.660	6328.70	5481.41	5814.43	-54.52	1681949.12	14337499.56	39°28'55.537"N	80°51'10.104"W	5814.89	359.463	6.75	0.52	6.73	
12498.00	90.090	342.800	6328.72	5571.21	5900.83	-79.73	1681923.91	14337585.91	39°28'56.391"N	80°51'10.424"W	5901.36	359.226	2.08	0.23	-2.07	
12588.00	90.490	339.430	6328.27	5661.18	5985.97	-108.85	1681894.80	14337671.02	39°28'57.233"N	80°51'10.793"W	5986.96	358.958	3.77	0.44	-3.74	
12677.00	89.880	339.130	6327.98	5750.17	6069.21	-140.34	1681863.32	14337754.23	39°28'58.057"N	80°51'11.193"W	6070.83	358.675	0.76	-0.69	-0.34	
12767.00	89.480	340.020	6328.48	5840.17	6153.55	-171.75	1681831.93	14337838.54	39°28'58.891"N	80°51'11.592"W	6155.95	358.401	1.08	-0.44	0.99	
12857.00	91.910	344.500	6327.39	5930.06	6239.23	-199.16	1681804.53	14337924.19	39°28'59.738"N	80°51'11.940"W	6242.41	358.172	5.66	2.70	4.98	
12946.00	91.750	341.600	6324.55	6018.88	6324.32	-225.09	1681778.61	14338009.24	39°29'00.579"N	80°51'12.269"W	6328.32	357.962	3.26	-0.18	-3.26	
13036.00	91.350	340.690	6322.11	6108.82	6409.45	-254.17	1681749.54	14338094.34	39°29'01.421"N	80°51'12.638"W	6414.49	357.729	1.10	-0.44	-1.01	
13126.00	90.740	339.210	6320.47	6198.81	6493.98	-285.02	1681718.71	14338178.83	39°29'02.257"N	80°51'13.030"W	6500.23	357.487	1.78	-0.68	-1.64	
13216.00	90.990	338.090	6319.11	6288.77	6577.80	-317.78	1681685.96	14338262.61	39°29'03.086"N	80°51'13.446"W	6585.47	357.234	1.27	0.28	-1.24	
13305.00	90.650	335.390	6317.84	6377.61	6659.55	-352.92	1681650.83	14338344.33	39°29'03.895"N	80°51'13.892"W	6668.89	356.966	3.06	-0.38	-3.03	
13395.00	90.550	336.740	6316.90	6467.40	6741.80	-389.43	1681614.34	14338426.55	39°29'04.708"N	80°51'14.356"W	6753.04	356.694	1.50	-0.11	1.50	
13485.00	90.710	339.170	6315.91	6557.33	6825.21	-423.20	1681580.57	14338509.93	39°29'05.533"N	80°51'14.785"W	6838.32	356.452	2.71	0.18	2.70	
13575.00	90.120	342.300	6315.26	6647.31	6910.16	-452.89	1681550.90	14338594.84	39°29'06.373"N	80°51'15.162"W	6924.98	356.250	3.54	-0.66	3.48	
13664.00	90.180	343.100	6315.02	6736.20	6995.13	-479.36	1681524.44	14338679.78	39°29'07.213"N	80°51'15.498"W	7011.53	356.080	0.90	0.07	0.90	
13754.00	89.480	342.520	6315.29	6826.09	7081.11	-505.96	1681497.85	14338765.72	39°29'08.064"N	80°51'15.835"W	7099.16	355.913	1.01	-0.78	-0.64	
13844.00	89.380	342.390	6316.18	6916.00	7166.92	-533.09	1681470.74	14338851.50	39°29'08.912"N	80°51'16.180"W	7186.71	355.746	0.18	-0.11	-0.14	
13933.00	88.980	341.930	6317.46	7004.93	7251.63	-560.35	1681443.48	14338936.18	39°29'09.750"N	80°51'16.526"W	7273.24	355.581	0.68	-0.45	-0.52	
14023.00	89.420	340.430	6318.72	7094.90	7336.80	-589.38	1681414.46	14339021.32	39°29'10.592"N	80°51'16.894"W	7360.44	355.407	1.74	0.49	-1.67	
14113.00	88.800	339.790	6320.11	7184.88	7421.42	-620.00	1681383.86	14339105.91	39°29'11.429"N	80°51'17.283"W	7447.28	355.225	0.99	-0.69	-0.71	
14203.00	90.150	338.750	6320.94	7274.87	7505.59	-651.85	1681352.02	14339190.04	39°29'12.261"N	80°51'17.687"W	7533.84	355.036	1.89	1.50	-1.16	
14292.00	90.060	337.230	6320.77	7363.81	7588.10	-685.20	1681318.68	14339272.52	39°29'13.077"N	80°51'18.111"W	7618.98	354.840	1.71	-0.10	-1.71	
14382.00	90.060	335.970	6320.68	7453.66	7670.70	-720.95	1681282.95	14339355.08	39°29'13.894"N	80°51'18.565"W	7704.50	354.631	1.40	0.00	-1.40	
14471.00	89.480	336.440	6321.04	7542.46	7752.13	-756.85	1681247.06	14339436.48	39°29'14.699"N	80°51'19.022"W	7788.99	354.424	0.84	-0.65	0.53	
14561.00	90.060	339.890	6321.40	7632.40	7835.66	-790.32	1681213.60	14339519.98	39°29'15.526"N	80°51'19.447"W	7875.42	354.240	3.89	0.64	3.83	
14651.00	89.690	338.430	6321.60	7722.39	7919.77	-822.34	1681181.60	14339604.05	39°29'16.357"N	80°51'19.853"W	7962.35	354.072	1.67	-0.41	-1.62	
14740.00	90.220	339.540	6321.67	7811.38	8002.85	-854.26	1681149.70	14339687.10	39°29'17.179"N	80°51'20.259"W	8048.31	353.907	1.38	0.60	1.25	
14830.00	90.460	342.380	6321.13	7901.35	8087.92	-883.61	1681120.35	14339772.13	39°29'18.020"N	80°51'20.631"W	8136.04	353.765	3.17	0.27	3.16	

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Area	Tyler County, WV	Well	Owens Unit 3H
Field	Tyler	Wellbore	Owens Unit 3H AWB
Facility	Weigle East Pad		

WELLPATH DATA (196 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
14920.00	90.310	346.930	6320.53	7991.03	8174.68	-907.42	1681096.55	14339858.86	39°29'18.878"N	80°51'20.933"W	8224.89	353.666	5.06	-0.17	5.06	
15010.00	90.800	351.050	6319.65	8079.89	8263.00	-924.61	1681079.37	14339947.15	39°29'19.751"N	80°51'21.151"W	8314.57	353.615	4.61	0.54	4.58	
15099.00	90.770	347.680	6318.43	8167.68	8350.45	-941.03	1681062.96	14340034.56	39°29'20.616"N	80°51'21.358"W	8403.31	353.570	3.79	-0.03	-3.79	
15189.00	90.460	342.150	6317.47	8257.30	8437.31	-964.44	1681039.55	14340121.39	39°29'21.475"N	80°51'21.655"W	8492.25	353.479	6.15	-0.34	-6.14	
15279.00	90.650	337.330	6316.60	8347.27	8521.72	-995.60	1681008.41	14340205.76	39°29'22.309"N	80°51'22.051"W	8579.68	353.336	5.36	0.21	-5.36	
15368.00	90.370	335.630	6315.80	8436.10	8603.31	-1031.11	1680972.91	14340287.32	39°29'23.116"N	80°51'22.502"W	8664.88	353.166	1.94	-0.31	-1.91	
15458.00	90.310	339.120	6315.27	8525.99	8686.37	-1065.73	1680938.31	14340370.35	39°29'23.938"N	80°51'22.942"W	8751.51	353.005	3.88	-0.07	3.88	
15548.00	90.680	337.500	6314.49	8615.95	8770.00	-1098.99	1680905.06	14340453.94	39°29'24.765"N	80°51'23.365"W	8838.59	352.857	1.85	0.41	-1.80	
15638.00	90.180	333.380	6313.82	8705.64	8851.83	-1136.39	1680867.68	14340535.74	39°29'25.574"N	80°51'23.840"W	8924.48	352.684	4.61	-0.56	-4.58	
15727.00	90.490	335.350	6313.29	8794.21	8932.07	-1174.89	1680829.19	14340615.94	39°29'26.368"N	80°51'24.329"W	9009.01	352.507	2.24	0.35	2.21	
15817.00	91.320	335.330	6311.87	8883.90	9013.85	-1212.43	1680791.66	14340697.69	39°29'27.177"N	80°51'24.807"W	9095.02	352.339	0.92	0.92	-0.02	
15907.00	91.020	343.940	6310.03	8973.80	9098.13	-1243.72	1680760.39	14340781.94	39°29'28.010"N	80°51'25.204"W	9182.74	352.216	9.57	-0.33	9.57	
15996.00	90.430	339.180	6308.91	9062.73	9182.52	-1271.86	1680732.26	14340866.30	39°29'28.845"N	80°51'25.561"W	9270.19	352.114	5.39	-0.66	-5.35	
16086.00	90.580	339.090	6308.11	9152.72	9266.62	-1303.91	1680700.22	14340950.36	39°29'29.676"N	80°51'25.968"W	9357.91	351.990	0.19	0.17	-0.10	
16160.00	90.770	338.620	6307.24	9226.70	9335.63	-1330.60	1680673.54	14341019.35	39°29'30.359"N	80°51'26.307"W	9429.98	351.888	0.69	0.26	-0.64	
16185.00	90.770	338.620	6306.90	9251.69	9358.91	-1339.72	1680664.43	14341042.62	39°29'30.589"N	80°51'26.423"W	9454.31	351.854	0.00	0.00	0.00	Projected MD at TD: 16185'

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Owens Unit 3H POE Rev-3	6333.00	653.63	1841.06	1683843.93	14332340.82	39°28'04.500"N	80°50'46.041"W	point
Owens Unit 3H BHL Rev-1	6359.00	9349.52	-1329.37	1680674.77	14341033.23	39°29'30.496"N	80°51'26.291"W	point
Owens Unit 3H LP Rev-3	6359.00	799.64	1787.82	1683790.72	14332486.77	39°28'05.944"N	80°50'46.717"W	point

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #12
Area	Tyler County, WV	Well	Owens Unit 3H
Field	Tyler	Wellbore	Owens Unit 3H AWB
Facility	Weigle East Pad		

WELLPATH COMPOSITION - Ref Wellbore: Owens Unit 3H AWB Ref Wellpath: Owens Unit 3H AWP Proj: 16185'				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
19.00	5760.00	Gyrodata standard - Drop gyro or Multi-shot	04 Gyrodata MS Gyro <8-3/4">(100'-5760')	Owens Unit 3H AWB
5760.00	16160.00	BHI AutoTrak Curve (Short)	05 BHI AT Curve <8-1/2">(5760')(5816'-16160')	Owens Unit 3H AWB
16160.00	16185.00	Blind Drilling (std)	Projection to bit	Owens Unit 3H AWB

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Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #12
Area	Tyler County, WV	Well	Owens Unit 3H
Field	Tyler	Wellbore	Owens Unit 3H AWB
Facility	Weigle East Pad		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
100.00	0.120	288.600	100.00	Gyrodata MS Gyro <8-3/4">(100'-5760')
5816.00	24.220	81.000	5488.71	BHI AT Curve <8-1/2">(5760')(5816'-16160')
6378.00	31.504	12.738	6002.40	Sycamore: 6378' MD
6612.00	49.854	355.169	6178.17	Middlesex: 6612' MD
6781.00	64.070	346.599	6270.17	Burkett: 6781' MD
6850.00	67.177	344.662	6298.35	Tully: 6850' MD
6963.00	71.605	341.104	6338.52	Marcellus POE: 6963' MD
16185.00	90.770	338.620	6306.90	Projected MD at TD: 16185'

COMMENTS

Wellpath general comments
 API: 47-095-02326-00-00
 BHI Job #: 8181140
 Rig: Precision 525
 Duration: 09.28.2016 - 09.30.2016
 Gyrodata MS Gyro <8-3/4">(100'-5760')
 BHI AT Curve <8-1/2">(5760')(5816'-16160')
 Sycamore: 6378' MD
 Middlesex: 6612' MD
 Burkett: 6781' MD
 Tully: 6850' MD
 Marcellus POE: 6963' MD
 Projected MD at TD: 16185'

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