



ANTERO RESOURCES CORPORATION

Location: Tyler County, WV Slot: Slot #07
 Field: Tyler Well: Jug Unit 1H
 Facility: Dale Pad Wellbore: Jug Unit 1H PWB

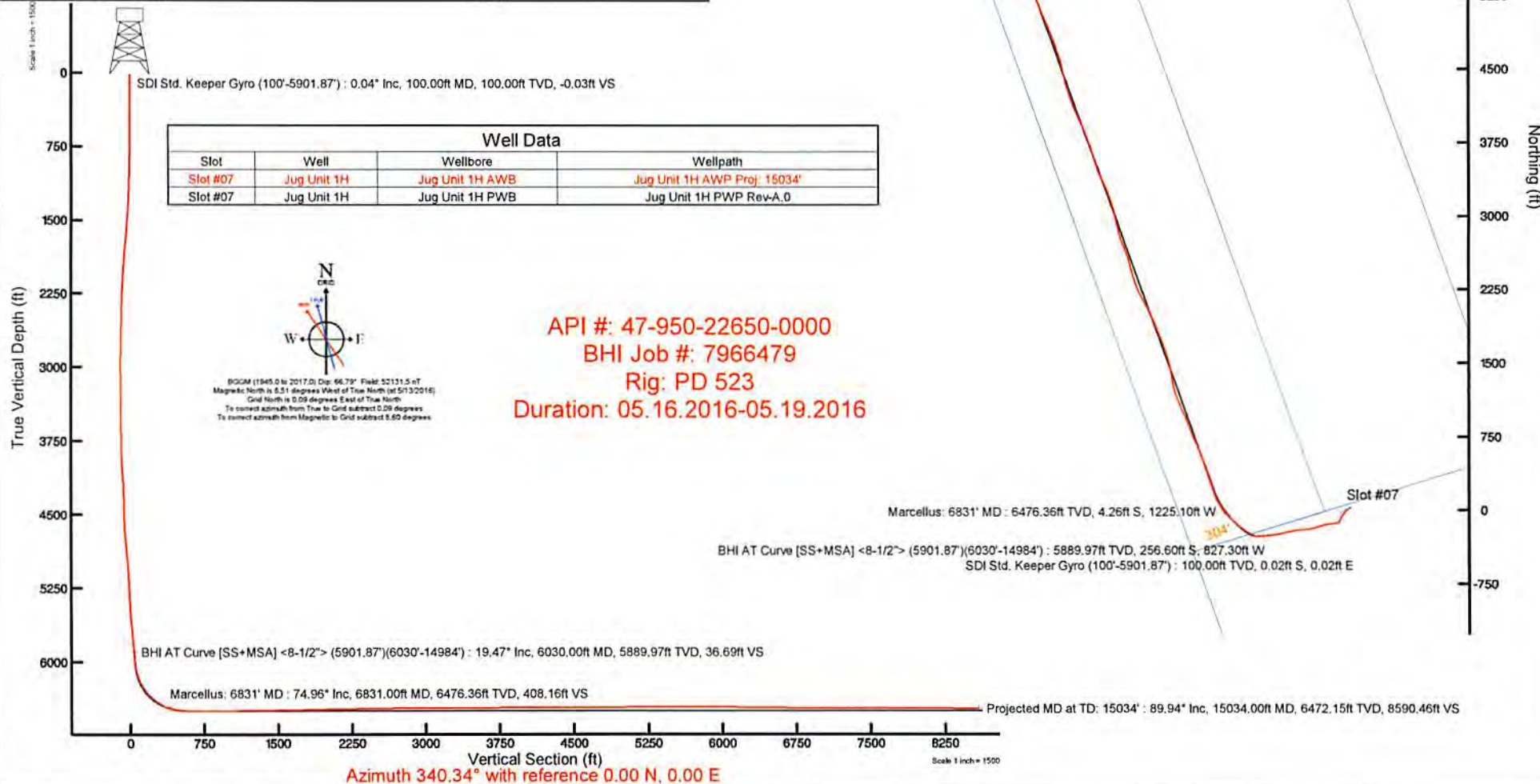


Plot reference wellpath is Jug Unit 1H PWP Rev-A.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to PD 523 (RKB)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to PD 523 (RKB)	North Reference: Grid north
PD 523 (RKB) to Mean Sea Level 1036 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: Slot #07) -1017 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: harelik on 2016-05-10
	Database: WA_MPL_EASTERNLUS_Defn

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Dale Pad	1679131.090	14319219.570	39°25'54.840"N	80°51'46.413"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
Slot #07	22.33	44.12	1679175.190	14319241.890
			Latitude	Longitude
			39°25'55.060"N	80°51'45.850"W
Comment Jug Unit 1H				
PD 523 (RKB) to Mud line (At Slot: Slot #07)				19ft
Mean Sea Level to Mud line (At Slot: Slot #07)				-1017ft
PD 523 (RKB) to Mean Sea Level				1036ft

Scale 1 inch = 1500
 Easting (ft) -4500 -3750 -3000 -2250 -1500 -750 0 750



Slot	Well	Wellbore	Wellpath
Slot #07	Jug Unit 1H	Jug Unit 1H AWB	Jug Unit 1H AWP Proj: 15034'
Slot #07	Jug Unit 1H	Jug Unit 1H PWB	Jug Unit 1H PWP Rev-A.0

API #: 47-950-22650-0000
 BHI Job #: 7966479
 Rig: PD 523
 Duration: 05.16.2016-05.19.2016

GCSN (1945.0 to 2017.0) Dip: 66.79° Field: 52131.5 nT
 Magnetic North is 5.51 degrees West of True North (at 5/13/2016)
 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 8.60 degrees

Marcellus: 6831' MD : 6476.36ft TVD, 4.26ft S, 1225.10ft W
 BHI AT Curve [SS+MSA] <8-1/2"> (5901.87')(6030'-14984') : 5889.97ft TVD, 256.60ft S, 827.30ft W
 SDI Std. Keeper Gyro (100'-5901.87') : 100.00ft TVD, 0.02ft S, 0.02ft E

BHI AT Curve [SS+MSA] <8-1/2"> (5901.87')(6030'-14984') : 19.47° Inc, 6030.00ft MD, 5889.97ft TVD, 36.69ft VS
 Marcellus: 6831' MD : 74.96° Inc, 6831.00ft MD, 6476.36ft TVD, 408.16ft VS
 Projected MD at TD: 15034' : 89.94° Inc, 15034.00ft MD, 6472.15ft TVD, 8590.46ft VS

Vertical Section (ft)
 Azimuth 340.34° with reference 0.00 N, 0.00 E

Scale 1 inch = 1500



Actual Wellpath Report

Jug Unit 1H AWP Proj: 15034'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Tyler County, WV	Well	Jug Unit 1H
Field	Tyler	Wellbore	Jug Unit 1H AWB
Facility	Dale 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	6/10/2016 at 12:59:38 PM
Convergence at slot	0.09° East	Database/Source file	WA_MPL_EASTERNUS_Defn/Jug_Unit_1H_AWP_Proj_15034_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	22.33	44.12	1679175.19	14319241.89	39°25'55.060"N	80°51'45.850"W
Facility Reference Pt			1679131.09	14319219.57	39°25'54.840"N	80°51'46.413"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM

Calculation method	Minimum curvature	PD 523 (RKB) to Facility Vertical Datum	19.00ft
Horizontal Reference Pt	Slot	PD 523 (RKB) to Mean Sea Level	1036.00ft
Vertical Reference Pt	PD 523 (RKB)	PD 523 (RKB) to Mud Line at Slot (Slot #07)	19.00ft
MD Reference Pt	PD 523 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	340.34°



Actual Wellpath Report

Jug Unit 1H AWP Proj: 15034'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Tyler County, WV	Well	Jug Unit 1H
Field	Tyler	Wellbore	Jug Unit 1H AWB
Facility	Date Pad		

WELLPATH DATA (350 stations) † = interpolated/extrapolated station															
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude (N)	Longitude (W)	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Comments	
0.00	0.000	144.690	0.00	0.00	0.00	0.00	1679175.19	14319241.89	39°25'55.060"N	80°51'45.850"W	0.00	0.000	0.00		
19.00	0.000	144.690	19.00	0.00	0.00	0.00	1679175.19	14319241.89	39°25'55.060"N	80°51'45.850"W	0.00	0.000	0.00		
100.00	0.040	144.690	100.00	-0.03	-0.02	0.02	1679175.21	14319241.87	39°25'55.060"N	80°51'45.850"W	0.03	144.690	0.05	SDI Std. Keeper Gyro (100-5901.87)	
125.00	0.100	117.510	125.00	-0.05	-0.04	0.04	1679175.23	14319241.85	39°25'55.060"N	80°51'45.849"W	0.06	134.671	0.27		
150.00	0.150	119.130	150.00	-0.09	-0.07	0.09	1679175.28	14319241.82	39°25'55.060"N	80°51'45.849"W	0.11	126.777	0.20		
175.00	0.130	136.340	175.00	-0.14	-0.10	0.14	1679175.33	14319241.79	39°25'55.059"N	80°51'45.848"W	0.17	126.896	0.19		
200.00	0.120	79.780	200.00	-0.17	-0.12	0.18	1679175.37	14319241.77	39°25'55.059"N	80°51'45.848"W	0.22	123.064	0.48		
225.00	0.040	156.080	225.00	-0.19	-0.12	0.21	1679175.40	14319241.77	39°25'55.059"N	80°51'45.847"W	0.24	119.966	0.47		
250.00	0.080	167.660	250.00	-0.21	-0.15	0.22	1679175.41	14319241.74	39°25'55.059"N	80°51'45.847"W	0.26	123.893	0.17		
275.00	0.040	74.760	275.00	-0.23	-0.16	0.23	1679175.42	14319241.73	39°25'55.058"N	80°51'45.847"W	0.28	125.006	0.36		
300.00	0.140	156.870	300.00	-0.26	-0.19	0.25	1679175.44	14319241.70	39°25'55.058"N	80°51'45.847"W	0.31	126.726	0.56		
325.00	0.120	139.760	325.00	-0.32	-0.24	0.28	1679175.47	14319241.65	39°25'55.058"N	80°51'45.846"W	0.37	130.053	0.17		
350.00	0.110	143.550	350.00	-0.36	-0.27	0.31	1679175.50	14319241.62	39°25'55.057"N	80°51'45.846"W	0.42	131.434	0.05		
375.00	0.240	116.650	375.00	-0.42	-0.32	0.37	1679175.56	14319241.57	39°25'55.057"N	80°51'45.845"W	0.49	130.460	0.60		
400.00	0.330	157.690	400.00	-0.53	-0.41	0.45	1679175.64	14319241.48	39°25'55.056"N	80°51'45.844"W	0.60	132.397	0.87		
425.00	0.150	137.410	425.00	-0.64	-0.50	0.50	1679175.69	14319241.39	39°25'55.055"N	80°51'45.844"W	0.70	135.138	0.79		
450.00	0.190	142.370	450.00	-0.71	-0.56	0.54	1679175.73	14319241.33	39°25'55.055"N	80°51'45.843"W	0.78	135.618	0.17		
475.00	0.200	165.620	475.00	-0.79	-0.63	0.59	1679175.78	14319241.26	39°25'55.054"N	80°51'45.842"W	0.86	136.938	0.18		
500.00	0.150	197.290	500.00	-0.86	-0.70	0.60	1679175.78	14319241.19	39°25'55.053"N	80°51'45.842"W	0.92	139.586	0.53		
525.00	0.080	170.320	525.00	-0.90	-0.75	0.59	1679175.78	14319241.14	39°25'55.053"N	80°51'45.842"W	0.95	141.791	0.35		
550.00	0.100	201.650	550.00	-0.94	-0.78	0.58	1679175.77	14319241.11	39°25'55.052"N	80°51'45.843"W	0.98	143.385	0.21		
575.00	0.170	190.320	575.00	-0.98	-0.84	0.57	1679175.76	14319241.05	39°25'55.052"N	80°51'45.843"W	1.02	145.981	0.30		
600.00	0.550	245.150	600.00	-1.03	-0.93	0.45	1679175.64	14319240.96	39°25'55.051"N	80°51'45.844"W	1.03	153.994	1.89		
625.00	0.410	237.810	625.00	-1.06	-1.03	0.27	1679175.46	14319240.86	39°25'55.050"N	80°51'45.847"W	1.06	165.347	0.61		
650.00	0.460	237.620	650.00	-1.10	-1.13	0.11	1679175.30	14319240.76	39°25'55.049"N	80°51'45.849"W	1.13	174.532	0.20		
675.00	0.600	238.300	675.00	-1.15	-1.25	-0.09	1679175.10	14319240.64	39°25'55.048"N	80°51'45.851"W	1.25	184.032	0.56		
700.00	0.550	239.470	699.99	-1.20	-1.38	-0.30	1679174.89	14319240.51	39°25'55.046"N	80°51'45.854"W	1.41	192.376	0.21		
725.00	0.590	233.000	724.99	-1.26	-1.52	-0.51	1679174.68	14319240.37	39°25'55.045"N	80°51'45.856"W	1.60	198.530	0.30		
750.00	0.740	232.160	749.99	-1.35	-1.70	-0.74	1679174.45	14319240.20	39°25'55.043"N	80°51'45.859"W	1.85	203.563	0.60		
775.00	1.070	210.240	774.99	-1.55	-2.00	-0.98	1679174.21	14319239.89	39°25'55.040"N	80°51'45.863"W	2.23	206.252	1.89		



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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Tyler County, WV	Well	Jug Unit 1H
Field	Tyler	Wellbore	Jug Unit 1H AWP
Facility	Date Pad		

MD (m)	Inclination (°)	Azimuth (°)	TVD (m)	Vert Sect (m)	North (m)	East (m)	Grid East (m)	Grid North (m)	Latitude	Longitude	Closure Dist (m)	Closure Dir (°)	DLS (m/100ft)	Comments
800.00	1.140	208.090	799.98	-1.87	-2.42	-1.22	1679173.97	14319239.47	39°25'55.036"N	80°51'45.866"W	2.71	206.765	0.33	
825.00	1.230	206.430	824.98	-2.22	-2.88	-1.46	1679173.74	14319239.01	39°25'55.032"N	80°51'45.869"W	3.22	206.839	0.39	
850.00	1.370	206.750	849.97	-2.61	-3.38	-1.71	1679173.48	14319238.51	39°25'55.027"N	80°51'45.872"W	3.79	206.803	0.56	
875.00	1.550	206.420	874.96	-3.05	-3.95	-1.99	1679173.20	14319237.94	39°25'55.021"N	80°51'45.875"W	4.43	206.770	0.72	
900.00	1.570	203.030	899.95	-3.54	-4.57	-2.28	1679172.91	14319237.32	39°25'55.015"N	80°51'45.879"W	5.11	206.497	0.38	
925.00	1.660	204.070	924.94	-4.05	-5.22	-2.56	1679172.63	14319236.67	39°25'55.009"N	80°51'45.883"W	5.81	206.141	0.38	
950.00	1.680	203.720	949.93	-4.58	-5.88	-2.86	1679172.34	14319236.01	39°25'55.002"N	80°51'45.886"W	6.54	205.891	0.09	
975.00	1.770	203.490	974.92	-5.13	-6.57	-3.16	1679172.03	14319235.32	39°25'54.995"W	80°51'45.890"W	7.29	205.655	0.36	
1000.00	1.770	204.720	999.91	-5.69	-7.28	-3.47	1679171.72	14319234.62	39°25'54.988"N	80°51'45.894"W	8.06	205.506	0.15	
1025.00	2.070	206.250	1024.90	-6.28	-8.03	-3.83	1679171.36	14319233.86	39°25'54.981"N	80°51'45.899"W	8.90	205.510	1.22	
1050.00	2.450	207.120	1049.88	-6.96	-8.91	-4.28	1679170.91	14319232.98	39°25'54.972"N	80°51'45.905"W	9.89	205.631	1.53	
1075.00	2.500	204.010	1074.85	-7.72	-9.89	-4.74	1679170.45	14319232.01	39°25'54.962"N	80°51'45.911"W	10.97	205.623	0.57	
1100.00	2.520	206.090	1099.83	-8.49	-10.88	-5.21	1679169.99	14319231.02	39°25'54.953"N	80°51'45.917"W	12.06	205.571	0.37	
1125.00	2.630	201.990	1124.80	-9.31	-11.90	-5.66	1679169.53	14319229.99	39°25'54.942"N	80°51'45.922"W	13.18	205.437	0.86	
1150.00	2.750	205.600	1149.78	-10.16	-12.98	-6.14	1679169.06	14319228.92	39°25'54.928"W	80°51'45.928"W	14.38	205.306	0.83	
1175.00	3.180	206.660	1174.74	-11.06	-14.14	-6.71	1679168.49	14319227.76	39°25'54.920"N	80°51'45.936"W	15.65	205.377	1.73	
1200.00	3.330	207.420	1199.70	-12.03	-15.40	-7.35	1679167.84	14319226.49	39°25'54.908"N	80°51'45.944"W	17.07	205.516	0.62	
1225.00	3.420	206.760	1224.66	-13.04	-16.71	-8.02	1679167.17	14319225.18	39°25'54.895"N	80°51'45.953"W	18.54	205.641	0.39	
1250.00	4.110	211.070	1249.61	-14.12	-18.15	-8.82	1679166.37	14319223.75	39°25'54.881"N	80°51'45.963"W	20.18	205.923	2.88	
1275.00	4.500	214.110	1274.53	-15.27	-19.73	-9.83	1679165.36	14319222.17	39°25'54.865"N	80°51'45.976"W	22.04	206.495	1.61	
1300.00	4.750	215.460	1299.45	-16.44	-21.38	-10.98	1679164.21	14319220.52	39°25'54.849"N	80°51'45.990"W	24.04	207.189	1.09	
1325.00	4.980	215.130	1324.36	-17.66	-23.11	-12.21	1679162.99	14319218.79	39°25'54.832"N	80°51'46.006"W	26.14	207.844	0.93	
1350.00	5.440	215.490	1349.26	-18.96	-24.96	-13.52	1679161.68	14319216.94	39°25'54.814"N	80°51'46.023"W	28.39	208.440	1.84	
1375.00	5.870	215.420	1374.14	-20.36	-26.96	-14.94	1679160.25	14319214.94	39°25'54.794"N	80°51'46.041"W	30.82	208.997	1.48	
1400.00	6.060	214.120	1399.01	-21.86	-29.08	-16.42	1679158.78	14319212.82	39°25'54.773"N	80°51'46.060"W	33.40	209.442	1.14	
1425.00	6.390	215.040	1423.66	-23.45	-31.31	-17.95	1679157.24	14319210.59	39°25'54.751"N	80°51'46.079"W	36.10	209.828	1.38	
1450.00	6.700	214.560	1448.70	-25.11	-33.65	-19.58	1679155.62	14319208.25	39°25'54.728"N	80°51'46.100"W	38.94	210.191	1.26	
1475.00	6.980	213.750	1473.52	-26.86	-36.12	-21.25	1679153.95	14319205.79	39°25'54.703"N	80°51'46.121"W	41.91	210.472	1.18	
1500.00	6.870	213.720	1498.33	-28.66	-38.63	-22.93	1679152.27	14319203.28	39°25'54.679"N	80°51'46.143"W	44.92	210.691	0.44	
1525.00	6.810	212.580	1523.16	-30.46	-41.12	-24.55	1679150.65	14319200.79	39°25'54.654"N	80°51'46.164"W	47.89	210.844	0.59	



Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Tyler County, WV	Well	Jug Unit 1H
Field	Tyler	Wellbore	Jug Unit 1H AWP
Facility	Date Pad		

WELLPATH DATA (350 stations)													
MD	Inclination	Azimuth	TVD	Vent Sect	North	East	East	Gnd East	Gnd North	Latitude	Longitude	Comments	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)			(ft/100ft)	
1550.00	6.670	211.940	1547.98	-32.27	-43.60	-26.12	1679149.08	14319198.31	39°25'54.630"N	80°51'46.184"W	50.82	210.926	0.64
1550.00	6.790	211.220	1572.81	-34.10	-46.09	-27.66	1679147.55	14319195.81	39°25'54.605"N	80°51'46.203"W	53.75	210.961	0.59
1600.00	6.990	212.090	1597.63	-35.98	-48.66	-29.23	1679145.97	14319193.26	39°25'54.580"N	80°51'46.223"W	56.75	210.998	0.80
1625.00	6.940	212.310	1622.45	-37.85	-51.21	-30.84	1679144.36	14319190.70	39°25'54.554"N	80°51'46.244"W	59.78	211.059	0.23
1650.00	6.940	211.000	1647.26	-39.74	-53.78	-32.43	1679142.77	14319188.13	39°25'54.529"N	80°51'46.264"W	62.80	211.088	0.63
1675.00	6.790	209.960	1672.08	-41.65	-56.36	-33.94	1679141.26	14319185.55	39°25'54.504"N	80°51'46.284"W	65.79	211.060	0.78
1700.00	6.530	208.200	1696.92	-43.56	-58.89	-35.35	1679139.85	14319183.02	39°25'54.479"N	80°51'46.302"W	68.69	210.977	1.32
1725.00	6.300	208.460	1721.75	-45.48	-61.41	-36.71	1679138.49	14319180.50	39°25'54.454"N	80°51'46.319"W	71.55	210.872	0.42
1750.00	6.480	209.170	1746.59	-47.37	-63.91	-38.09	1679137.12	14319178.00	39°25'54.429"N	80°51'46.337"W	74.40	210.793	0.68
1775.00	6.440	208.710	1771.43	-49.23	-66.38	-39.45	1679135.76	14319175.54	39°25'54.405"N	80°51'46.354"W	77.21	210.725	0.26
1800.00	6.490	208.010	1796.27	-51.12	-68.85	-40.79	1679134.42	14319173.06	39°25'54.380"N	80°51'46.371"W	80.03	210.642	0.37
1825.00	6.490	208.860	1821.11	-53.00	-71.34	-42.13	1679133.07	14319170.58	39°25'54.356"N	80°51'46.388"W	82.85	210.567	0.38
1850.00	6.500	211.480	1845.95	-54.83	-73.78	-43.55	1679131.65	14319168.14	39°25'54.331"N	80°51'46.406"W	85.68	210.554	1.19
1875.00	6.070	213.750	1870.80	-56.50	-76.09	-45.03	1679130.18	14319165.83	39°25'54.309"N	80°51'46.425"W	88.41	210.616	1.99
1900.00	6.100	189.650	1895.66	-58.05	-78.27	-46.53	1679128.68	14319163.65	39°25'54.287"N	80°51'46.444"W	91.06	210.730	0.67
1925.00	6.350	213.990	1920.51	-59.64	-80.50	-48.07	1679127.14	14319161.42	39°25'54.265"N	80°51'46.464"W	93.76	210.843	1.15
1950.00	6.230	215.290	1945.36	-61.23	-82.75	-49.63	1679125.58	14319159.17	39°25'54.243"N	80°51'46.484"W	96.49	210.950	0.74
1975.00	6.000	213.240	1970.22	-62.80	-84.95	-51.13	1679124.08	14319156.97	39°25'54.221"N	80°51'46.503"W	99.15	211.040	1.27
2000.00	5.260	212.700	1995.10	-64.29	-87.01	-52.46	1679122.75	14319154.91	39°25'54.201"N	80°51'46.520"W	101.60	211.087	2.97
2025.00	5.180	212.130	2019.99	-65.69	-88.93	-53.68	1679121.53	14319152.99	39°25'54.182"N	80°51'46.536"W	103.88	211.116	0.38
2050.00	5.070	211.840	2044.89	-67.07	-90.83	-54.86	1679120.35	14319151.10	39°25'54.163"N	80°51'46.551"W	106.11	211.134	0.45
2075.00	4.440	204.720	2069.81	-68.45	-92.64	-55.85	1679119.36	14319149.28	39°25'54.145"N	80°51'46.564"W	108.18	211.084	3.45
2100.00	4.400	201.920	2094.73	-69.86	-94.41	-56.61	1679118.60	14319147.52	39°25'54.128"N	80°51'46.573"W	110.09	210.949	0.88
2125.00	4.300	199.630	2119.66	-71.30	-96.18	-57.29	1679117.93	14319145.74	39°25'54.110"N	80°51'46.582"W	111.95	210.778	0.80
2150.00	4.480	199.850	2144.59	-72.78	-97.99	-57.93	1679117.28	14319143.94	39°25'54.092"N	80°51'46.590"W	113.83	210.584	0.73
2175.00	4.510	199.820	2169.51	-74.29	-99.83	-58.60	1679116.61	14319142.10	39°25'54.074"N	80°51'46.599"W	115.76	210.414	0.13
2200.00	4.500	201.400	2194.43	-75.79	-101.67	-59.29	1679115.92	14319140.27	39°25'54.056"N	80°51'46.608"W	117.69	210.251	0.50
2225.00	4.140	202.360	2219.36	-77.20	-103.41	-59.99	1679115.22	14319138.52	39°25'54.039"N	80°51'46.617"W	119.56	210.119	1.47
2250.00	3.750	206.050	2244.30	-78.44	-104.98	-60.70	1679114.52	14319136.95	39°25'54.023"N	80°51'46.626"W	121.27	210.034	1.86
2275.00	3.420	205.490	2269.25	-79.54	-106.39	-61.38	1679113.84	14319135.54	39°25'54.009"N	80°51'46.634"W	122.82	209.980	1.33



Actual Wellpath Report
 Jug Unit 1H AWP Proj: 15034
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Date Pad
Slot	Slot #07
Jug Unit 1H	Jug Unit 1H
Jug Unit 1H AWP	Jug Unit 1H AWP

WELLPATH DATA (350 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Comments
2300.00	3.390	208.000	2294.21	-80.56	-107.72	-62.04	1679113.17	14319134.22	39°25'53.996"N	80°51'46.643"W	124.31	209.942	0.61	
2325.00	2.440	205.010	2319.18	-81.44	-108.85	-62.62	1679112.60	14319133.08	39°25'53.985"N	80°51'46.650"W	125.58	209.909	3.85	
2350.00	1.980	208.520	2344.16	-82.11	-109.71	-63.05	1679112.17	14319132.22	39°25'53.977"N	80°51'46.656"W	126.64	209.884	1.92	
2375.00	1.840	208.160	2369.15	-82.66	-110.45	-63.44	1679111.77	14319131.49	39°25'53.969"N	80°51'46.661"W	127.37	209.874	0.56	
2400.00	1.760	207.410	2394.13	-83.19	-111.14	-63.81	1679111.41	14319130.79	39°25'53.963"N	80°51'46.665"W	128.15	209.861	0.33	
2425.00	1.680	206.320	2419.12	-83.71	-111.81	-64.15	1679111.07	14319130.13	39°25'53.956"N	80°51'46.670"W	128.90	209.844	0.35	
2450.00	1.640	204.640	2444.11	-84.22	-112.46	-64.46	1679110.76	14319129.47	39°25'53.949"N	80°51'46.674"W	129.63	209.820	0.25	
2475.00	1.680	202.550	2469.10	-84.75	-113.13	-64.75	1679110.47	14319128.81	39°25'53.943"N	80°51'46.677"W	130.35	209.785	0.29	
2500.00	1.790	202.600	2494.09	-85.31	-113.83	-65.04	1679110.18	14319128.11	39°25'53.936"N	80°51'46.681"W	131.10	209.743	0.44	
2525.00	1.850	203.330	2519.08	-85.89	-114.56	-65.35	1679109.87	14319127.38	39°25'53.929"N	80°51'46.685"W	131.89	209.703	0.26	
2550.00	1.890	202.130	2544.06	-86.50	-115.31	-65.66	1679109.55	14319126.63	39°25'53.921"N	80°51'46.689"W	132.70	209.660	0.22	
2575.00	1.910	202.300	2569.05	-87.11	-116.08	-65.98	1679109.24	14319125.86	39°25'53.914"N	80°51'46.693"W	133.52	209.614	0.08	
2600.00	2.000	204.120	2594.04	-87.74	-116.86	-66.31	1679108.90	14319125.08	39°25'53.906"N	80°51'46.697"W	134.36	209.573	0.44	
2625.00	2.090	207.970	2619.02	-88.36	-117.66	-66.71	1679108.51	14319124.28	39°25'53.898"N	80°51'46.702"W	135.25	209.550	0.66	
2650.00	1.950	209.220	2644.00	-88.95	-118.43	-67.13	1679108.09	14319123.50	39°25'53.890"N	80°51'46.708"W	136.14	209.544	0.59	
2675.00	1.660	205.540	2668.99	-89.48	-119.13	-67.49	1679107.73	14319122.80	39°25'53.884"N	80°51'46.712"W	136.92	209.533	1.25	
2700.00	1.160	200.460	2693.98	-89.93	-119.70	-67.74	1679107.48	14319122.24	39°25'53.878"N	80°51'46.716"W	137.53	209.505	2.06	
2725.00	0.840	189.920	2718.98	-90.28	-120.11	-67.86	1679107.36	14319121.82	39°25'53.874"N	80°51'46.717"W	137.96	209.463	1.47	
2750.00	0.870	192.340	2743.98	-90.60	-120.48	-67.93	1679107.29	14319121.46	39°25'53.870"N	80°51'46.718"W	138.31	209.415	0.19	
2775.00	0.920	196.640	2768.97	-90.93	-120.86	-68.03	1679107.19	14319121.08	39°25'53.867"N	80°51'46.719"W	138.69	209.374	0.33	
2800.00	0.900	194.550	2793.97	-91.25	-121.24	-68.13	1679107.08	14319120.70	39°25'53.863"N	80°51'46.721"W	139.07	209.335	0.15	
2825.00	0.940	198.960	2818.97	-91.57	-121.62	-68.25	1679106.97	14319120.31	39°25'53.859"N	80°51'46.722"W	139.46	209.299	0.33	
2850.00	0.980	195.150	2843.96	-91.91	-122.02	-68.37	1679106.85	14319119.91	39°25'53.855"N	80°51'46.724"W	139.87	209.262	0.30	
2875.00	0.950	185.720	2868.96	-92.27	-122.44	-68.45	1679106.77	14319119.50	39°25'53.851"N	80°51'46.725"W	140.27	209.207	0.65	
2900.00	0.780	175.670	2893.96	-92.62	-122.81	-68.46	1679106.76	14319119.13	39°25'53.847"N	80°51'46.725"W	140.60	209.136	0.87	
2925.00	0.640	174.210	2918.96	-92.92	-123.12	-68.43	1679106.78	14319118.82	39°25'53.844"N	80°51'46.724"W	140.86	209.067	0.57	
2950.00	0.230	160.290	2943.96	-93.11	-123.31	-68.40	1679106.81	14319118.63	39°25'53.842"N	80°51'46.724"W	141.01	209.019	1.68	
2975.00	0.460	26.120	2968.95	-93.09	-123.27	-68.34	1679106.87	14319118.67	39°25'53.843"N	80°51'46.723"W	140.94	209.006	2.57	
3000.00	0.600	27.640	2993.95	-92.93	-123.06	-68.24	1679106.98	14319118.88	39°25'53.845"N	80°51'46.722"W	140.71	209.009	0.56	
3025.00	0.520	30.720	3018.95	-92.77	-122.85	-68.12	1679107.10	14319119.09	39°25'53.847"N	80°51'46.720"W	140.47	209.009	0.34	



Actual Wellpath Report

Jug Unit 1H AWP Proj: 15034
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Tyler County, WV	Well	Jug Unit 1H
Field	Tyler	Wellbore	Jug Unit 1H AWP
Facility	Date Pad		

WELLPATH DATA (350 stations)														
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Comments
3050.00	0.570	20.170	3043.95	-92.60	-122.63	-68.02	1679107.20	14319119.31	39°25'53.848"N	80°51'46.719"W	140.23	209.015	0.45	
3075.00	0.580	17.660	3068.95	-92.40	-122.39	-67.94	1679107.28	14319119.54	39°25'53.851"N	80°51'46.718"W	139.98	209.033	0.11	
3100.00	0.590	14.290	3093.95	-92.20	-122.15	-67.87	1679107.35	14319119.79	39°25'53.854"N	80°51'46.717"W	139.74	209.057	0.14	
3125.00	0.600	12.560	3118.95	-91.98	-121.90	-67.81	1679107.41	14319120.04	39°25'53.856"N	80°51'46.716"W	139.49	209.086	0.08	
3150.00	0.630	18.360	3143.95	-91.76	-121.64	-67.73	1679107.48	14319120.30	39°25'53.859"N	80°51'46.716"W	139.23	209.112	0.28	
3175.00	0.660	9.790	3168.94	-91.53	-121.37	-67.67	1679107.55	14319120.57	39°25'53.862"N	80°51'46.715"W	138.96	209.142	0.40	
3200.00	0.670	0.000	3193.94	-91.26	-121.08	-67.64	1679107.57	14319120.86	39°25'53.864"N	80°51'46.714"W	138.69	209.191	0.46	
3225.00	0.650	359.420	3218.94	-90.99	-120.79	-67.64	1679107.57	14319121.15	39°25'53.870"N	80°51'46.714"W	138.44	209.250	0.08	
3250.00	0.640	4.270	3243.94	-90.73	-120.51	-67.64	1679107.58	14319121.43	39°25'53.872"N	80°51'46.714"W	138.19	209.303	0.22	
3275.00	0.720	5.560	3418.93	-88.74	-118.40	-67.62	1679107.60	14319123.54	39°25'53.891"N	80°51'46.714"W	136.35	209.732	0.62	
3425.00	0.720	3.880	3443.92	-88.47	-118.10	-67.59	1679107.62	14319123.84	39°25'53.894"N	80°51'46.714"W	136.07	209.785	0.29	
3450.00	0.590	343.420	3468.92	-88.21	-117.83	-67.62	1679107.59	14319124.10	39°25'53.896"N	80°51'46.714"W	135.86	209.851	0.91	
3475.00	1.080	268.890	3493.92	-88.01	-117.71	-67.89	1679107.32	14319124.22	39°25'53.898"N	80°51'46.717"W	135.89	209.975	4.34	
3500.00	2.230	253.010	3518.91	-87.91	-117.86	-68.60	1679106.62	14319124.08	39°25'53.896"N	80°51'46.726"W	136.37	210.199	4.91	
3525.00	2.540	251.800	3543.89	-87.88	-118.18	-69.59	1679105.63	14319123.76	39°25'53.893"N	80°51'46.739"W	137.14	210.491	1.26	
3550.00	2.880	251.900	3568.86	-87.84	-118.54	-70.71	1679104.51	14319123.39	39°25'53.888"N	80°51'46.753"W	138.03	210.815	1.36	
3600.00	3.550	253.820	3593.82	-87.78	-118.96	-72.05	1679103.17	14319122.98	39°25'53.885"N	80°51'46.770"W	139.07	211.203	2.71	
3625.00	3.920	254.680	3618.77	-87.67	-119.40	-73.62	1679101.60	14319122.54	39°25'53.881"N	80°51'46.790"W	140.27	211.657	1.50	
3650.00	4.150	254.540	3643.71	-87.54	-119.86	-75.31	1679089.91	14319122.07	39°25'53.876"N	80°51'46.812"W	141.56	212.142	0.92	
3675.00	5.030	255.570	3668.63	-87.37	-120.38	-77.25	1679097.97	14319121.56	39°25'53.871"N	80°51'46.837"W	143.03	212.688	3.54	
3700.00	5.960	256.950	3693.51	-87.12	-120.94	-79.57	1679095.65	14319120.99	39°25'53.866"N	80°51'46.866"W	144.77	213.342	3.76	
3725.00	6.400	257.530	3718.37	-86.80	-121.54	-82.20	1679093.03	14319120.40	39°25'53.860"N	80°51'46.900"W	146.72	214.071	1.78	
3750.00	6.810	257.980	3743.20	-86.43	-122.15	-85.01	1679090.22	14319119.79	39°25'53.854"N	80°51'46.936"W	148.82	214.836	1.65	
3775.00	7.910	258.520	3767.99	-85.99	-122.80	-88.14	1679087.08	14319119.14	39°25'53.848"N	80°51'46.976"W	151.16	215.670	4.41	



Actual Wellpath Report
 Jug Unit 1H AWP Proj.: 15034
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Tyler County, WV	Well	Jug Unit 1H
Field	Tyler	Wellbore	Jug Unit 1H AWB
Facility			
Date Pad			

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Comments
3800.00	9.220	258.320	3792.71	-85.46	-123.55	-91.79	1679083.44	14319118.39	39°25'53.84"N	80°51'47.02"W	153.91	216.611	5.24	
3825.00	9.220	258.060	3817.37	-84.90	-124.39	-95.82	1679079.41	14319117.55	39°25'53.832"N	80°51'47.073"W	157.01	217.607	2.01	
3850.00	9.900	257.950	3842.01	-84.33	-125.27	-99.98	1679075.25	14319116.67	39°25'53.823"N	80°51'47.127"W	160.28	218.594	0.72	
3875.00	10.520	257.740	3866.61	-83.75	-126.21	-104.32	1679070.92	14319115.73	39°25'53.814"N	80°51'47.182"W	163.74	219.575	2.48	
3900.00	11.550	258.350	3891.15	-83.11	-127.20	-109.00	1679066.24	14319114.74	39°25'53.805"N	80°51'47.242"W	167.51	220.594	4.15	
3925.00	12.180	259.130	3915.61	-82.36	-128.20	-114.04	1679061.20	14319113.74	39°25'53.795"N	80°51'47.306"W	171.58	221.654	2.60	
3950.00	12.610	260.210	3940.03	-81.49	-129.16	-119.32	1679055.92	14319112.78	39°25'53.785"N	80°51'47.373"W	175.84	222.731	1.95	
3975.00	13.510	261.900	3964.39	-80.44	-130.04	-124.90	1679050.34	14319111.91	39°25'53.777"N	80°51'47.444"W	180.30	223.845	3.91	
4000.00	14.760	263.470	3988.63	-79.13	-130.81	-130.95	1679044.29	14319111.13	39°25'53.769"N	80°51'47.521"W	185.10	225.031	5.23	
4025.00	16.050	263.870	4012.73	-77.60	-131.54	-137.55	1679037.69	14319110.40	39°25'53.762"N	80°51'47.606"W	190.33	226.280	5.18	
4050.00	17.380	263.300	4036.67	-75.95	-132.35	-144.70	1679030.55	14319109.60	39°25'53.754"N	80°51'47.697"W	196.10	227.553	5.36	
4075.00	18.450	262.820	4060.46	-74.26	-133.28	-152.33	1679022.92	14319108.67	39°25'53.745"N	80°51'47.794"W	202.40	228.817	4.32	
4100.00	18.810	262.240	4084.15	-72.57	-134.32	-160.25	1679015.00	14319107.63	39°25'53.735"N	80°51'47.895"W	209.10	230.032	1.62	
4125.00	18.570	261.250	4107.83	-70.99	-135.47	-168.18	1679007.08	14319106.48	39°25'53.724"N	80°51'47.996"W	215.95	231.149	1.59	
4150.00	18.430	260.520	4131.54	-69.53	-136.72	-176.01	1678999.25	14319105.22	39°25'53.711"N	80°51'48.096"W	222.87	232.161	1.08	
4175.00	18.820	259.270	4155.23	-68.21	-138.12	-183.87	1678991.39	14319103.82	39°25'53.698"N	80°51'48.196"W	229.97	233.086	2.23	
4200.00	19.250	257.930	4178.66	-67.04	-139.74	-191.66	1678983.40	14319102.21	39°25'53.682"N	80°51'48.298"W	237.35	233.934	2.45	
4225.00	19.730	256.780	4202.43	-66.02	-141.56	-200.00	1678975.27	14319100.38	39°25'53.664"N	80°51'48.402"W	245.03	234.709	2.46	
4250.00	20.250	255.540	4225.92	-65.16	-143.61	-208.30	1678966.98	14319098.34	39°25'53.644"N	80°51'48.507"W	253.00	235.416	2.68	
4275.00	20.510	255.110	4249.36	-64.40	-145.81	-216.72	1678958.56	14319096.13	39°25'53.622"N	80°51'48.615"W	261.21	236.067	1.20	
4300.00	20.370	254.430	4272.79	-63.73	-148.11	-225.14	1678950.14	14319093.84	39°25'53.600"N	80°51'48.722"W	269.49	236.662	1.10	
4325.00	20.440	253.610	4296.22	-63.17	-150.51	-233.52	1678941.76	14319091.44	39°25'53.576"N	80°51'48.829"W	277.82	237.198	1.18	
4350.00	20.210	253.450	4318.66	-62.68	-152.97	-241.85	1678933.44	14319088.98	39°25'53.552"N	80°51'48.935"W	286.17	237.687	0.95	
4375.00	19.860	253.330	4343.15	-62.23	-155.42	-250.06	1678925.23	14319086.54	39°25'53.528"N	80°51'49.040"W	294.42	238.138	1.41	
4400.00	19.490	253.170	4366.69	-61.80	-157.84	-258.12	1678917.17	14319084.11	39°25'53.504"N	80°51'49.143"W	302.55	238.554	1.50	
4425.00	18.940	253.190	4390.30	-61.39	-160.22	-265.99	1678909.30	14319081.73	39°25'53.480"N	80°51'49.243"W	310.52	238.937	2.20	
4450.00	18.740	253.120	4413.96	-61.00	-162.56	-273.72	1678901.58	14319079.39	39°25'53.457"N	80°51'49.341"W	318.35	239.294	0.81	
4475.00	18.070	253.290	4437.61	-60.59	-164.90	-281.48	1678893.83	14319077.05	39°25'53.434"N	80°51'49.440"W	326.22	239.636	1.34	
4500.00	19.790	253.740	4461.18	-60.13	-167.26	-289.45	1678885.66	14319074.69	39°25'53.411"N	80°51'49.542"W	334.30	239.978	2.94	
4525.00	20.220	253.900	4484.67	-59.61	-169.65	-297.66	1678877.65	14319072.31	39°25'53.388"N	80°51'49.647"W	342.61	240.320	1.73	



Actual Wellpath Report
 Jug Unit 1H AWP Proj: 15034
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Tyler County, WV	Well	Jug Unit 1H
Field	Tyler	Wellbore	Jug Unit 1H AWP
Facility	Date Pad		

WELLPATH DATA (350 stations)

MD	Inclination	Azimuth	TVD	Vent Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Comments
4550.00	20.140	254.270	4508.14	-59.05	-172.01	-305.96	1678869.26	14319069.95	39°25'53.365"N	80°51'49.752"W	351.00	240.655	0.60	
455.00	20.230	255.060	4531.60	-58.40	-174.29	-314.28	1678861.04	14319067.67	39°25'53.342"N	80°51'49.859"W	359.37	240.888	1.15	
4600.00	20.530	255.570	4555.04	-57.64	-176.50	-322.70	1678852.62	14319065.46	39°25'53.320"N	80°51'49.966"W	367.81	241.324	1.39	
4625.00	20.340	255.850	4578.47	-56.82	-178.65	-331.16	1678844.17	14319063.31	39°25'53.299"N	80°51'50.074"W	376.27	241.654	0.85	
4650.00	20.230	256.950	4601.92	-55.91	-180.69	-339.58	1678835.75	14319061.27	39°25'53.279"N	80°51'50.181"W	384.66	241.983	1.59	
4675.00	20.480	258.520	4625.36	-54.79	-182.54	-348.08	1678827.25	14319059.43	39°25'53.261"N	80°51'50.289"W	393.04	242.327	2.40	
4700.00	20.560	259.280	4648.77	-53.49	-184.22	-356.68	1678818.66	14319057.74	39°25'53.245"N	80°51'50.399"W	401.44	242.684	1.11	
4725.00	20.310	259.980	4672.20	-52.11	-185.83	-365.26	1678810.62	14319056.14	39°25'53.229"N	80°51'50.508"W	409.81	243.035	1.08	
4750.00	19.800	261.780	4695.68	-50.57	-187.22	-373.72	1678801.19	14319054.75	39°25'53.215"N	80°51'50.616"W	417.99	243.391	3.64	
4775.00	19.270	264.200	4719.24	-48.74	-188.24	-382.01	1678793.33	14319053.73	39°25'53.205"N	80°51'50.722"W	425.87	243.768	3.87	
4800.00	19.080	265.020	4742.85	-46.72	-189.01	-390.19	1678785.16	14319052.96	39°25'53.198"N	80°51'50.826"W	433.55	244.154	1.32	
4825.00	19.290	265.420	4766.47	-44.61	-189.69	-398.37	1678776.98	14319052.27	39°25'53.191"N	80°51'50.931"W	441.23	244.537	0.99	
4850.00	19.460	265.790	4790.05	-42.43	-190.33	-406.64	1678768.71	14319051.64	39°25'53.185"N	80°51'51.036"W	448.98	244.918	0.84	
4875.00	19.340	266.030	4813.63	-40.20	-190.92	-414.92	1678760.43	14319051.04	39°25'53.179"N	80°51'51.142"W	456.74	245.291	0.58	
4900.00	19.260	265.810	4837.23	-37.98	-191.51	-423.17	1678752.19	14319050.46	39°25'53.174"N	80°51'51.247"W	464.48	245.650	0.43	
4925.00	19.480	265.670	4860.81	-35.78	-192.13	-431.43	1678743.93	14319049.84	39°25'53.168"N	80°51'51.352"W	472.28	245.996	0.90	
4950.00	19.970	265.300	4884.34	-33.57	-192.79	-439.85	1678735.52	14319049.18	39°25'53.161"N	80°51'51.459"W	480.24	246.332	2.02	
4975.00	20.180	264.620	4907.82	-31.41	-193.54	-448.39	1678726.98	14319048.42	39°25'53.154"N	80°51'51.568"W	488.38	246.653	1.26	
5000.00	20.160	263.980	4931.29	-29.33	-194.40	-456.97	1678718.40	14319047.57	39°25'53.146"N	80°51'51.677"W	496.60	246.954	0.89	
5025.00	20.670	263.230	4954.72	-27.33	-195.37	-465.63	1678709.74	14319046.60	39°25'53.136"N	80°51'51.788"W	504.96	247.238	2.33	
5050.00	21.700	262.280	4978.03	-25.39	-196.51	-474.60	1678700.78	14319045.46	39°25'53.125"N	80°51'51.902"W	513.67	247.507	4.34	
5075.00	22.290	261.710	5001.21	-23.49	-197.82	-483.87	1678691.52	14319044.15	39°25'53.112"N	80°51'52.020"W	522.74	247.764	2.51	
5100.00	22.440	261.250	5024.33	-21.66	-199.23	-493.27	1678682.11	14319042.74	39°25'53.098"N	80°51'52.140"W	531.99	248.007	0.92	
5125.00	22.680	260.760	5047.42	-19.88	-200.73	-502.75	1678672.64	14319041.24	39°25'53.084"N	80°51'52.261"W	541.34	248.235	1.22	
5150.00	22.890	260.380	5070.47	-18.16	-202.31	-512.30	1678663.10	14319039.66	39°25'53.068"N	80°51'52.383"W	550.80	248.450	1.03	
5175.00	22.700	259.970	5093.52	-16.51	-203.97	-521.84	1678653.56	14319038.01	39°25'53.052"N	80°51'52.504"W	560.29	248.652	0.99	
5200.00	22.160	259.500	5116.62	-14.95	-205.67	-531.23	1678644.17	14319036.31	39°25'53.035"N	80°51'52.624"W	569.65	248.836	2.28	
5225.00	21.620	258.760	5139.82	-13.53	-207.42	-540.38	1678635.02	14319034.55	39°25'53.018"N	80°51'52.741"W	578.82	249.001	2.43	
5250.00	20.960	258.500	5163.12	-12.22	-209.21	-549.28	1678626.13	14319032.76	39°25'53.001"N	80°51'52.854"W	587.77	249.149	2.67	
5275.00	20.370	257.830	5186.51	-11.01	-211.02	-557.92	1678617.50	14319030.95	39°25'52.983"N	80°51'52.964"W	596.49	249.282	2.54	



Actual Wellpath Report

Jug Unit 1H AWP Proj: 15034'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #07
Area	Tyler County, WV		Well	Jug Unit 1H
Field	Tyler		Wellbore	Jug Unit 1H AWB
Facility	Dale Pad			

WELLPATH DATA (350 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]	Comments
5300.00	19.890	257.070	5209.98	-9.95	-212.89	-566.31	1678609.10	14319029.09	39°25'52.964"N	80°51'53.071"W	605.01	249.398	2.19	
5325.00	19.560	256.540	5233.51	-9.00	-214.81	-574.53	1678600.89	14319027.16	39°25'52.945"N	80°51'53.176"W	613.37	249.499	1.50	
5350.00	19.510	255.940	5257.07	-8.14	-216.80	-582.65	1678592.77	14319025.17	39°25'52.926"N	80°51'53.280"W	621.68	249.590	0.83	
5375.00	19.820	256.140	5280.62	-7.30	-218.83	-590.81	1678584.61	14319023.14	39°25'52.906"N	80°51'53.384"W	630.04	249.676	1.27	
5400.00	20.760	256.930	5304.06	-5.37	-220.85	-599.24	1678576.19	14319021.13	39°25'52.886"N	80°51'53.491"W	638.65	249.769	3.92	
5425.00	22.210	257.500	5327.33	-5.27	-222.87	-608.17	1678567.26	14319019.10	39°25'52.866"N	80°51'53.605"W	647.73	249.874	5.86	
5450.00	23.350	257.600	5350.38	-4.05	-224.96	-617.63	1678557.81	14319017.02	39°25'52.846"N	80°51'53.725"W	657.32	249.987	4.56	
5475.00	23.600	257.300	5373.31	-2.82	-227.13	-627.35	1678548.09	14319014.86	39°25'52.825"N	80°51'53.849"W	667.19	250.098	1.11	
5500.00	23.270	256.900	5396.25	-1.65	-229.34	-637.04	1678538.41	14319012.64	39°25'52.803"N	80°51'53.973"W	677.06	250.200	1.47	
5525.00	22.820	256.770	5419.25	-0.54	-231.57	-646.57	1678528.88	14319010.41	39°25'52.781"N	80°51'54.094"W	686.79	250.295	1.81	
5550.00	22.200	257.500	5442.35	0.59	-233.71	-655.90	1678519.56	14319008.28	39°25'52.760"N	80°51'54.213"W	696.29	250.388	2.72	
5575.00	21.550	258.600	5465.55	1.84	-235.64	-665.01	1678510.45	14319006.35	39°25'52.741"N	80°51'54.330"W	705.52	250.489	3.07	
5600.00	20.950	258.710	5488.85	3.15	-237.42	-673.89	1678501.57	14319004.57	39°25'52.724"N	80°51'54.443"W	714.49	250.592	2.41	
5625.00	20.560	258.960	5512.22	4.45	-239.13	-682.58	1678492.88	14319002.85	39°25'52.707"N	80°51'54.554"W	723.26	250.693	1.60	
5650.00	21.010	260.200	5535.60	5.88	-240.74	-691.31	1678484.16	14319001.25	39°25'52.691"N	80°51'54.665"W	732.03	250.800	2.52	
5675.00	21.700	261.940	5558.88	7.58	-242.15	-700.30	1678475.17	14318999.84	39°25'52.677"N	80°51'54.779"W	740.99	250.926	3.75	
5700.00	22.490	263.540	5582.04	9.60	-243.33	-709.63	1678465.84	14318998.65	39°25'52.666"N	80°51'54.898"W	750.19	251.073	3.97	
5725.00	23.050	264.300	5605.10	11.87	-244.36	-719.25	1678456.23	14318997.63	39°25'52.656"N	80°51'55.021"W	759.63	251.235	2.53	
5750.00	22.980	264.350	5628.11	14.23	-245.32	-728.98	1678446.50	14318996.66	39°25'52.646"N	80°51'55.145"W	769.15	251.400	0.29	
5775.00	22.440	264.200	5651.17	16.56	-246.29	-738.58	1678436.90	14318995.70	39°25'52.637"N	80°51'55.267"W	778.56	251.559	2.17	
5800.00	21.960	264.010	5674.31	18.80	-247.26	-747.98	1678427.51	14318994.73	39°25'52.627"N	80°51'55.387"W	787.79	251.708	1.94	
5825.00	21.550	263.840	5697.53	20.98	-248.24	-757.19	1678418.30	14318993.75	39°25'52.618"N	80°51'55.505"W	796.84	251.849	1.66	
5850.00	21.040	263.940	5720.83	23.11	-249.20	-766.22	1678409.28	14318992.79	39°25'52.608"N	80°51'55.620"W	805.73	251.983	2.05	
5875.00	20.560	263.960	5744.20	25.20	-250.14	-775.05	1678400.45	14318991.85	39°25'52.599"N	80°51'55.732"W	814.41	252.113	1.92	
5900.00	20.100	263.950	5767.64	27.24	-251.05	-783.68	1678391.82	14318990.94	39°25'52.590"N	80°51'55.842"W	822.92	252.237	1.84	
5901.87	20.070	263.950	5769.40	27.39	-251.12	-784.32	1678391.18	14318990.87	39°25'52.590"N	80°51'55.850"W	823.54	252.246	1.60	
6030.00	19.470	261.480	5889.97	36.69	-256.60	-827.30	1678348.22	14318985.39	39°25'52.536"N	80°51'56.398"W	866.19	252.768	0.80	BHI AT Curve [SS+MSA] <8-1/2"> (5901.87')(6030'-14984')
6119.00	20.000	261.640	5973.75	42.54	-261.01	-857.03	1678318.50	14318980.98	39°25'52.493"N	80°51'56.777"W	895.90	253.062	0.60	
6209.00	21.750	275.940	6057.89	52.77	-261.53	-888.87	1678286.68	14318980.47	39°25'52.488"N	80°51'57.183"W	926.54	253.605	5.97	
6254.00	23.490	287.140	6099.45	61.75	-268.02	-905.74	1678269.61	14318983.98	39°25'52.523"N	80°51'57.398"W	941.77	254.099	10.31	



Actual Wellpath Report
 Jug Unit 1H AWP Proj.: 15034'
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Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Date Pad
Slot	Slot #07
Well	Jug Unit 1H
Wellbore	Jug Unit 1H AWP

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Comments
6298.00	292.850	6139.38	73.56	-251.67	-923.06	167852.50	14318990.33	39°25'52.56"N	80°51'57.61"W	956.76	254.749	8.15		
6343.00	29.990	6179.08	88.21	-243.01	-942.39	167823.18	14318998.97	39°25'52.67"N	80°51'57.86"W	973.21	255.540	8.87		
6388.00	33.640	6217.32	105.47	-232.23	-963.50	1678212.08	14319009.75	39°25'52.77"N	80°51'58.133"W	991.09	256.449	9.06		
6433.00	37.300	6263.97	126.53	-218.95	-985.97	1678189.62	14319023.03	39°25'52.91"N	80°51'58.420"W	1009.99	257.480	9.36		
6478.00	41.250	6305.310	148.43	-203.08	-1009.61	1678165.98	14319038.89	39°25'53.068"N	80°51'58.721"W	1029.83	258.627	9.74		
6516.00†	45.229	6316.48	170.01	-187.65	-1030.57	1678145.03	14319054.31	39°25'53.221"N	80°51'58.987"W	1047.51	259.680	11.09	Middlesex- 6516 MD	
6522.00	45.860	6320.68	173.61	-185.05	-1033.97	1678141.64	14319056.92	39°25'53.246"N	80°51'59.031"W	1050.39	259.853	11.09		
6567.00	50.490	6350.71	202.16	-164.04	-1060.06	1678115.55	14319077.91	39°25'53.454"N	80°51'59.363"W	1072.68	261.203	10.79		
6612.00	54.480	6378.13	233.21	-140.71	-1087.03	1678088.59	14319101.23	39°25'53.665"N	80°51'59.706"W	1096.10	262.624	9.59		
6657.00	56.600	6403.60	265.85	-116.81	-1114.62	1678061.01	14319126.03	39°25'53.931"N	80°52'00.057"W	1120.63	264.063	4.78		
6677.00†	58.213	6414.37	280.73	-104.56	-1127.08	1678048.56	14319137.37	39°25'54.043"N	80°52'00.216"W	1131.92	264.700	8.19	Burkett- 6677 MD	
6701.00	60.150	6426.66	298.99	-90.58	-1142.22	1678033.43	14319151.35	39°25'54.182"N	80°52'00.408"W	1145.81	265.466	8.19		
6734.00†	63.961	6442.13	325.02	-70.47	-1163.31	1678012.34	14319171.45	39°25'54.381"N	80°52'00.677"W	1165.45	266.534	12.16	Tully- 6734 MD	
6746.00	65.350	6447.26	334.79	-62.85	-1171.04	1678004.62	14319179.06	39°25'54.456"N	80°52'00.775"W	1172.72	266.928	12.16		
6831.00†	74.965	6476.36	408.16	-4.26	-1225.10	1677950.58	14319237.63	39°25'55.036"N	80°52'01.463"W	1225.11	269.801	14.80	Marcellus- 6831 MD	
6835.00	75.460	6477.39	411.80	-1.27	-1227.56	1677948.13	14319240.62	39°25'55.066"N	80°52'01.494"W	1227.56	269.941	14.80		
6880.00	79.580	6487.09	453.87	34.10	-1253.57	1677922.12	14319275.98	39°25'55.416"N	80°52'01.825"W	1254.04	271.558	15.43		
6925.00	83.330	6493.75	497.49	72.26	-1276.43	1677899.27	14319314.13	39°25'55.793"N	80°52'02.116"W	1278.47	273.240	14.02		
6952.00	89.930	6498.99	565.96	153.37	-1312.35	1677863.36	14319395.20	39°25'56.595"N	80°52'02.572"W	1321.28	276.666	12.40		
7014.00	89.930	6498.99	565.96	153.37	-1312.35	1677863.36	14319395.20	39°25'56.595"N	80°52'02.572"W	1321.28	276.666	12.40		
7104.00	89.810	6499.19	675.95	238.33	-1342.05	1677833.67	14319480.12	39°25'57.435"N	80°52'02.949"W	1363.05	280.070	0.46		
7194.00	89.990	6499.35	765.95	323.28	-1371.76	1677803.98	14319565.04	39°25'58.275"N	80°52'03.326"W	1409.34	283.261	0.50		
7283.00	90.140	6499.25	854.92	407.77	-1399.71	1677776.04	14319649.50	39°25'59.111"N	80°52'03.681"W	1457.90	286.242	2.65		
7373.00	90.450	6498.79	944.84	493.70	-1426.48	1677749.28	14319735.39	39°25'59.961"N	80°52'04.020"W	1509.50	289.091	0.51		
7462.00	90.760	6497.85	1033.82	577.87	-1455.36	1677720.41	14319819.53	39°26'00.793"N	80°52'04.387"W	1565.89	291.656	3.32		
7552.00	90.760	6496.65	1123.66	660.85	-1490.12	1677685.66	14319902.47	39°26'01.614"N	80°52'04.828"W	1630.09	293.917	5.16		
7641.00	90.570	6495.62	1212.28	741.57	-1527.58	1677648.22	14319983.17	39°26'02.412"N	80°52'05.304"W	1698.07	295.895	0.41		
7730.00	90.660	6494.66	1301.13	823.66	-1561.91	1677613.90	14320065.22	39°26'03.224"N	80°52'05.740"W	1765.78	297.905	4.60		
7820.00	91.090	6493.29	1391.11	907.96	-1593.40	1677582.43	14320149.49	39°26'04.057"N	80°52'06.140"W	1833.93	299.676	0.61		
7910.00	90.900	6491.73	1480.92	990.80	-1628.47	1677547.37	14320232.29	39°26'04.877"N	80°52'06.585"W	1906.20	301.317	5.86		

† = interpolated/extrapolated station



Actual Wellpath Report
 Jug Unit 1H AWP Proj: 15034
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Date Pad
Well	Jug Unit 1H
Wellbore	Jug Unit 1H AWP
Slot	Slot #07

WELLPATH DATA (350 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Comments
7999.00	91.000	337.140	6490.25	1569.62	1071.95	-1664.97	167510.89	14320313.41	39°26'05.679"N	80°52'07.049"W	1980.20	302.774	3.06	
8089.00	91.050	339.070	6488.63	1659.53	1155.44	-1698.53	1677477.34	14320396.86	39°26'06.505"N	80°52'07.475"W	2054.27	304.226	2.15	
8178.00	91.000	345.210	6487.03	1748.43	1240.09	-1725.80	1677450.08	14320481.49	39°26'07.342"N	80°52'07.821"W	2125.14	305.700	6.90	
8268.00	91.350	351.540	6485.18	1837.48	1328.18	-1743.93	1677431.96	14320569.54	39°26'08.213"N	80°52'08.051"W	2192.11	307.293	7.04	
8357.00	91.090	349.300	6483.27	1925.08	1415.92	-1756.73	1677417.16	14320657.24	39°26'09.080"N	80°52'08.238"W	2257.87	308.837	2.53	
8447.00	91.330	345.420	6481.37	2014.37	1503.70	-1778.42	1677397.48	14320744.99	39°26'09.948"N	80°52'08.487"W	2328.92	310.215	4.32	
8536.00	90.780	342.990	6479.73	2103.15	1589.32	-1802.64	1677373.27	14320830.57	39°26'10.794"N	80°52'08.794"W	2403.21	311.401	2.80	
8626.00	90.990	341.160	6478.34	2193.09	1674.84	-1830.33	1677345.59	14320916.15	39°26'11.641"N	80°52'09.145"W	2481.03	312.462	2.05	
8716.00	90.710	337.700	6477.02	2282.06	1758.24	-1861.60	1677314.34	14320999.43	39°26'12.465"N	80°52'09.542"W	2560.65	313.364	3.90	
8805.00	90.680	337.200	6475.93	2371.93	1841.35	-1896.11	1677279.84	14321082.50	39°26'13.287"N	80°52'09.981"W	2643.07	314.161	0.56	
8894.00	90.780	335.230	6474.80	2460.79	1923.39	-1930.60	1677245.36	14321164.51	39°26'14.098"N	80°52'10.419"W	2725.19	314.893	0.11	
8984.00	90.840	335.230	6473.52	2550.55	2005.73	-1966.90	1677209.08	14321246.82	39°26'14.912"N	80°52'10.880"W	2809.21	315.560	2.18	
9074.00	90.680	331.940	6472.33	2639.90	2086.31	-2006.93	1677169.06	14321327.37	39°26'15.709"N	80°52'11.389"W	2894.90	316.111	3.66	
9163.00	90.500	332.260	6471.41	2727.98	2164.96	-2048.57	1677127.44	14321405.99	39°26'16.487"N	80°52'11.918"W	2980.56	316.582	0.41	
9252.00	90.470	340.660	6470.66	2816.37	2244.73	-2088.01	1677088.01	14321485.73	39°26'17.276"N	80°52'12.419"W	3065.72	317.072	3.21	
9342.00	90.410	341.730	6469.97	2906.26	2328.38	-2121.09	1677054.95	14321569.34	39°26'18.104"N	80°52'12.839"W	3149.66	317.667	7.34	
9432.00	90.470	346.330	6469.28	2996.05	2414.88	-2145.85	1677030.20	14321655.80	39°26'18.959"N	80°52'13.153"W	3230.53	318.376	5.11	
9521.00	90.440	344.270	6468.57	3084.71	2500.96	-2166.43	1677007.63	14321741.85	39°26'19.810"N	80°52'13.439"W	3310.12	319.073	2.31	
9611.00	90.220	340.830	6468.05	3174.63	2586.80	-2195.41	1676980.66	14321827.66	39°26'20.659"N	80°52'13.782"W	3392.84	319.679	3.83	
9700.00	90.440	337.760	6467.54	3263.60	2670.04	-2226.87	1676949.21	14321910.86	39°26'21.482"N	80°52'14.181"W	3476.79	320.171	3.46	
9790.00	89.570	339.940	6467.53	3353.56	2753.98	-2259.34	1676916.75	14321994.76	39°26'22.312"N	80°52'14.593"W	3562.16	320.635	2.61	
9880.00	90.100	344.940	6467.79	3443.47	2839.75	-2286.49	1676889.62	14322080.51	39°26'23.160"N	80°52'14.938"W	3645.85	321.160	5.59	
9969.00	90.000	347.760	6467.71	3531.98	2926.23	-2307.49	1676868.62	14322166.95	39°26'24.015"N	80°52'15.204"W	3726.57	321.742	3.17	
10059.00	89.880	346.640	6467.81	3621.33	3013.99	-2327.43	1676848.69	14322254.68	39°26'24.883"N	80°52'15.456"W	3808.03	322.324	1.25	
10149.00	90.710	344.810	6467.34	3710.93	3101.21	-2349.62	1676826.51	14322341.86	39°26'25.745"N	80°52'15.738"W	3890.78	322.851	2.23	
10238.00	91.420	341.760	6465.69	3799.78	3186.42	-2375.21	1676800.93	14322427.04	39°26'26.588"N	80°52'16.062"W	3974.28	323.299	3.52	
10328.00	90.100	335.460	6464.49	3889.69	3270.17	-2408.01	1676768.14	14322510.75	39°26'27.416"N	80°52'16.479"W	4061.10	323.634	7.15	
10418.00	89.970	334.620	6464.44	3979.30	3351.77	-2445.99	1676730.18	14322592.31	39°26'28.223"N	80°52'16.962"W	4149.36	323.879	0.94	
10507.00	90.160	338.580	6464.34	4066.09	3433.43	-2481.33	1676694.85	14322673.94	39°26'29.030"N	80°52'17.410"W	4236.21	324.144	4.45	
10597.00	90.130	343.360	6464.11	4158.06	3518.49	-2510.67	1676665.53	14322758.97	39°26'29.871"N	80°52'17.833"W	4322.41	324.490	5.31	



Actual Wellpath Report

Jug Unit 1H AWP Proj: 15034



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Tyler County, WV	Well	Jug Unit 1H
Field	Tyler	Wellbore	Jug Unit 1H AWP
Facility	Date Pad		

WELLPATH DATA (350 stations)												
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Comments
10686.00	90.250	342.750	6463.81	4246.96	3603.62	-2536.61	1676639.60	14322844.07	39°26'30.713"N	80°52'18.112"W	4406.87	J1190M
10776.00	90.100	341.730	6463.54	4336.91	3689.33	-2564.06	1676612.16	14322929.74	39°26'31.561"N	80°52'18.460"W	4492.83	
10865.00	90.160	340.280	6463.34	4425.90	3773.48	-2593.03	1676583.20	14323013.86	39°26'32.393"N	80°52'18.828"W	4578.53	
10955.00	90.190	339.140	6463.06	4515.89	3857.89	-2624.24	1676552.00	14323098.24	39°26'33.228"N	80°52'19.224"W	4665.83	
11044.00	90.030	336.080	6462.89	4604.78	3940.18	-2658.13	1676518.12	14323180.49	39°26'34.041"N	80°52'19.655"W	4752.96	
11134.00	90.190	335.420	6462.72	4694.49	4022.23	-2695.10	1676481.17	14323262.51	39°26'34.853"N	80°52'20.125"W	4841.68	
11223.00	90.100	336.620	6462.49	4783.24	4103.55	-2731.27	1676445.02	14323343.80	39°26'35.675"N	80°52'20.584"W	4929.40	
11313.00	90.160	340.780	6462.29	4873.18	4187.38	-2763.95	1676412.34	14323427.60	39°26'36.486"N	80°52'20.999"W	5017.33	
11403.00	90.160	344.030	6462.04	4963.11	4273.16	-2791.15	1676385.15	14323513.34	39°26'37.334"N	80°52'21.344"W	5103.96	
11492.00	90.280	341.790	6461.70	5052.01	4358.23	-2817.31	1676359.01	14323598.37	39°26'38.175"N	80°52'21.676"W	5189.54	
11582.00	90.160	341.140	6461.35	5141.67	4445.10	-2840.64	1676335.68	14323683.21	39°26'39.034"N	80°52'21.972"W	5275.24	
11671.00	90.370	348.050	6460.94	5229.86	4532.18	-2859.00	1676317.33	14323772.26	39°26'39.895"N	80°52'22.205"W	5358.60	
11761.00	90.590	342.490	6460.18	5319.49	4619.19	-2881.88	1676294.47	14323859.23	39°26'40.755"N	80°52'22.495"W	5444.46	
11850.00	90.160	340.090	6459.80	5408.47	4703.48	-2910.42	1676265.93	14323943.48	39°26'41.589"N	80°52'22.857"W	5531.12	
11940.00	90.470	341.010	6459.11	5488.46	4788.34	-2940.39	1676240.28	14324028.31	39°26'42.428"N	80°52'23.237"W	5619.08	
12029.00	89.940	338.150	6458.79	5587.45	4871.74	-2971.44	1676204.94	14324111.68	39°26'43.253"N	80°52'23.632"W	5706.42	
12119.00	89.790	336.460	6459.00	5677.32	4954.76	-3006.16	1676170.23	14324194.67	39°26'44.074"N	80°52'24.073"W	5795.40	
12209.00	89.670	337.060	6459.42	5767.14	5037.46	-3041.67	1676134.73	14324277.33	39°26'44.892"N	80°52'24.524"W	5884.54	
12298.00	89.640	337.960	6459.96	5856.03	5119.69	-3075.72	1676100.70	14324359.53	39°26'45.705"N	80°52'24.956"W	5972.54	
12388.00	89.730	339.790	6460.45	5945.99	5203.64	-3108.15	1676068.28	14324443.44	39°26'46.535"N	80°52'25.368"W	6061.22	
12477.00	89.600	340.900	6460.98	6034.99	5287.45	-3138.09	1676038.36	14324527.22	39°26'47.364"N	80°52'25.748"W	6148.55	
12567.00	89.480	339.930	6461.70	6124.99	5372.24	-3168.25	1676008.20	14324611.98	39°26'48.202"N	80°52'26.131"W	6236.89	
12656.00	89.390	340.100	6462.58	6213.98	5455.87	-3198.67	1675977.80	14324695.58	39°26'49.029"N	80°52'26.518"W	6324.40	
12746.00	89.420	342.020	6463.51	6303.97	5540.99	-3227.88	1675948.60	14324780.66	39°26'49.871"N	80°52'26.899"W	6412.63	
12835.00	89.480	340.610	6464.36	6392.95	5625.30	-3256.39	1675920.10	14324864.93	39°26'50.704"N	80°52'27.250"W	6499.85	
12925.00	89.480	338.320	6465.18	6482.93	5709.57	-3287.96	1675888.55	14324949.17	39°26'51.538"N	80°52'27.651"W	6588.61	
13014.00	89.480	338.580	6465.99	6571.87	5792.35	-3320.64	1675855.88	14325031.92	39°26'52.356"N	80°52'28.066"W	6676.67	
13104.00	89.300	343.010	6466.95	6661.84	5877.31	-3350.23	1675826.30	14325116.85	39°26'53.196"N	80°52'28.442"W	6765.12	
13194.00	89.670	6750.82	5961.40	-3379.33	167579.33	1675764.12	14325200.90	14325200.90	39°26'54.028"N	80°52'28.812"W	6852.60	
13283.00	89.630	338.020	6468.30	6840.76	6045.08	-3412.44	1675764.12	14325284.55	39°26'54.855"N	80°52'29.232"W	6941.74	



Actual Wellpath Report

Jug Unit 1H AWP Proj: 15034'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Tyler County, WV	Well	Jug Unit 1H
Field	Tyler	Wellbore	Jug Unit 1H AWB
Facility	Date Pad		

WELLPATH DATA (350 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)	Comments
13372.00	89.700	339.930	6468.82	6928.73	6128.16	-3444.36	1675732.20	14325367.59	39°26'55.677"N	80°52'29.638"W	7029.79	330.662	2.15	
13462.00	89.670	341.880	6469.31	7019.72	6213.20	-3473.81	1675702.78	14325452.60	39°26'56.518"N	80°52'30.011"W	7118.37	330.790	2.17	
13551.00	89.700	341.890	6469.80	7108.69	6297.78	-3501.48	1675675.11	14325537.15	39°26'57.354"N	80°52'30.363"W	7205.72	330.927	0.04	
13641.00	89.730	341.720	6470.25	7198.66	6383.28	-3529.58	1675647.02	14325622.62	39°26'58.200"N	80°52'30.719"W	7294.12	331.060	0.19	
13730.00	89.940	342.630	6470.51	7287.51	6468.01	-3556.82	1675619.79	14325707.31	39°26'59.037"N	80°52'31.065"W	7381.47	331.193	1.05	
13820.00	90.030	342.280	6470.53	7377.55	6553.82	-3583.95	1675592.67	14325793.09	39°26'59.896"N	80°52'31.410"W	7469.76	331.328	0.40	
13909.00	89.970	339.610	6470.53	7466.54	6637.94	-3613.01	1675563.63	14325877.17	39°27'00.718"N	80°52'31.776"W	7557.51	331.441	3.00	
13998.00	89.970	337.890	6470.58	7556.50	6721.81	-3645.63	1675531.02	14325961.01	39°27'01.547"N	80°52'32.193"W	7646.79	331.526	1.91	
14088.00	89.970	339.260	6470.62	7645.45	6804.66	-3678.14	1675498.53	14326043.83	39°27'02.366"N	80°52'32.606"W	7735.12	331.607	1.54	
14178.00	89.970	339.490	6470.67	7735.44	6888.89	-3709.84	1675466.84	14326128.03	39°27'03.199"N	80°52'33.008"W	7824.31	331.696	0.26	
14267.00	89.970	339.260	6470.72	7824.43	6972.19	-3741.19	1675435.50	14326211.29	39°27'04.023"N	80°52'33.407"W	7912.52	331.783	0.26	
14357.00	89.940	340.350	6470.79	7914.42	7056.66	-3772.26	1675404.44	14326295.72	39°27'04.858"N	80°52'33.801"W	8001.64	331.872	1.21	
14446.00	89.910	339.220	6470.90	8003.42	7140.17	-3803.01	1675373.70	14326379.20	39°27'05.694"N	80°52'34.192"W	8089.80	331.959	1.27	
14536.00	89.760	337.390	6471.16	8093.36	7223.79	-3836.28	1675340.45	14326462.79	39°27'06.511"N	80°52'34.514"W	8179.25	332.029	2.04	
14626.00	89.850	336.420	6471.47	8183.19	7306.58	-3871.58	1675305.16	14326545.54	39°27'07.330"N	80°52'35.063"W	8268.93	332.082	1.08	
14715.00	89.850	338.960	6471.70	8272.09	7388.91	-3905.36	1675271.39	14326627.84	39°27'08.144"N	80°52'35.492"W	8357.50	332.142	2.85	
14805.00	89.850	341.560	6471.94	8362.08	7473.61	-3935.76	1675241.01	14326712.51	39°27'08.981"N	80°52'35.878"W	8446.60	332.228	2.89	
14894.00	90.000	343.520	6472.06	8451.01	7558.51	-3962.46	1675214.32	14326797.37	39°27'09.821"N	80°52'36.217"W	8534.17	332.335	2.21	
14984.00	89.940	346.190	6472.10	8540.72	7645.37	-3985.97	1675190.81	14326884.20	39°27'10.680"N	80°52'36.515"W	8622.05	332.464	2.97	
15034.00	89.940	346.190	6472.15	8590.46	7693.93	-3997.91	1675178.88	14326932.74	39°27'11.160"N	80°52'36.667"W	8670.63	332.543	0.00	Projected MD at TD: 15034'



Actual Wellpath Report

Jug Unit 1H AWP Proj: 15034'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Tyler County, WV	Well	Jug Unit 1H
Field	Tyler	Wellbore	Jug Unit 1H AWB
Facility	Dale Pad		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Jug Unit 1H POE - Plat	6476.00	1.41	-1217.88	1677957.79	14319243.30	39°25'55.092"N	80°52'01.371"W	point
Jug Unit 1H BHL Rev-1	6498.00	7726.32	-4009.82	1675166.97	14326965.12	39°27'11.480"N	80°52'36.818"W	point
Jug Unit 1H LP Rev-1	6498.00	173.61	-1311.43	1677864.28	14319415.43	39°25'56.795"N	80°52'02.560"W	point
Jug Unit 1H 20' Hardline	6550.00	3949.97	-2660.63	1676515.63	14323190.28	39°26'34.138"N	80°52'19.686"W	rectangle

WELLPATH COMPOSITION - Ref Wellbore: Jug Unit 1H AWB Ref Wellpath: Jug Unit 1H AWP Proj: 15034'				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
19.00	5901.87	SDI Keeper v1.04	01 SDI Std. Keeper Gyro (100'-5901.87')	Jug Unit 1H AWB
5901.87	14984.00	BHI AutoTrak Curve (Short)	02 BHI AT Curve [SS+MSA] <8-1/2"> (5901.87')(6030'-14984')	Jug Unit 1H AWB
14984.00	15034.00	Blind Drilling (std)	Projection to bit	Jug Unit 1H AWB



Actual Wellpath Report

Jug Unit 1H AWP Proj: 15034'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Tyler County, WV	Well	Jug Unit 1H
Field	Tyler	Wellbore	Jug Unit 1H AWB
Facility	Dale Pad		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
100.00	0.040	144.690	100.00	SDI Std. Keeper Gyro (100'-5901.87')
6030.00	19.470	261.480	5889.97	BHI AT Curve [SS+MSA] <8-1/2"> (5901.87')(6030'-14984')
6516.00	45.229	307.336	6316.48	Middlesex: 6516' MD
6677.00	58.213	312.513	6414.37	Burkett: 6677' MD
6734.00	63.961	314.335	6442.13	Tully: 6734' MD
6831.00	74.965	320.475	6476.36	Marcellus: 6831' MD
15034.00	89.940	346.190	6472.15	Projected MD at TD: 15034'

COMMENTS
<p>Wellpath general comments</p> <p>API #: 47-950-22650-0000</p> <p>BHI Job #: 7966479</p> <p>Rig: PD 523</p> <p>Duration: 05.16.2016-05.19.2016</p> <p>SDI Std. Keeper Gyro (100'-5901.87')</p> <p>BHI AT Curve [SS+MSA] <8-1/2"> (5901.87')(6030'-14984')</p> <p>Middlesex: 6516' MD</p> <p>Burkett: 6677' MD</p> <p>Tully: 6734' MD</p> <p>Marcellus: 6831' MD</p> <p>Projected MD at TD: 15034'</p>