



ANTERO RESOURCES CORPORATION

Location: Ritchie County, WV
 Field: Ritchie
 Facility: Buck Run Pad

Slot: Slot #02
 Well: Deem Unit 2H
 Wellbore: Deem Unit 2H PWB

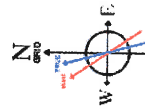


Plot reference wellpath is Deem Unit 2H PWP Rev-A-0	
Grid System:	NAD27/UTM Zone 17 North, US feet
True vertical depths are referenced to Patterson 343 (RKB)	
Measured depths are referenced to Patterson 343 (RKB)	
North Reference: Grid north	
Patterson 343 (RKB) to Mean Sea Level: 1152 feet	
Scale: True distance	
Mean Sea Level to Mud line (At Slot #02): -1127 feet	
Depths are in feet	
Coordinates are in feet referenced to Slot	
Created by: hareluik on 15/Mar/2016	

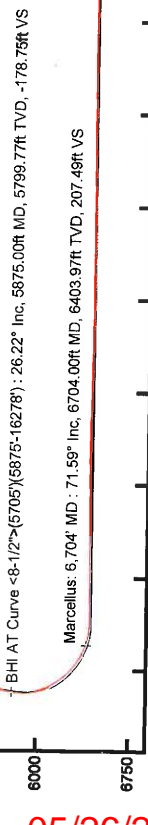
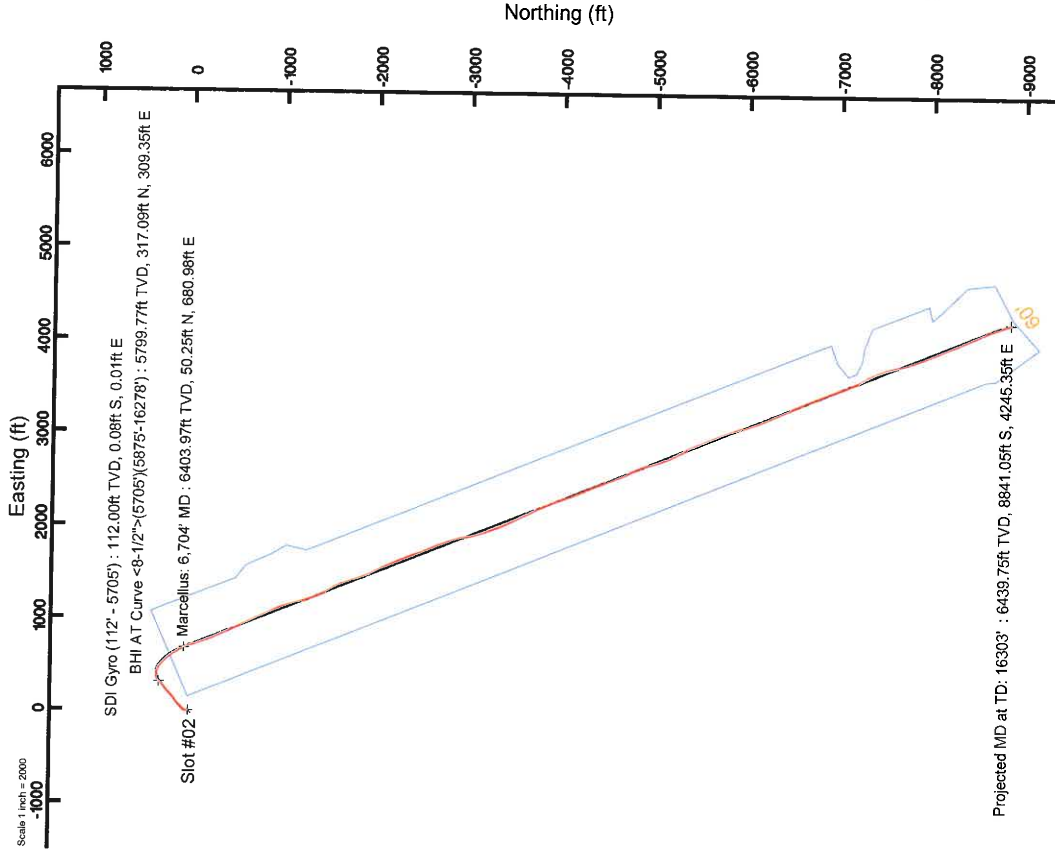
Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
Buck Run Pad	1655300.580	14276984.620	80°56'50.552"W
Slot	Local N (ft)	Local E (ft)	Latitude
Slot #02	-6.17	-7.88	39°18'57.280"N
Comment	Deem Unit 2H	Deem Unit 2H	Longitude
			80°5'50.652"W
Patterson 343 (RKB) to Mud line (At Slot #02)			
			25ft
Mean Sea Level to Mud line (At Slot #02)			
			-1127ft
Patterson 343 (RKB) to Mean Sea Level			
			1152ft

Well Data			
Slot	Well	Wellbore	Wellbath
Slot #02	Deem Unit 2H	Deem Unit 2H PWB	Deem Unit 2H AWP Proj: 16303
Slot #02	Deem Unit 2H	Deem Unit 2H PWB	Deem Unit 2H PWP Rev-A-0

API: 47-085-10269-0000
 BHI Job #: 7829562
 Rig: Patterson 343
 Duration: 03.03.2016-03.07.2016



BGSM (1945.0 to 2017.0) Dis: 60.74° Field: 62000.7° T
 Magnetic North is 6.43 degrees West of True North (at 2016-03-07)
 Grid North is 0.03 degrees East of True North
 To convert azimuth from Magnetic to Grid add/subtract 8.46 degrees



05/26/2017

Azimuth 158.09° with reference 0.00 N, 0.00 E



Actual Wellpath Report

Deem Unit 2H AWP Proj: 16303'
Page 1 of 15



REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Area	Ritchie County, WV
Field	Ritchie
Facility	Buck Run Pad
Slot	Slot #02
Well	Deem Unit 2H
Wellbore	Deem Unit 2H AWB

REPORT SETUP INFORMATION	
Projection System	NAD27 / UTM Zone 17 North, US feet
North Reference	Grid
Scale	0.9996
Convergence at slot	0.03° East
Software System	WellArchitect® 4.0.1
User	Hareluk
Report Generated	15/Mar/2016 at 10:43
Database/Source file	WA_MPL_EASTERNUS_Defn/Deem_Unit_2H_AWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-6.17	-7.86	1655292.72	14276958.45	39° 18' 57.229" N	80° 56' 50.652" W
Facility Reference Pt			1655300.58	14276964.62	39° 18' 57.290" N	80° 56' 50.552" W
Field Reference Pt			0.00	0.00	0° 00' 00.000" N	85° 29' 19.301" W

WELLPATH DATUM	
Calculation method	Minimum curvature
Horizontal Reference Pt	Slot
Vertical Reference Pt	Patterson 343 (RKB)
MD Reference Pt	Patterson 343 (RKB)
Field Vertical Reference	Mean Sea Level
	Patterson 343 (RKB) to Facility Vertical Datum
	Patterson 343 (RKB) to Mean Sea Level
	Patterson 343 (RKB) to Mud Line at Slot (Slot #02)
	Section Origin
	Section Azimuth
	25.00ft
	1152.00ft
	25.00ft
	N 0.00, E 0.00 ft
	158.09°



Actual Wellpath Report

Deem Unit 2H AWP Proj: 16303'
Page 2 of 15



REFERENCE WELLPATH IDENTIFICATION

Operator	Area	Field	Facility	Slot	Slot #02
ANTERO RESOURCES CORPORATION	Ritchie County, WV	Ritchie	Buck Run Pad	Well	Deem Unit 2H
				Wellbore	Deem Unit 2H AWB

WELLPATH DATA (354 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	VertSect [ft]	North [ft]	East [ft]	Grid East [ft]	Grid North [ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [1/100ft]	Comments
0.00†	0.000	173.890	0.00	0.00	0.00	0.00	1655292.72	14276958.45	39°18'57.229"N	80°56'50.652"W	0.00	0.000	0.00	
25.00	0.000	173.890	25.00	0.00	0.00	0.00	1655292.72	14276958.45	39°18'57.229"N	80°56'50.652"W	0.00	0.000	0.00	
112.00	0.100	173.890	112.00	0.07	-0.08	0.01	1655292.73	14276958.37	39°18'57.228"N	80°56'50.652"W	0.08	173.890	0.11	SDI Gyro (112° - 5705°)
137.00	0.070	141.610	137.00	0.11	-0.11	0.02	1655292.74	14276958.34	39°18'57.228"N	80°56'50.652"W	0.11	169.674	0.22	
162.00	0.080	187.120	162.00	0.14	-0.14	0.03	1655292.75	14276958.31	39°18'57.228"N	80°56'50.652"W	0.14	168.882	0.23	
187.00	0.100	174.850	187.00	0.17	-0.18	0.03	1655292.75	14276958.27	39°18'57.227"N	80°56'50.652"W	0.18	171.350	0.11	
212.00	0.080	203.070	212.00	0.21	-0.22	0.02	1655292.74	14276958.23	39°18'57.227"N	80°56'50.652"W	0.22	174.133	0.19	
237.00	0.110	221.660	237.00	0.23	-0.25	0.00	1655292.72	14276958.20	39°18'57.227"N	80°56'50.652"W	0.25	180.154	0.17	
262.00	0.040	236.480	262.00	0.24	-0.27	-0.02	1655292.70	14276958.18	39°18'57.226"N	80°56'50.652"W	0.27	185.021	0.29	
287.00	0.070	206.940	287.00	0.26	-0.29	-0.04	1655292.68	14276958.16	39°18'57.226"N	80°56'50.653"W	0.29	187.472	0.16	
312.00	0.040	207.460	312.00	0.27	-0.31	-0.05	1655292.67	14276958.14	39°18'57.226"N	80°56'50.653"W	0.32	188.937	0.12	
337.00	0.040	195.000	337.00	0.28	-0.33	-0.06	1655292.66	14276958.12	39°18'57.226"N	80°56'50.653"W	0.33	189.573	0.03	
362.00	0.080	155.920	362.00	0.31	-0.35	-0.05	1655292.67	14276958.10	39°18'57.226"N	80°56'50.653"W	0.36	188.149	0.22	
387.00	0.070	144.850	387.00	0.34	-0.38	-0.03	1655292.69	14276958.07	39°18'57.225"N	80°56'50.653"W	0.38	185.183	0.07	
412.00	0.140	151.090	412.00	0.39	-0.42	-0.01	1655292.71	14276958.03	39°18'57.225"N	80°56'50.652"W	0.42	181.498	0.28	
437.00	0.140	140.740	437.00	0.45	-0.47	0.02	1655292.74	14276957.98	39°18'57.224"N	80°56'50.652"W	0.47	177.187	0.10	
462.00	0.120	154.260	462.00	0.50	-0.52	0.05	1655292.77	14276957.93	39°18'57.224"N	80°56'50.651"W	0.52	174.065	0.15	
487.00	0.070	166.060	487.00	0.54	-0.56	0.07	1655292.79	14276957.89	39°18'57.224"N	80°56'50.651"W	0.56	172.940	0.21	
512.00	0.070	133.250	512.00	0.57	-0.58	0.08	1655292.80	14276957.87	39°18'57.223"N	80°56'50.651"W	0.59	171.810	0.16	
537.00	0.080	116.200	537.00	0.60	-0.60	0.11	1655292.83	14276957.85	39°18'57.223"N	80°56'50.651"W	0.61	169.561	0.10	
562.00	0.090	52.910	562.00	0.61	-0.60	0.14	1655292.86	14276957.85	39°18'57.223"N	80°56'50.650"W	0.61	166.605	0.36	
587.00	0.460	20.230	587.00	0.53	-0.49	0.19	1655292.91	14276957.96	39°18'57.224"N	80°56'50.650"W	0.53	158.562	1.55	
612.00	0.760	13.270	612.00	0.32	-0.23	0.26	1655292.98	14276958.22	39°18'57.227"N	80°56'50.649"W	0.35	131.430	1.23	
637.00	1.040	5.370	636.99	-0.02	0.15	0.32	1655293.04	14276958.60	39°18'57.231"N	80°56'50.648"W	0.36	64.665	1.22	
662.00	1.450	0.560	661.99	-0.52	0.70	0.35	1655293.07	14276959.15	39°18'57.236"N	80°56'50.648"W	0.78	26.610	1.69	
687.00	2.030	355.580	686.98	-1.23	1.45	0.32	1655293.04	14276959.90	39°18'57.243"N	80°56'50.648"W	1.49	12.322	2.40	
712.00	2.540	355.930	711.96	-2.18	2.45	0.24	1655292.96	14276960.90	39°18'57.233"N	80°56'50.649"W	2.46	5.694	2.04	
737.00	2.770	356.230	736.93	-3.28	3.60	0.16	1655292.88	14276962.05	39°18'57.265"N	80°56'50.650"W	3.61	2.622	0.92	
762.00	3.280	357.000	761.90	-4.53	4.92	0.09	1655292.81	14276963.37	39°18'57.278"N	80°56'50.651"W	4.92	1.023	2.05	
787.00	3.900	358.140	786.85	-6.01	6.48	0.02	1655292.74	14276964.93	39°18'57.293"N	80°56'50.652"W	6.48	0.202	2.50	



Actual Wellpath Report

Deem Unit 2H AWP Proj: 16303'
Page 3 of 15



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Ritchie County, WV	Well	Deem Unit 2H
Field	Ritchie	Wellbore	
Facility	Buck Run Pad		

WELLPATH DATA (354 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
812.00	4.410	356.890	811.78	-7.72	8.29	-0.06	1655292.66	14276966.74	39°18'57.31"N	80°56'50.653"W	8.29	359.607	2.07	
837.00	4.500	355.970	836.70	-9.56	10.23	-0.18	1655292.54	14276968.68	39°18'57.330"N	80°56'50.654"W	10.23	359.003	0.46	
862.00	4.530	356.750	861.63	-11.43	12.20	-0.30	1655292.42	14276970.64	39°18'57.350"N	80°56'50.656"W	12.20	358.577	0.27	
887.00	4.500	356.010	886.55	-13.30	14.16	-0.43	1655292.29	14276972.60	39°18'57.369"N	80°56'50.657"W	14.17	358.272	0.26	
912.00	4.500	355.150	911.47	-15.17	16.11	-0.58	1655292.14	14276974.56	39°18'57.388"N	80°56'50.659"W	16.13	357.945	0.27	
937.00	4.430	355.550	936.40	-17.03	18.05	-0.74	1655291.98	14276976.50	39°18'57.408"N	80°56'50.661"W	18.07	357.665	0.31	
962.00	4.180	355.860	961.33	-18.81	19.93	-0.88	1655291.84	14276978.37	39°18'57.426"N	80°56'50.663"W	19.95	357.481	1.00	
987.00	3.960	354.680	986.26	-20.51	21.69	-1.02	1655291.70	14276980.14	39°18'57.444"N	80°56'50.665"W	21.72	357.301	0.94	
1012.00	3.720	356.280	1011.21	-22.11	23.36	-1.16	1655291.57	14276981.80	39°18'57.460"N	80°56'50.667"W	23.39	357.169	1.05	
1037.00	3.490	356.300	1036.16	-23.60	24.93	-1.26	1655291.46	14276983.37	39°18'57.476"N	80°56'50.668"W	24.96	357.114	0.92	
1062.00	3.110	356.930	1061.12	-24.96	26.37	-1.34	1655291.38	14276984.81	39°18'57.490"N	80°56'50.669"W	26.40	357.086	1.53	
1087.00	2.860	356.720	1086.08	-26.20	27.67	-1.41	1655291.31	14276986.11	39°18'57.503"N	80°56'50.670"W	27.70	357.074	1.00	
1112.00	2.620	357.840	1111.05	-27.33	28.86	-1.47	1655291.25	14276987.30	39°18'57.514"N	80°56'50.671"W	28.90	357.081	0.98	
1137.00	2.450	356.640	1136.03	-28.37	29.97	-1.52	1655291.20	14276988.40	39°18'57.525"N	80°56'50.671"W	30.01	357.088	0.71	
1162.00	2.160	358.900	1161.01	-29.32	30.97	-1.56	1655291.16	14276989.41	39°18'57.535"N	80°56'50.672"W	31.01	357.108	1.22	
1187.00	2.040	358.340	1185.99	-30.18	31.89	-1.59	1655291.13	14276990.32	39°18'57.544"N	80°56'50.672"W	31.93	357.151	0.49	
1212.00	1.820	0.960	1210.98	-30.96	32.73	-1.59	1655291.13	14276991.17	39°18'57.553"N	80°56'50.672"W	32.77	357.213	0.95	
1237.00	1.650	0.730	1235.97	-31.66	33.49	-1.58	1655291.14	14276991.92	39°18'57.560"N	80°56'50.672"W	33.52	357.295	0.68	
1262.00	1.510	3.440	1260.96	-32.29	34.17	-1.56	1655291.16	14276992.61	39°18'57.567"N	80°56'50.672"W	34.21	357.391	0.63	
1287.00	1.510	0.700	1285.95	-32.89	34.83	-1.53	1655291.19	14276993.27	39°18'57.573"N	80°56'50.671"W	34.87	357.479	0.29	
1312.00	1.250	359.110	1310.94	-33.45	35.43	-1.53	1655291.18	14276993.87	39°18'57.579"N	80°56'50.671"W	35.47	357.521	1.05	
1337.00	1.220	358.860	1335.93	-33.95	35.97	-1.54	1655291.18	14276994.41	39°18'57.585"N	80°56'50.672"W	36.01	357.543	0.12	
1362.00	1.010	353.500	1360.93	-34.41	36.46	-1.57	1655291.15	14276994.89	39°18'57.589"N	80°56'50.672"W	36.49	357.528	0.94	
1387.00	0.830	2.160	1385.93	-34.79	36.86	-1.59	1655291.13	14276995.29	39°18'57.593"N	80°56'50.672"W	36.89	357.527	0.91	
1412.00	0.700	351.260	1410.92	-35.10	37.19	-1.61	1655291.11	14276995.62	39°18'57.597"N	80°56'50.672"W	37.22	357.524	0.78	
1437.00	0.700	348.050	1435.92	-35.40	37.49	-1.66	1655291.06	14276995.92	39°18'57.600"N	80°56'50.673"W	37.53	357.460	0.16	
1462.00	0.650	352.720	1460.92	-35.69	37.78	-1.71	1655291.01	14276996.21	39°18'57.603"N	80°56'50.674"W	37.82	357.405	0.30	
1487.00	0.620	353.260	1485.92	-35.96	38.06	-1.75	1655290.97	14276996.49	39°18'57.605"N	80°56'50.674"W	38.10	357.372	0.12	
1512.00	0.580	338.010	1510.92	-36.22	38.31	-1.81	1655290.91	14276996.74	39°18'57.608"N	80°56'50.675"W	38.35	357.295	0.66	
1537.00	0.540	348.400	1535.92	-36.46	38.54	-1.88	1655290.84	14276996.97	39°18'57.610"N	80°56'50.676"W	38.59	357.206	0.44	



Actual Wellpath Report

Deem Unit 2H AWP Proj: 16303'
Page 4 of 15



REFERENCE WELLPATH IDENTIFICATION

Operator	Slot #02
ANTERO RESOURCES CORPORATION	Deem Unit 2H
Area	Well
Ritchie County, WV	Deem Unit 2H AWB
Field	Wellbore
Ritchie	
Facility	Buck Run Pad

WELLPATH DATA (354 stations)

MD ft	Inclination [°]	Azimuth [°]	TVD ft	Vert Sect ft	North ft	East ft	Grid East US ft	Grid North US ft	Latitude	Longitude	Closure Dist ft	Closure Dir [°]	DLS 1/2100ft	Comments
1562.00	0.580	355.770	1560.92	-36.69	38.78	-1.91	1655290.81	14276997.22	39°18'57.612"N	80°56'50.676"W	38.83	357.175	0.33	
1587.00	0.530	354.810	1585.91	-36.93	39.02	-1.93	1655290.79	14276997.46	39°18'57.615"N	80°56'50.676"W	39.07	357.163	0.20	
1612.00	0.450	345.780	1610.91	-37.13	39.23	-1.97	1655290.75	14276997.67	39°18'57.617"N	80°56'50.677"W	39.28	357.128	0.44	
1637.00	0.400	342.320	1635.91	-37.32	39.41	-2.02	1655290.70	14276997.85	39°18'57.619"N	80°56'50.678"W	39.46	357.068	0.22	
1662.00	0.420	341.650	1660.91	-37.50	39.58	-2.07	1655290.65	14276998.02	39°18'57.620"N	80°56'50.678"W	39.64	357.000	0.08	
1687.00	0.430	354.260	1685.91	-37.68	39.76	-2.11	1655290.61	14276998.20	39°18'57.622"N	80°56'50.679"W	39.82	356.959	0.38	
1712.00	0.420	344.450	1710.91	-37.86	39.94	-2.15	1655290.57	14276998.38	39°18'57.624"N	80°56'50.679"W	40.00	356.924	0.29	
1737.00	0.340	346.980	1735.91	-38.02	40.10	-2.19	1655290.53	14276998.54	39°18'57.625"N	80°56'50.680"W	40.16	356.878	0.33	
1762.00	0.340	344.000	1760.91	-38.17	40.25	-2.22	1655290.50	14276998.68	39°18'57.627"N	80°56'50.680"W	40.31	356.836	0.07	
1787.00	0.300	342.790	1785.91	-38.31	40.38	-2.26	1655290.46	14276998.81	39°18'57.628"N	80°56'50.681"W	40.44	356.790	0.16	
1812.00	0.290	343.490	1810.91	-38.44	40.50	-2.30	1655290.42	14276998.94	39°18'57.629"N	80°56'50.681"W	40.57	356.747	0.04	
1837.00	0.290	337.030	1835.91	-38.56	40.62	-2.34	1655290.38	14276999.06	39°18'57.631"N	80°56'50.682"W	40.69	356.697	0.13	
1862.00	0.250	348.800	1860.91	-38.68	40.73	-2.38	1655290.34	14276999.17	39°18'57.632"N	80°56'50.682"W	40.80	356.657	0.27	
1887.00	0.180	332.930	1885.91	-38.77	40.82	-2.41	1655290.31	14276999.26	39°18'57.633"N	80°56'50.682"W	40.89	356.624	0.37	
1912.00	0.170	340.990	1910.91	-38.85	40.89	-2.44	1655290.28	14276999.33	39°18'57.633"N	80°56'50.683"W	40.97	356.587	0.10	
1937.00	0.160	310.920	1935.91	-38.92	40.95	-2.48	1655290.24	14276999.38	39°18'57.634"N	80°56'50.683"W	41.03	356.538	0.33	
1962.00	0.210	355.260	1960.91	-38.99	41.02	-2.51	1655290.21	14276999.45	39°18'57.635"N	80°56'50.684"W	41.10	356.501	0.59	
1987.00	0.220	349.210	1985.91	-39.08	41.11	-2.52	1655290.20	14276999.55	39°18'57.635"N	80°56'50.684"W	41.19	356.491	0.10	
2012.00	0.200	330.860	2010.91	-39.17	41.20	-2.55	1655290.17	14276999.63	39°18'57.636"N	80°56'50.684"W	41.28	356.457	0.28	
2037.00	0.300	308.450	2035.91	-39.27	41.28	-2.62	1655290.10	14276999.71	39°18'57.637"N	80°56'50.685"W	41.36	356.363	0.55	
2062.00	0.250	332.010	2060.91	-39.38	41.37	-2.70	1655290.02	14276999.80	39°18'57.638"N	80°56'50.686"W	41.45	356.265	0.49	
2087.00	0.180	339.390	2085.91	-39.48	41.45	-2.74	1655289.98	14276999.88	39°18'57.639"N	80°56'50.687"W	41.54	356.218	0.30	
2112.00	0.190	345.300	2110.91	-39.56	41.53	-2.76	1655289.96	14276999.96	39°18'57.640"N	80°56'50.687"W	41.62	356.192	0.09	
2137.00	0.110	341.660	2135.91	-39.62	41.59	-2.78	1655289.94	14277000.02	39°18'57.641"N	80°56'50.687"W	41.68	356.173	0.32	
2162.00	0.080	327.430	2160.91	-39.66	41.63	-2.80	1655289.92	14277000.06	39°18'57.641"N	80°56'50.687"W	41.72	356.153	0.15	
2187.00	0.170	14.420	2185.91	-39.71	41.68	-2.80	1655289.92	14277000.11	39°18'57.641"N	80°56'50.687"W	41.77	356.158	0.52	
2212.00	0.080	277.730	2210.91	-39.75	41.72	-2.81	1655289.91	14277000.15	39°18'57.641"N	80°56'50.688"W	41.81	356.150	0.78	
2237.00	0.100	18.150	2235.91	-39.78	41.74	-2.82	1655289.90	14277000.17	39°18'57.642"N	80°56'50.688"W	41.83	356.138	0.56	
2262.00	0.150	355.800	2260.91	-39.82	41.79	-2.81	1655289.91	14277000.23	39°18'57.642"N	80°56'50.688"W	41.89	356.149	0.28	
2287.00	0.150	7.990	2285.91	-39.88	41.86	-2.81	1655289.91	14277000.29	39°18'57.643"N	80°56'50.688"W	41.95	356.158	0.13	



Actual Wellpath Report

Deem Unit 2H AWP Proj: 16303'
Page 5 of 15



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Ritchie County, WV	Well	Deem Unit 2H
Field	Ritchie	Wellbore	Deem Unit 2H AWB
Facility	Buck Run Pad		

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	G-rid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Comments
2312.00	0.150	320.940	2310.91	-39.94	41.92	-2.83	1655289.89	14277000.35	39°18'57.643"N	80°56'50.688"W	42.01	356.141	0.48	
2337.00	0.160	318.330	2335.91	-40.01	41.97	-2.87	1655289.85	14277000.40	39°18'57.644"N	80°56'50.688"W	42.06	356.086	0.05	
2362.00	0.120	14.710	2360.91	-40.06	42.02	-2.89	1655289.83	14277000.45	39°18'57.644"N	80°56'50.688"W	42.12	356.068	0.55	
2387.00	0.160	14.420	2385.91	-40.11	42.08	-2.87	1655289.85	14277000.51	39°18'57.645"N	80°56'50.688"W	42.18	356.094	0.16	
2412.00	0.150	9.340	2410.91	-40.17	42.14	-2.86	1655289.86	14277000.58	39°18'57.646"N	80°56'50.688"W	42.24	356.119	0.07	
2437.00	0.080	19.180	2435.91	-40.21	42.19	-2.85	1655289.87	14277000.63	39°18'57.646"N	80°56'50.688"W	42.29	356.139	0.29	
2462.00	0.090	63.410	2460.91	-40.22	42.22	-2.82	1655289.90	14277000.65	39°18'57.646"N	80°56'50.688"W	42.31	356.173	0.26	
2487.00	0.140	348.640	2485.91	-40.25	42.26	-2.81	1655289.91	14277000.69	39°18'57.647"N	80°56'50.688"W	42.35	356.192	0.58	
2512.00	0.090	58.340	2510.91	-40.29	42.30	-2.80	1655289.92	14277000.73	39°18'57.647"N	80°56'50.687"W	42.39	356.210	0.55	
2537.00	0.040	96.420	2535.91	-40.29	42.31	-2.78	1655289.94	14277000.74	39°18'57.647"N	80°56'50.687"W	42.40	356.245	0.25	
2562.00	0.090	79.510	2560.91	-40.28	42.31	-2.75	1655289.97	14277000.74	39°18'57.647"N	80°56'50.687"W	42.40	356.283	0.21	
2587.00	0.060	73.210	2585.91	-40.27	42.32	-2.72	1655290.00	14277000.75	39°18'57.647"N	80°56'50.686"W	42.40	356.326	0.12	
2612.00	0.120	80.060	2610.91	-40.27	42.32	-2.68	1655290.04	14277000.76	39°18'57.647"N	80°56'50.686"W	42.41	356.379	0.24	
2637.00	0.120	86.680	2635.91	-40.25	42.33	-2.63	1655290.09	14277000.76	39°18'57.647"N	80°56'50.685"W	42.41	356.449	0.06	
2662.00	0.140	88.460	2660.91	-40.23	42.33	-2.57	1655290.15	14277000.77	39°18'57.648"N	80°56'50.685"W	42.41	356.526	0.08	
2687.00	0.110	82.820	2685.91	-40.22	42.34	-2.52	1655290.21	14277000.77	39°18'57.648"N	80°56'50.684"W	42.41	356.599	0.13	
2712.00	0.100	139.820	2710.91	-40.19	42.32	-2.48	1655290.24	14277000.76	39°18'57.647"N	80°56'50.683"W	42.39	356.649	0.40	
2737.00	0.160	98.770	2735.91	-40.15	42.30	-2.43	1655290.29	14277000.73	39°18'57.647"N	80°56'50.683"W	42.37	356.713	0.43	
2762.00	0.140	116.260	2760.91	-40.11	42.28	-2.37	1655290.35	14277000.71	39°18'57.647"N	80°56'50.682"W	42.35	356.795	0.20	
2787.00	0.080	119.170	2785.91	-40.07	42.26	-2.32	1655290.40	14277000.69	39°18'57.647"N	80°56'50.681"W	42.32	356.851	0.24	
2812.00	0.070	169.420	2810.91	-40.05	42.24	-2.31	1655290.41	14277000.67	39°18'57.647"N	80°56'50.681"W	42.30	356.874	0.26	
2837.00	0.080	114.770	2835.91	-40.02	42.21	-2.29	1655290.43	14277000.65	39°18'57.646"N	80°56'50.681"W	42.28	356.898	0.28	
2862.00	0.050	147.440	2860.91	-39.99	42.20	-2.27	1655290.45	14277000.63	39°18'57.646"N	80°56'50.681"W	42.26	356.926	0.19	
2887.00	0.080	188.940	2885.91	-39.97	42.17	-2.26	1655290.46	14277000.60	39°18'57.646"N	80°56'50.681"W	42.23	356.928	0.22	
2912.00	0.020	142.420	2910.91	-39.95	42.15	-2.26	1655290.46	14277000.58	39°18'57.646"N	80°56'50.681"W	42.21	356.927	0.27	
2937.00	0.040	88.760	2935.91	-39.94	42.15	-2.25	1655290.47	14277000.58	39°18'57.646"N	80°56'50.680"W	42.21	356.942	0.13	
2962.00	0.060	138.080	2960.91	-39.93	42.14	-2.23	1655290.49	14277000.57	39°18'57.646"N	80°56'50.680"W	42.20	356.965	0.18	
2987.00	0.060	112.080	2985.91	-39.91	42.12	-2.21	1655290.51	14277000.56	39°18'57.645"N	80°56'50.680"W	42.18	356.992	0.11	
3012.00	0.050	96.760	3010.91	-39.89	42.12	-2.19	1655290.53	14277000.55	39°18'57.645"N	80°56'50.680"W	42.17	357.023	0.07	
3037.00	0.130	88.940	3035.91	-39.88	42.12	-2.15	1655290.57	14277000.55	39°18'57.645"N	80°56'50.679"W	42.17	357.076	0.32	



Actual Wellpath Report

Deem Unit 2H AWP Proj: 16303'
Page 6 of 15



REFERENCE WELLPATH IDENTIFICATION

Operator	Area	Field	Facility	Slot #02
ANTERO RESOURCES CORPORATION	Ritchie County, WV	Ritchie	Buck Run Pad	Deem Unit 2H
				Deem Unit 2H AWB

WELLPATH DATA (354 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [1/1000]	Comments
3062.00	0.130	93.150	3060.91	-39.85	42.11	-2.09	1655290.63	14277000.55	39°18'57.645"N	80°56'50.678"W	42.17	357.153	0.04	
3087.00	0.140	190.810	3085.91	-39.82	42.08	-2.07	1655290.65	14277000.52	39°18'57.645"N	80°56'50.678"W	42.13	357.181	0.81	
3112.00	0.180	86.220	3110.91	-39.78	42.06	-2.04	1655290.68	14277000.49	39°18'57.645"N	80°56'50.678"W	42.10	357.225	1.02	
3137.00	0.060	125.730	3135.91	-39.76	42.05	-1.99	1655290.73	14277000.48	39°18'57.645"N	80°56'50.677"W	42.10	357.292	0.56	
3162.00	0.110	160.950	3160.91	-39.72	42.02	-1.97	1655290.75	14277000.45	39°18'57.644"N	80°56'50.677"W	42.07	357.315	0.28	
3187.00	0.080	150.080	3185.91	-39.68	41.98	-1.95	1655290.77	14277000.42	39°18'57.644"N	80°56'50.677"W	42.03	357.336	0.14	
3212.00	0.120	147.310	3210.91	-39.64	41.95	-1.93	1655290.79	14277000.38	39°18'57.644"N	80°56'50.676"W	41.99	357.364	0.16	
3237.00	0.090	168.090	3235.91	-39.59	41.90	-1.91	1655290.81	14277000.34	39°18'57.643"N	80°56'50.676"W	41.95	357.387	0.19	
3262.00	0.070	133.470	3260.91	-39.56	41.87	-1.90	1655290.82	14277000.31	39°18'57.643"N	80°56'50.676"W	41.92	357.405	0.21	
3287.00	0.020	173.910	3285.91	-39.54	41.86	-1.89	1655290.83	14277000.29	39°18'57.643"N	80°56'50.676"W	41.90	357.420	0.23	
3312.00	0.050	99.600	3310.91	-39.53	41.85	-1.87	1655290.85	14277000.29	39°18'57.643"N	80°56'50.676"W	41.90	357.435	0.19	
3337.00	0.120	72.370	3335.91	-39.52	41.86	-1.84	1655290.88	14277000.29	39°18'57.643"N	80°56'50.675"W	41.90	357.484	0.32	
3362.00	0.060	135.140	3360.91	-39.51	41.86	-1.80	1655290.92	14277000.29	39°18'57.643"N	80°56'50.675"W	41.90	357.531	0.43	
3387.00	0.060	85.130	3385.91	-39.49	41.85	-1.78	1655290.94	14277000.28	39°18'57.643"N	80°56'50.675"W	41.89	357.561	0.20	
3412.00	0.080	102.700	3410.91	-39.48	41.85	-1.75	1655290.97	14277000.28	39°18'57.643"N	80°56'50.674"W	41.88	357.602	0.12	
3437.00	0.080	112.400	3435.91	-39.46	41.84	-1.72	1655291.00	14277000.27	39°18'57.643"N	80°56'50.674"W	41.87	357.647	0.05	
3462.00	0.110	115.370	3460.91	-39.43	41.82	-1.68	1655291.04	14277000.25	39°18'57.642"N	80°56'50.673"W	41.85	357.697	0.12	
3487.00	0.100	106.950	3485.91	-39.40	41.80	-1.64	1655291.08	14277000.24	39°18'57.642"N	80°56'50.673"W	41.84	357.755	0.07	
3512.00	0.090	84.660	3510.90	-39.38	41.80	-1.60	1655291.12	14277000.23	39°18'57.642"N	80°56'50.672"W	41.83	357.810	0.15	
3537.00	0.100	85.550	3535.90	-39.36	41.80	-1.56	1655291.16	14277000.24	39°18'57.642"N	80°56'50.672"W	41.83	357.866	0.04	
3562.00	0.110	166.840	3560.90	-39.33	41.78	-1.53	1655291.19	14277000.21	39°18'57.642"N	80°56'50.671"W	41.81	357.903	0.55	
3587.00	0.090	132.920	3585.90	-39.29	41.74	-1.51	1655291.21	14277000.18	39°18'57.642"N	80°56'50.671"W	41.77	357.928	0.25	
3612.00	0.120	171.080	3610.90	-39.25	41.70	-1.49	1655291.23	14277000.14	39°18'57.641"N	80°56'50.671"W	41.73	357.951	0.30	
3637.00	0.060	70.280	3635.90	-39.22	41.68	-1.48	1655291.25	14277000.12	39°18'57.641"N	80°56'50.671"W	41.71	357.973	0.58	
3662.00	0.050	145.910	3660.90	-39.21	41.68	-1.46	1655291.27	14277000.11	39°18'57.641"N	80°56'50.670"W	41.70	358.000	0.24	
3687.00	0.090	100.410	3685.90	-39.19	41.67	-1.43	1655291.29	14277000.10	39°18'57.641"N	80°56'50.670"W	41.69	358.036	0.23	
3712.00	0.050	164.210	3710.90	-39.17	41.65	-1.41	1655291.31	14277000.09	39°18'57.641"N	80°56'50.670"W	41.68	358.066	0.33	
3737.00	0.070	194.870	3735.90	-39.15	41.63	-1.41	1655291.31	14277000.06	39°18'57.641"N	80°56'50.670"W	41.65	358.064	0.15	
3762.00	0.050	145.240	3760.90	-39.12	41.61	-1.41	1655291.32	14277000.04	39°18'57.640"N	80°56'50.670"W	41.63	358.066	0.21	
3787.00	0.060	145.230	3785.90	-39.10	41.59	-1.39	1655291.33	14277000.02	39°18'57.640"N	80°56'50.670"W	41.61	358.084	0.04	



Actual Wellpath Report

Deem Unit 2H AWP Proj: 16303'
Page 7 of 15



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Ritchie County, WV	Well	Deem Unit 2H
Field	Ritchie	Wellbore	Deem Unit 2H AWB
Facility	Buck Run Pad		

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 [1/100ft]	Comments
3812.00	0.030	166.320	3810.90	-39.08	41.57	-1.38	1655291.34	14277000.00	39°18'57.640"N	80°56'50.669"W	41.59	358.095	0.14	
3837.00	0.020	345.660	3835.90	-39.08	41.57	-1.38	1655291.34	14277000.00	39°18'57.640"N	80°56'50.669"W	41.59	358.096	0.20	
3862.00	0.060	134.990	3860.90	-39.07	41.56	-1.37	1655291.35	14276999.99	39°18'57.640"N	80°56'50.669"W	41.58	358.107	0.31	
3887.00	0.060	95.370	3885.90	-39.05	41.55	-1.35	1655291.37	14276999.98	39°18'57.640"N	80°56'50.669"W	41.57	358.137	0.16	
3912.00	0.110	66.890	3910.90	-39.05	41.56	-1.32	1655291.40	14276999.99	39°18'57.640"N	80°56'50.669"W	41.58	358.186	0.26	
3937.00	0.080	77.660	3935.90	-39.05	41.57	-1.28	1655291.44	14277000.01	39°18'57.640"N	80°56'50.668"W	41.59	358.240	0.14	
3962.00	0.100	103.080	3960.90	-39.03	41.57	-1.24	1655291.48	14277000.00	39°18'57.640"N	80°56'50.668"W	41.59	358.293	0.18	
3987.00	0.090	134.110	3985.90	-39.00	41.55	-1.20	1655291.52	14276999.99	39°18'57.640"N	80°56'50.667"W	41.57	358.341	0.21	
4012.00	0.110	141.340	4010.90	-38.96	41.52	-1.17	1655291.55	14276999.95	39°18'57.639"N	80°56'50.667"W	41.54	358.380	0.09	
4037.00	0.060	97.170	4035.90	-38.93	41.50	-1.15	1655291.57	14276999.93	39°18'57.639"N	80°56'50.666"W	41.52	358.418	0.32	
4062.00	0.080	111.890	4060.90	-38.91	41.49	-1.12	1655291.60	14276999.92	39°18'57.639"N	80°56'50.666"W	41.51	358.458	0.11	
4087.00	0.080	117.530	4085.90	-38.89	41.48	-1.09	1655291.63	14276999.91	39°18'57.639"N	80°56'50.666"W	41.49	358.501	0.03	
4112.00	0.190	160.350	4110.90	-38.83	41.43	-1.06	1655291.66	14276999.86	39°18'57.639"N	80°56'50.665"W	41.44	358.540	0.57	
4137.00	0.040	144.460	4135.90	-38.78	41.38	-1.04	1655291.68	14276999.82	39°18'57.638"N	80°56'50.665"W	41.40	358.564	0.61	
4162.00	0.050	154.120	4160.90	-38.76	41.37	-1.03	1655291.69	14276999.80	39°18'57.638"N	80°56'50.665"W	41.38	358.577	0.05	
4187.00	0.060	145.730	4185.90	-38.74	41.35	-1.02	1655291.71	14276999.78	39°18'57.638"N	80°56'50.665"W	41.36	358.593	0.05	
4212.00	0.060	190.220	4210.90	-38.71	41.32	-1.01	1655291.71	14276999.76	39°18'57.638"N	80°56'50.665"W	41.33	358.600	0.18	
4237.00	0.050	125.200	4235.90	-38.69	41.30	-1.00	1655291.72	14276999.74	39°18'57.637"N	80°56'50.665"W	41.32	358.608	0.24	
4262.00	0.070	103.940	4260.90	-38.68	41.29	-0.98	1655291.74	14276999.73	39°18'57.637"N	80°56'50.664"W	41.30	358.641	0.12	
4287.00	0.120	185.440	4285.90	-38.64	41.26	-0.97	1655291.75	14276999.70	39°18'57.637"N	80°56'50.664"W	41.27	358.657	0.32	
4312.00	0.110	187.680	4310.90	-38.60	41.21	-0.97	1655291.75	14276999.65	39°18'57.636"N	80°56'50.664"W	41.22	358.647	0.04	
4337.00	0.070	163.120	4335.90	-38.56	41.18	-0.97	1655291.75	14276999.61	39°18'57.636"N	80°56'50.664"W	41.19	358.648	0.22	
4362.00	0.100	155.270	4360.90	-38.53	41.14	-0.96	1655291.76	14276999.57	39°18'57.636"N	80°56'50.664"W	41.15	358.666	0.13	
4387.00	0.130	109.850	4385.90	-38.49	41.11	-0.92	1655291.80	14276999.54	39°18'57.635"N	80°56'50.664"W	41.12	358.714	0.37	
4412.00	0.170	176.340	4410.90	-38.43	41.06	-0.89	1655291.83	14276999.50	39°18'57.635"N	80°56'50.663"W	41.07	358.754	0.67	
4437.00	0.040	175.640	4435.90	-38.39	41.02	-0.89	1655291.83	14276999.45	39°18'57.635"N	80°56'50.663"W	41.03	358.756	0.32	
4462.00	0.060	110.550	4460.90	-38.37	41.01	-0.88	1655291.84	14276999.44	39°18'57.634"N	80°56'50.663"W	41.01	358.774	0.23	
4487.00	0.240	46.120	4485.90	-38.38	41.04	-0.83	1655291.89	14276999.47	39°18'57.635"N	80°56'50.662"W	41.05	358.845	0.88	
4512.00	1.500	37.420	4510.90	-38.57	41.33	-0.59	1655292.13	14276999.77	39°18'57.638"N	80°56'50.659"W	41.34	359.181	5.05	
4537.00	2.660	38.440	4535.88	-39.02	42.03	-0.03	1655292.69	14277000.48	39°18'57.645"N	80°56'50.652"W	42.05	359.957	4.64	



Actual Wellpath Report

Deem Unit 2H AWP Proj: 16303'
Page 8 of 15



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Ritchie County, WV	Well	Deem Unit 2H
Field	Ritchie	Wellbore	Deem Unit 2H AWB
Facility	Buck Run Pad		

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
4562.00	4.120	38.230	4560.84	-39.76	43.21	0.88	1655293.60	14277001.64	39°18'57.656"N	80°56'50.641"W	43.22	1.173	5.84	
4587.00	5.840	37.260	4585.74	-40.86	44.93	2.21	1655294.93	14277003.36	39°18'57.673"N	80°56'50.624"W	44.98	2.817	6.89	
4612.00	7.060	36.390	4610.59	-42.31	47.17	3.89	1655296.61	14277005.61	39°18'57.695"N	80°56'50.602"W	47.33	4.717	4.90	
4637.00	8.060	36.600	4635.37	-44.04	49.82	5.85	1655298.57	14277008.25	39°18'57.721"N	80°56'50.577"W	50.16	6.696	4.00	
4662.00	8.880	37.030	4660.09	-45.95	52.77	8.06	1655300.77	14277011.19	39°18'57.751"N	80°56'50.549"W	53.38	8.681	3.29	
4687.00	10.090	36.940	4684.75	-48.08	56.06	10.53	1655303.25	14277014.48	39°18'57.783"N	80°56'50.518"W	57.04	10.643	4.84	
4712.00	10.420	37.200	4709.35	-50.37	59.61	13.22	1655305.93	14277018.03	39°18'57.818"N	80°56'50.484"W	61.06	12.502	1.33	
4737.00	11.030	38.770	4733.92	-52.70	63.27	16.08	1655308.80	14277021.70	39°18'57.854"N	80°56'50.447"W	65.29	14.260	2.71	
4762.00	11.550	40.270	4758.43	-55.04	67.05	19.20	1655311.91	14277025.47	39°18'57.892"N	80°56'50.407"W	69.74	15.972	2.39	
4787.00	12.330	41.710	4782.89	-57.40	70.95	22.59	1655315.30	14277029.37	39°18'57.930"N	80°56'50.364"W	74.46	17.662	3.34	
4812.00	12.640	42.640	4807.30	-59.76	74.95	26.22	1655318.93	14277033.37	39°18'57.970"N	80°56'50.318"W	79.41	19.280	1.48	
4837.00	13.110	43.560	4831.67	-62.11	79.02	30.03	1655322.73	14277037.44	39°18'58.010"N	80°56'50.270"W	84.53	20.806	2.05	
4862.00	13.220	44.920	4856.01	-64.41	83.10	34.00	1655326.71	14277041.52	39°18'58.050"N	80°56'50.219"W	89.79	22.251	1.31	
4887.00	13.880	46.740	4880.32	-66.63	87.18	38.20	1655330.91	14277045.59	39°18'58.091"N	80°56'50.165"W	95.18	23.663	3.14	
4912.00	14.500	48.080	4904.56	-68.79	91.33	42.71	1655335.42	14277049.74	39°18'58.131"N	80°56'50.108"W	100.82	25.066	2.81	
4937.00	15.040	48.950	4928.73	-70.93	95.55	47.49	1655340.19	14277053.96	39°18'58.173"N	80°56'50.047"W	106.70	26.428	2.34	
4962.00	15.370	48.860	4952.85	-73.08	99.86	52.43	1655345.13	14277058.27	39°18'58.216"N	80°56'49.984"W	112.78	27.702	1.32	
4987.00	15.360	49.060	4976.96	-75.25	104.21	57.43	1655350.12	14277062.61	39°18'58.259"N	80°56'49.921"W	118.98	28.858	0.22	
5012.00	15.480	49.040	5001.06	-77.42	108.56	62.45	1655355.14	14277066.97	39°18'58.302"N	80°56'49.857"W	125.24	29.908	0.48	
5037.00	15.700	48.920	5025.14	-79.62	112.97	67.52	1655360.21	14277071.38	39°18'58.345"N	80°56'49.792"W	131.61	30.864	0.89	
5062.00	15.840	49.200	5049.20	-81.83	117.42	72.65	1655365.34	14277075.83	39°18'58.389"N	80°56'49.727"W	138.08	31.744	0.64	
5087.00	16.300	49.180	5073.22	-84.08	121.95	77.89	1655370.58	14277080.35	39°18'58.434"N	80°56'49.660"W	144.70	32.566	1.84	
5112.00	16.860	50.010	5097.18	-86.34	126.57	83.32	1655376.01	14277084.97	39°18'58.480"N	80°56'49.591"W	151.53	33.356	2.43	
5137.00	17.650	50.820	5121.06	-88.59	131.30	89.03	1655381.72	14277089.69	39°18'58.526"N	80°56'49.518"W	158.64	34.142	3.30	
5162.00	18.240	51.720	5144.84	-90.82	136.11	95.04	1655387.73	14277094.51	39°18'58.574"N	80°56'49.442"W	166.01	34.926	2.61	
5187.00	18.970	52.750	5168.54	-92.99	141.00	101.35	1655394.03	14277099.39	39°18'58.622"N	80°56'49.362"W	173.64	35.709	3.20	
5212.00	19.940	53.240	5192.11	-95.16	146.01	108.00	1655400.68	14277104.40	39°18'58.672"N	80°56'49.277"W	181.61	36.490	3.93	
5237.00	20.720	53.350	5215.55	-97.38	151.20	114.96	1655407.64	14277109.59	39°18'58.723"N	80°56'49.188"W	189.94	37.247	3.12	
5262.00	20.760	53.230	5238.93	-99.64	156.49	122.06	1655414.73	14277114.88	39°18'58.775"N	80°56'49.098"W	198.46	37.954	0.23	
5287.00	21.530	52.870	5262.25	-101.98	161.91	129.27	1655421.94	14277120.30	39°18'58.829"N	80°56'49.006"W	207.19	38.603	3.12	



Actual Wellpath Report

Deem Unit 2H AWP Proj: 16303'
Page 9 of 15



REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #02
ANTERO RESOURCES CORPORATION	Well	Deem Unit 2H
Ritchie County, WV	Wellbore	Deem Unit 2H AWP
Ritchie		
Buck Run Pad		

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
5312.00	22.340	51.600	5285.44	-104.53	167.63	136.65	1655429.31	14277126.02	39°18'58.885"N	80°56'48.912"W	216.27	39.186	3.75	
5337.00	23.080	50.730	5308.50	-107.35	173.69	144.17	1655436.83	14277132.07	39°18'58.945"N	80°56'48.817"W	225.72	39.694	3.25	
5362.00	23.430	49.970	5331.47	-110.35	179.98	151.77	1655444.42	14277138.36	39°18'59.007"N	80°56'48.720"W	235.43	40.138	1.84	
5387.00	23.740	49.160	5354.38	-113.53	186.47	159.38	1655452.03	14277144.85	39°18'59.071"N	80°56'48.623"W	245.30	40.521	1.79	
5412.00	24.130	48.620	5377.23	-116.87	193.14	167.02	1655459.67	14277151.51	39°18'59.137"N	80°56'48.526"W	255.34	40.852	1.79	
5437.00	23.780	47.410	5400.08	-120.35	199.93	174.56	1655467.21	14277158.30	39°18'59.204"N	80°56'48.430"W	265.41	41.125	2.41	
5462.00	23.250	46.460	5423.00	-123.95	206.74	181.85	1655474.50	14277165.11	39°18'59.271"N	80°56'48.337"W	275.34	41.335	2.61	
5487.00	23.420	45.650	5445.96	-127.66	213.61	188.98	1655481.63	14277171.98	39°18'59.339"N	80°56'48.246"W	285.21	41.499	1.45	
5512.00	23.310	45.600	5468.91	-131.45	220.55	196.07	1655488.71	14277178.91	39°18'59.408"N	80°56'48.156"W	295.10	41.638	0.45	
5537.00	22.840	45.400	5491.91	-135.22	227.41	203.06	1655495.70	14277185.77	39°18'59.476"N	80°56'48.067"W	304.88	41.762	1.91	
5562.00	21.600	45.980	5515.05	-138.82	234.02	209.82	1655502.46	14277192.37	39°18'59.541"N	80°56'47.981"W	314.31	41.879	5.04	
5587.00	21.810	47.200	5538.28	-142.21	240.37	216.54	1655509.17	14277198.73	39°18'59.604"N	80°56'47.895"W	323.52	42.014	1.99	
5612.00	22.340	48.530	5561.44	-145.46	246.67	223.51	1655516.14	14277205.02	39°18'59.666"N	80°56'47.807"W	332.87	42.179	2.91	
5637.00	23.470	50.710	5584.47	-148.33	252.97	230.92	1655523.55	14277211.32	39°18'59.728"N	80°56'47.712"W	342.52	42.391	5.65	
5662.00	23.890	52.620	5607.37	-151.37	259.20	238.80	1655531.42	14277217.54	39°18'59.790"N	80°56'47.612"W	352.43	42.654	3.50	
5687.00	21.310	54.000	5630.19	-153.97	265.30	246.98	1655539.60	14277223.64	39°18'59.850"N	80°56'47.508"W	362.47	42.952	2.81	
5705.00	25.170	54.000	5646.54	-155.81	269.72	253.08	1655545.69	14277228.07	39°18'59.893"N	80°56'47.430"W	369.86	43.176	4.78	
5875.00	26.220	45.980	5799.77	-178.75	317.09	309.35	1655601.94	14277275.41	39°19'00.361"N	80°56'46.714"W	442.99	44.292	2.14	BH AT Curve <8-1/2">(5705)(5875-16278)
5914.00	25.980	47.670	5834.79	-184.97	328.83	321.86	1655614.45	14277287.14	39°19'00.477"N	80°56'46.555"W	460.13	44.386	2.00	
5962.00	25.920	61.040	5877.99	-189.93	341.00	338.82	1655631.41	14277299.31	39°19'00.597"N	80°56'46.339"W	480.71	44.817	12.17	
6008.00	27.100	75.670	5919.20	-189.79	348.47	357.79	1655650.37	14277306.78	39°19'00.671"N	80°56'46.097"W	499.44	45.757	14.39	
6058.00	27.830	87.670	5963.60	-184.37	351.76	380.51	1655673.07	14277310.07	39°19'00.704"N	80°56'45.808"W	518.19	47.248	11.15	
6103.00	27.930	94.960	6003.39	-176.08	351.28	401.51	1655694.07	14277309.59	39°19'00.699"N	80°56'45.541"W	533.48	48.817	7.57	
6151.00	29.440	104.280	6045.52	-164.03	347.39	424.15	1655716.70	14277305.70	39°19'00.660"N	80°56'45.253"W	548.26	50.681	9.83	
6197.00	31.890	113.500	6085.10	-148.69	339.75	446.27	1655738.81	14277298.07	39°19'00.585"N	80°56'44.972"W	560.88	52.717	11.51	
6245.00	34.400	120.920	6125.31	-128.85	327.72	469.54	1655762.07	14277286.04	39°19'00.465"N	80°56'44.676"W	572.60	55.086	9.93	
6292.00	37.270	127.520	6163.42	-106.00	312.23	492.23	1655784.75	14277270.55	39°19'00.312"N	80°56'44.387"W	582.90	57.613	10.23	
6338.00	40.090	131.860	6199.33	-80.71	293.85	514.32	1655806.83	14277252.18	39°19'00.130"N	80°56'44.106"W	592.34	60.259	8.50	
6386.00	43.280	135.070	6235.18	-51.69	271.88	537.46	1655829.96	14277230.22	39°18'59.913"N	80°56'43.812"W	602.31	63.167	7.99	
6409.00H	45.238	136.705	6251.65	-36.83	260.36	548.62	1655841.12	14277218.70	39°18'59.799"N	80°56'43.670"W	607.27	64.613	9.85	Middlesex 6.409' MD



Actual Wellpath Report

Deem Unit 2H AWP Proj: 16303'
Page 10 of 15



REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #02
Operator	ANTERO RESOURCES CORPORATION	Well	Deem Unit 2H
Area	Ritchie County, WV	Wellbore	Deem Unit 2H AWB
Field	Ritchie		
Facility	Buck Run Pad		

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Comments
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)	(°)	(°)	(ft)	(°)	(%/100ft)	
6434.00	47.390	138.360	6268.92	-19.90	247.02	560.83	1655853.32	14277205.37	39°18'59.667"N	80°56'43.515"W	612.82	66.229	9.85	
6481.00	51.960	142.170	6299.33	14.20	219.45	583.69	1655876.17	14277177.82	39°18'59.395"N	80°56'43.224"W	623.58	69.395	11.52	
6529.00	56.360	145.970	6327.44	51.94	187.94	606.48	1655898.95	14277146.32	39°18'59.083"N	80°56'42.934"W	634.93	72.782	11.19	
6575.00	60.330	148.750	6351.58	90.40	154.97	627.57	1655920.04	14277113.36	39°18'58.757"N	80°56'42.666"W	646.42	76.129	10.05	
6584.00†	61.087	149.392	6355.98	98.15	148.24	631.61	1655924.07	14277106.63	39°18'58.691"N	80°56'42.615"W	648.77	76.792	10.46	Burkett: 6.584' MD
6623.00	64.400	152.070	6373.84	132.53	118.00	648.54	1655951.00	14277076.40	39°18'58.392"N	80°56'42.400"W	659.19	79.688	10.46	
6645.00†	66.495	153.447	6382.98	152.45	100.21	657.70	1655950.15	14277058.62	39°18'58.216"N	80°56'42.283"W	665.29	81.337	11.10	Tully: 6.645' MD
6670.00	68.890	154.960	6392.47	175.53	79.38	667.76	1655960.21	14277037.80	39°18'58.010"N	80°56'42.155"W	672.46	83.221	11.10	
6704.00†	71.587	156.236	6403.97	207.49	50.25	680.98	1655973.42	14277008.68	39°18'57.722"N	80°56'41.988"W	682.83	85.780	8.68	Marcellus: 6.704' MD
6718.00	72.790	156.750	6408.26	220.81	38.03	686.29	1655978.73	14276996.46	39°18'57.601"N	80°56'41.920"W	687.34	86.829	8.68	
6764.00	78.920	158.840	6419.53	265.38	-3.24	703.12	1655995.56	14276955.21	39°18'57.193"N	80°56'41.706"W	703.13	90.264	14.22	
6810.00	83.490	160.280	6426.36	310.81	-45.83	718.99	1656011.42	14276912.64	39°18'56.772"N	80°56'41.505"W	720.45	93.647	10.41	
6859.00	88.950	159.940	6429.79	359.66	-91.79	735.62	1656028.04	14276866.70	39°18'56.318"N	80°56'41.293"W	741.32	97.113	11.16	
6953.00	90.520	159.610	6430.23	453.61	-179.99	768.12	1656060.53	14276778.53	39°18'55.446"N	80°56'40.881"W	788.92	103.188	1.71	
7048.00	90.400	157.630	6429.46	548.60	-268.45	802.75	1656095.14	14276690.11	39°18'54.571"N	80°56'40.441"W	846.44	108.490	2.09	
7142.00	90.430	156.080	6428.78	642.57	-354.87	839.69	1656132.07	14276603.72	39°18'53.717"N	80°56'39.971"W	911.60	112.910	1.65	
7236.00	90.340	156.120	6428.15	736.51	-440.81	877.77	1656170.14	14276517.81	39°18'52.867"N	80°56'39.487"W	982.24	116.666	0.10	
7331.00	90.650	155.350	6427.33	831.43	-527.42	916.81	1656209.16	14276431.25	39°18'52.011"N	80°56'38.991"W	1057.69	119.911	0.87	
7425.00	90.580	154.720	6426.32	925.29	-612.63	956.48	1656248.82	14276346.07	39°18'51.168"N	80°56'38.487"W	1135.86	122.640	0.67	
7520.00	90.650	154.910	6425.30	1020.13	-698.59	996.91	1656289.23	14276260.14	39°18'50.319"N	80°56'37.974"W	1217.31	125.021	0.21	
7614.00	90.060	156.140	6424.72	1114.03	-784.14	1035.85	1656328.15	14276174.62	39°18'49.473"N	80°56'37.479"W	1299.18	127.126	1.45	
7709.00	90.120	152.580	6424.57	1208.81	-869.77	1076.95	1656369.24	14276089.03	39°18'48.626"N	80°56'36.957"W	1384.32	128.925	3.75	
7803.00	90.580	156.030	6424.00	1302.59	-954.46	1117.70	1656409.97	14276004.37	39°18'47.789"N	80°56'36.439"W	1469.78	130.496	3.70	
7898.00	90.680	163.930	6422.95	1397.46	-1043.65	1150.20	1656442.45	14275915.22	39°18'46.907"N	80°56'36.026"W	1553.11	132.219	8.32	
7992.00	90.650	165.120	6421.86	1490.86	-1134.23	1175.28	1656467.52	14275824.67	39°18'46.012"N	80°56'35.708"W	1633.33	133.982	1.27	
8086.00	90.740	162.360	6420.72	1584.39	-1224.46	1201.59	1656493.83	14275734.49	39°18'45.120"N	80°56'35.374"W	1715.55	135.540	2.94	
8181.00	90.680	160.760	6419.54	1679.20	-1314.57	1231.64	1656523.86	14275644.41	39°18'44.229"N	80°56'34.992"W	1801.39	136.865	1.69	
8276.00	90.250	156.040	6418.77	1774.17	-1402.87	1266.60	1656558.81	14275556.15	39°18'43.356"N	80°56'34.548"W	1890.06	137.922	4.99	
8370.00	89.660	149.660	6418.84	1867.73	-1486.47	1309.47	1656601.66	14275472.58	39°18'42.529"N	80°56'34.003"W	1980.98	138.622	6.82	
8464.00	88.740	151.880	6420.16	1960.95	-1568.48	1355.36	1656647.54	14275390.60	39°18'41.719"N	80°56'33.420"W	2072.96	139.169	2.56	



Actual Wellpath Report

Deem Unit 2H AWP Proj: 16303'
Page 11 of 15



REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #02
ANTERO RESOURCES CORPORATION	Well	Deem Unit 2H
Area	Wellbore	Deem Unit 2H AWB
Field		
Facility		

WELLPATH DATA (354 stations)

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (1/100ft)	Comments
8559.00	88.890	159.650	6422.12	2055.78	-1655.03	1394.32	1656686.48	14275304.09	39°18'40.863"N	80°56'32.925"W	2164.08	139.887	8.18	
8634.00	89.020	162.910	6423.86	2150.60	-1748.97	1424.80	1656716.95	14275214.18	39°18'39.974"N	80°56'32.538"W	2252.77	140.768	3.43	
8748.00	88.860	161.750	6425.60	2244.33	-1834.52	1453.33	1656745.46	14275124.66	39°18'39.088"N	80°56'32.176"W	2340.43	141.613	1.25	
8842.00	89.480	155.870	6426.96	2338.27	-1922.12	1487.29	1656779.41	14275037.10	39°18'38.223"N	80°56'31.745"W	2430.34	142.288	6.29	
8937.00	89.260	150.650	6428.00	2432.89	-2006.92	1530.01	1656822.12	14274952.33	39°18'37.384"N	80°56'31.202"W	2523.63	142.679	5.50	
9031.00	89.420	155.750	6429.09	2526.51	-2090.79	1572.38	1656864.47	14274868.50	39°18'36.555"N	80°56'30.663"W	2616.07	143.055	5.43	
9126.00	89.380	156.000	6430.08	2621.44	-2177.49	1611.21	1656903.28	14274781.83	39°18'35.698"N	80°56'30.170"W	2708.77	143.501	0.27	
9220.00	89.380	155.740	6431.10	2715.36	-2263.27	1649.63	1656941.69	14274696.09	39°18'34.850"N	80°56'29.682"W	2800.66	143.913	0.28	
9314.00	89.290	160.580	6432.19	2809.32	-2350.49	1684.59	1656976.63	14274608.90	39°18'33.987"N	80°56'29.238"W	2891.83	144.371	5.15	
9409.00	89.450	161.930	6433.24	2904.17	-2440.45	1715.12	1657007.15	14274518.98	39°18'33.098"N	80°56'28.850"W	2982.85	144.901	1.43	
9503.00	89.370	157.270	6434.04	2998.11	-2528.52	1747.87	1657039.89	14274430.94	39°18'32.227"N	80°56'28.434"W	3073.84	145.345	4.96	
9598.00	90.180	156.460	6434.25	3093.09	-2615.88	1785.20	1657077.20	14274343.62	39°18'31.364"N	80°56'27.960"W	3166.98	145.689	1.07	
9693.00	90.150	157.940	6433.97	3188.07	-2703.46	1822.01	1657114.00	14274256.08	39°18'30.498"N	80°56'27.493"W	3260.12	146.022	1.56	
9787.00	89.880	162.650	6433.95	3281.99	-2791.93	1853.69	1657145.67	14274167.64	39°18'29.623"N	80°56'27.090"W	3351.28	146.418	5.02	
9882.00	90.220	166.620	6433.87	3376.34	-2883.51	1878.86	1657170.83	14274076.09	39°18'28.718"N	80°56'26.771"W	3441.62	146.912	4.19	
9976.00	90.180	168.550	6433.54	3469.05	-2975.31	1899.07	1657191.03	14273984.33	39°18'27.810"N	80°56'26.515"W	3529.72	147.451	2.05	
10071.00	90.280	164.320	6433.16	3563.02	-3067.64	1921.35	1657213.29	14273892.04	39°18'26.898"N	80°56'26.232"W	3619.67	147.940	4.45	
10165.00	89.940	160.860	6432.98	3656.71	-3157.32	1949.47	1657241.40	14273802.40	39°18'26.011"N	80°56'25.875"W	3710.67	148.307	3.70	
10260.00	90.090	161.350	6432.95	3751.58	-3247.20	1980.23	1657272.16	14273712.55	39°18'25.123"N	80°56'25.484"W	3803.37	148.624	0.54	
10355.00	90.430	159.320	6432.52	3846.30	-3336.65	2012.20	1657304.11	14273623.14	39°18'24.238"N	80°56'25.078"W	3896.43	148.908	2.17	
10449.00	90.220	151.880	6431.99	3940.35	-3422.20	2051.00	1657342.90	14273537.63	39°18'23.393"N	80°56'24.586"W	3989.74	149.065	7.92	
10543.00	90.860	154.220	6431.10	4033.97	-3505.98	2093.60	1657385.48	14273453.88	39°18'22.564"N	80°56'24.044"W	4083.51	149.156	2.58	
10638.00	90.340	155.230	6430.10	4128.80	-3591.88	2134.16	1657426.02	14273368.02	39°18'21.715"N	80°56'23.529"W	4178.06	149.283	1.20	
10732.00	89.880	155.310	6429.55	4222.59	-3676.55	2174.96	1657466.81	14273283.38	39°18'20.878"N	80°56'23.011"W	4271.71	149.392	2.04	
10827.00	89.880	155.390	6429.36	4317.38	-3762.18	2216.08	1657507.91	14273197.78	39°18'20.031"N	80°56'22.488"W	4366.36	149.500	2.24	
10921.00	89.940	158.430	6429.51	4411.35	-3848.64	2252.94	1657544.76	14273111.35	39°18'19.176"N	80°56'22.020"W	4459.58	149.656	3.23	
11016.00	89.850	159.140	6429.69	4506.34	-3937.21	2287.32	1657579.12	14273022.83	39°18'18.301"N	80°56'21.584"W	4553.40	149.846	0.75	
11110.00	90.180	160.000	6429.66	4600.31	-4025.29	2320.13	1657611.92	14272934.78	39°18'17.430"N	80°56'21.167"W	4646.07	150.041	0.98	
11205.00	90.030	159.640	6429.49	4695.26	-4114.46	2352.91	1657644.68	14272845.64	39°18'16.548"N	80°56'20.751"W	4739.72	150.236	0.41	
11299.00	90.000	156.830	6429.46	4789.25	-4201.75	2387.76	1657679.52	14272758.39	39°18'15.685"N	80°56'20.308"W	4832.81	150.391	2.99	



Actual Wellpath Report

Deem Unit 2H AWP Proj: 16303'
Page 12 of 15



REFERENCE WELLPATH IDENTIFICATION

Operator	Slot #02
ANTERO RESOURCES CORPORATION	Deem Unit 2H
Area	Deem Unit 2H AWP
Field	Wellbore
Facility	Buck Run Pad

WELLPATH DATA (354 stations)

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert.Sect (ft)	North (ft)	East (ft)	Grid East (US Ft)	Grid North (US Ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (1/100ft)	Comments
11394.00	89.970	157.420	6429.49	4884.24	-4289.28	2424.69	1657716.43	14272670.90	39°18'14.820"N	80°56'19.839"W	4927.17	150.521	0.62	
11488.00	90.220	157.480	6429.33	4978.23	-4376.09	2460.73	1657752.47	14272584.12	39°18'13.962"N	80°56'19.381"W	5020.50	150.650	0.27	
11583.00	90.060	158.760	6429.10	5073.23	-4464.25	2496.14	1657787.85	14272496.00	39°18'13.090"N	80°56'18.932"W	5114.70	150.789	1.36	
11677.00	90.120	159.880	6428.95	5167.21	-4552.19	2529.33	1657821.04	14272408.09	39°18'12.221"N	80°56'18.510"W	5207.68	150.942	1.19	
11772.00	89.320	157.160	6429.42	5262.19	-4640.58	2564.11	1657855.80	14272319.73	39°18'11.347"N	80°56'18.069"W	5301.85	151.078	2.98	
11866.00	89.570	154.520	6430.33	5356.11	-4726.33	2602.58	1657894.26	14272234.01	39°18'10.499"N	80°56'17.580"W	5395.52	151.160	2.82	
11961.00	89.570	156.440	6431.04	5451.00	-4812.76	2642.00	1657933.66	14272147.62	39°18'09.645"N	80°56'17.079"W	5490.25	151.235	2.02	
12055.00	89.510	160.620	6431.80	5544.98	-4900.22	2676.40	1657968.05	14272060.20	39°18'08.780"N	80°56'16.642"W	5583.48	151.357	4.45	
12150.00	89.940	163.590	6432.58	5639.73	-4990.61	2705.59	1657997.22	14271969.85	39°18'07.887"N	80°56'16.272"W	5676.83	151.536	3.13	
12244.00	90.030	162.140	6432.94	5733.40	-5080.43	2733.28	1658024.90	14271880.06	39°18'06.989"N	80°56'15.920"W	5769.02	151.720	1.63	
12339.00	91.540	156.040	6431.63	5828.33	-5169.12	2767.17	1658058.77	14271791.41	39°18'06.122"N	80°56'15.490"W	5863.19	151.839	6.61	
12433.00	89.780	152.610	6430.55	5922.10	-5253.82	2807.88	1658099.48	14271706.74	39°18'05.284"N	80°56'14.973"W	5957.08	151.878	4.10	
12528.00	89.570	151.840	6431.09	6016.60	-5337.87	2852.15	1658143.73	14271622.72	39°18'04.453"N	80°56'14.411"W	6052.08	151.883	0.84	
12623.00	91.450	156.560	6430.24	6111.35	-5423.37	2893.48	1658185.04	14271537.26	39°18'03.608"N	80°56'13.886"W	6146.97	151.919	5.35	
12717.00	91.350	157.790	6427.95	6205.31	-5509.98	2929.94	1658221.48	14271450.68	39°18'02.752"N	80°56'13.423"W	6240.55	151.988	1.31	
12812.00	90.060	156.940	6426.78	6300.29	-5597.65	2966.50	1658258.02	14271363.04	39°18'01.885"N	80°56'12.958"W	6335.13	152.079	1.63	
12906.00	89.540	157.660	6427.11	6394.28	-5684.37	3002.77	1658294.28	14271276.36	39°18'01.028"N	80°56'12.498"W	6428.74	152.155	0.94	
13001.00	89.940	159.950	6427.54	6489.26	-5772.94	3037.11	1658328.61	14271187.83	39°18'00.152"N	80°56'12.062"W	6523.10	152.251	2.45	
13095.00	89.970	161.610	6427.61	6583.16	-5861.70	3068.06	1658359.54	14271099.11	39°17'59.274"N	80°56'11.669"W	6616.08	152.372	1.77	
13189.00	89.910	162.310	6427.71	6676.94	-5951.07	3097.17	1658388.64	14271009.77	39°17'58.391"N	80°56'11.299"W	6708.78	152.506	0.75	
13283.00	90.740	161.210	6427.18	6770.75	-6040.35	3126.59	1658418.05	14270920.53	39°17'57.508"N	80°56'10.926"W	6801.57	152.633	1.47	
13378.00	90.650	158.570	6426.02	6865.68	-6129.94	3159.25	1658450.70	14270831.37	39°17'56.627"N	80°56'10.511"W	6895.80	152.733	2.78	
13472.00	90.520	156.990	6425.06	6959.67	-6216.55	3194.79	1658486.23	14270744.39	39°17'55.766"N	80°56'10.060"W	6989.44	152.801	1.69	
13567.00	91.170	156.060	6423.66	7054.63	-6303.68	3232.63	1658524.05	14270657.30	39°17'54.905"N	80°56'09.579"W	7084.23	152.851	1.19	
13661.00	91.110	157.460	6421.79	7148.58	-6390.03	3269.71	1658561.12	14270570.98	39°17'54.051"N	80°56'09.108"W	7177.99	152.902	1.49	
13756.00	91.050	156.390	6420.00	7243.54	-6477.42	3306.94	1658598.33	14270483.64	39°17'53.187"N	80°56'08.636"W	7272.74	152.984	1.13	
13851.00	91.020	155.290	6418.29	7338.45	-6564.08	3345.81	1658637.19	14270397.01	39°17'52.330"N	80°56'08.142"W	7367.60	152.991	1.16	
13945.00	90.950	158.640	6416.67	7432.41	-6650.56	3382.58	1658673.94	14270310.56	39°17'51.475"N	80°56'07.675"W	7461.35	153.041	3.56	
14039.00	90.580	158.130	6415.41	7526.40	-6737.94	3417.21	1658708.55	14270223.22	39°17'50.611"N	80°56'07.235"W	7554.94	153.108	0.67	
14134.00	90.710	158.100	6414.34	7621.39	-6826.09	3452.62	1658743.95	14270135.10	39°17'49.740"N	80°56'06.786"W	7649.58	153.170	0.14	



Actual Wellpath Report

Deem Unit 2H AWP Proj: 16303'
Page 13 of 15



REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #02
ANTERO RESOURCES CORPORATION	Well	Deem Unit 2H
Ritchie County, WV	Wellbore	Deem Unit 2H AWB
Ritchie		
Buck Run Pad		

WELLPATH DATA (354 stations)

MD (ft)	Inclination	Azimuth	TVD (ft)	Vert.Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Comments
14228.00	90.310	159.990	6413.51	7715.37	-6913.86	3486.23	1658777.55	14270047.36	39°17'48.872"N	80°56'06.359"W	7743.08	153.241	2.06	
14323.00	89.200	159.620	6413.91	7810.32	-7003.02	3519.02	1658810.33	14269958.24	39°17'47.991"N	80°56'05.943"W	7837.46	153.320	1.23	
14418.00	87.750	157.730	6416.44	7905.28	-7091.48	3553.56	1658844.85	14269869.82	39°17'47.116"N	80°56'05.504"W	7932.01	153.384	2.51	
14512.00	89.880	155.200	6418.39	7999.21	-7177.63	3591.08	1658882.36	14269783.70	39°17'46.264"N	80°56'05.028"W	8025.85	153.420	3.52	
14607.00	87.660	150.770	6420.43	8093.78	-7262.22	3634.21	1658925.47	14269699.15	39°17'45.428"N	80°56'04.480"W	8120.79	153.415	5.21	
14701.00	88.650	153.520	6423.45	8187.22	-7345.28	3678.10	1658969.34	14269616.13	39°17'44.607"N	80°56'03.923"W	8214.71	153.401	3.11	
14796.00	88.650	158.950	6425.69	8282.10	-7432.16	3716.36	1659007.58	14269529.27	39°17'43.748"N	80°56'03.437"W	8309.53	153.433	5.71	
14890.00	88.580	164.320	6427.97	8375.86	-7521.32	3745.95	1659037.17	14269440.15	39°17'42.866"N	80°56'03.061"W	8402.52	153.525	5.71	
14985.00	88.620	165.370	6430.29	8470.17	-7612.98	3770.78	1659061.99	14269348.52	39°17'41.960"N	80°56'02.746"W	8495.67	153.650	1.11	
15080.00	89.660	163.950	6431.71	8564.54	-7704.59	3795.91	1659087.11	14269256.96	39°17'41.055"N	80°56'02.427"W	8588.92	153.771	1.85	
15174.00	91.510	160.920	6430.75	8658.25	-7794.18	3824.27	1659115.46	14269167.40	39°17'40.169"N	80°56'02.067"W	8681.84	153.865	3.78	
15268.00	89.720	158.310	6429.75	8752.19	-7882.28	3857.01	1659148.18	14269079.34	39°17'39.298"N	80°56'01.652"W	8775.36	153.926	3.37	
15363.00	89.480	157.640	6430.41	8847.19	-7970.35	3892.63	1659183.79	14268991.31	39°17'38.427"N	80°56'01.200"W	8870.12	153.970	0.75	
15457.00	89.350	156.320	6431.37	8941.17	-8056.85	3929.39	1659220.53	14268904.83	39°17'37.572"N	80°56'00.733"W	8963.98	154.001	1.41	
15552.00	89.510	158.980	6432.31	9036.15	-8144.70	3965.51	1659256.64	14268817.02	39°17'36.703"N	80°56'00.274"W	9058.78	154.039	2.80	
15646.00	89.140	156.420	6433.42	9130.13	-8231.66	4001.17	1659292.29	14268730.10	39°17'35.844"N	80°55'59.821"W	9152.57	154.077	2.75	
15741.00	89.510	156.990	6434.54	9225.10	-8318.91	4038.74	1659329.84	14268642.88	39°17'34.981"N	80°55'59.344"W	9247.47	154.104	0.72	
15835.00	89.420	156.440	6435.42	9319.07	-8405.25	4075.90	1659366.98	14268556.58	39°17'34.128"N	80°55'58.873"W	9341.37	154.130	0.59	
15930.00	89.140	156.470	6436.61	9414.02	-8492.33	4113.84	1659404.91	14268469.53	39°17'33.267"N	80°55'58.391"W	9436.28	154.154	0.30	
16024.00	89.050	156.940	6438.10	9507.98	-8578.66	4151.01	1659442.06	14268383.24	39°17'32.413"N	80°55'57.919"W	9530.18	154.179	0.51	
16118.00	90.220	159.380	6438.70	9601.97	-8665.90	4185.98	1659477.02	14268296.03	39°17'31.551"N	80°55'57.475"W	9623.94	154.218	2.88	
16213.00	89.380	160.770	6439.03	9696.91	-8755.21	4218.35	1659509.38	14268206.75	39°17'30.668"N	80°55'57.064"W	9718.45	154.275	1.71	
16278.00	89.630	163.540	6439.59	9761.74	-8817.08	4238.27	1659529.28	14268144.91	39°17'30.056"N	80°55'56.811"W	9782.83	154.327	4.28	
16303.00	89.630	163.540	6439.75	9786.62	-8841.05	4245.35	1659536.37	14268120.95	39°17'29.819"N	80°55'56.722"W	9807.51	154.350	0.00	Projected MD at TD: 16303'



Actual Wellpath Report

Deem Unit 2H AWP Proj: 16303'
Page 14 of 15



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #02
Area	Ritchie County, WV	Well	Deem Unit 2H
Field	Ritchie	Wellbore	Deem Unit 2H AWB
Facility	Buck Run Pad		

HOLE & CASING SECTIONS - Ref Wellbore: Deem Unit 2H AWB Ref Wellpath: Deem Unit 2H AWP Proj: 16303'									
String/Diameter	Start MD [ft]	End MD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
20in Conductor	25.00	65.00	120.88	654.80	1655947.26	14277079.28	39°18'58.420"N	80°56'42.320"W	point
13.375in Casing Surface	25.00	555.00	530.00	530.00	1655978.48	14277001.67	39°18'57.652"N	80°56'41.923"W	point
9.625in Casing Intermediate	25.00	2564.00	2539.00	2539.00	1655908.11	14268228.24	39°17'30.880"N	80°55'57.080"W	point
					1655292.72	14276958.45	39°18'57.229"N	80°56'50.652"W	point
					1656038.20	14276853.25	39°18'56.184"N	80°56'41.164"W	point

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Deem Unit 2H POE Rev-1	6412.00	6412.00	120.88	654.80	1655947.26	14277079.28	39°18'58.420"N	80°56'42.320"W	point
Deem Unit 2H POE Rev-2	6412.00	6412.00	43.24	686.04	1655978.48	14277001.67	39°18'57.652"N	80°56'41.923"W	point
Deem Unit 2H BHL Rev-1	6436.00	6436.00	-8733.72	4217.09	1655908.11	14268228.24	39°17'30.880"N	80°55'57.080"W	point
Deem Unit 2H Landing Pt. Rev-1	6436.00	6436.00	0.00	0.00	1655292.72	14276958.45	39°18'57.229"N	80°56'50.652"W	point
Deem Unit 2H Landing Pt. Rev-2	6436.00	6436.00	-105.24	745.78	1656038.20	14276853.25	39°18'56.184"N	80°56'41.164"W	point

WELLPATH COMPOSITION - Ref Wellbore: Deem Unit 2H AWB Ref Wellpath: Deem Unit 2H AWP Proj: 16303'			
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment
25.00	5705.00	Generic gyro - northseeking (Standard)	Wellbore
5705.00	16278.00	NavITrak (AT Curve Short Spaced)	Deem Unit 2H AWB
16278.00	16303.00	Blind Drilling (std)	Deem Unit 2H AWB
			Deem Unit 2H AWB



Actual Wellpath Report

Deem Unit 2H AWP Proj: 16303'
Page 15 of 15



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #02
Area	Ritchie County, WV		Well	Deem Unit 2H
Field	Ritchie		Wellbore	Deem Unit 2H AWB
Facility	Buck Run Pad			

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
112.00	0.100	173.890	112.00	SDI Gyro (112' - 5705')
5875.00	26.220	45.980	5799.77	BHI AT Curve <8-1/2"> (5705') (5875' - 16278')
6409.00	45.238	136.705	6251.65	Middlesex: 6,409' MD
6584.00	61.087	149.392	6355.98	Burkett: 6,584' MD
6645.00	66.495	153.447	6382.98	Tully: 6,645' MD
6704.00	71.587	156.236	6403.97	Marcellus: 6,704' MD
16303.00	89.630	163.540	6439.75	Projected MD at TD: 16303'

COMMENTS

Wellpath general comments
 API: 47-085-10269-0000
 BHI Job #: 7829562
 Rig: Patterson 343
 Duration: 03.03.2016-03.07.2016
 SDI Gyro (112' - 5705')
 BHI AT Curve <8-1/2"> (5705') (5875' - 16278')
 Middlesex: 6,409' MD
 Burkett: 6,584' MD
 Tully: 6,645' MD
 Marcellus: 6,704' MD
 Projected MD at TD: 16303'