



ANTERO RESOURCES CORPORATION

Location: Ritchie County, WV
Field: Ritchie
Facility: Zinn Pad

Slot: Slot #08
Well: Alliance Unit 2H
Wellbore: Alliance Unit 2H.PWB

SDI Gyro Std Keeper (112 - 5197.01') : 0.59° Inc, 112.00ft MD, 112.00ft TVD, 0.34ft VS
BHI AT Curve <8-1/2">(5197.01')(5305-15089) : 5304.49ft TVD, 1.59ft N, 10.15ft E

Marcellus: 6666' MD : 6407.29ft TVD, 439.47ft S, 205.36ft W

Alliance Unit

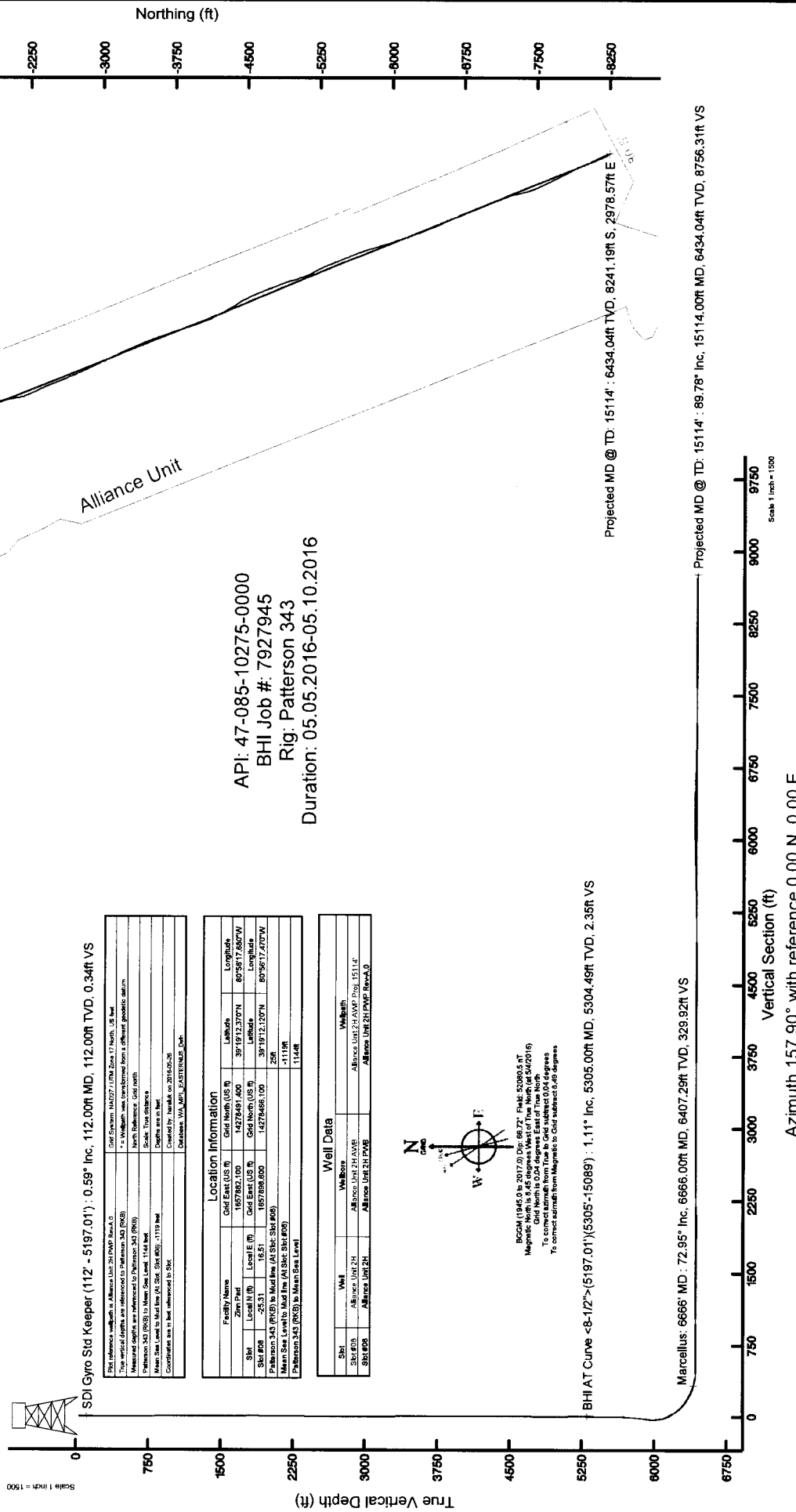
API: 47-085-10275-0000
BHI Job #: 7927945
Rig: Patterson 343
Duration: 05.05.2016-05.10.2016

BHI AT Curve <8-1/2">(5197.01')(5305-15089) : 1.11° Inc, 5305.00ft MD, 5304.49ft TVD, 2.36ft VS

Marcellus: 6666' MD : 72.95° Inc, 6666.00ft MD, 6407.29ft TVD, 329.92ft VS

Projected MD @ TD: 15114' : 6434.04ft TVD, 8241.19ft S, 2978.57ft E

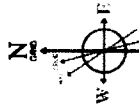
Projected MD @ TD: 15114' : 89.78° Inc, 15114.00ft MD, 6434.04ft TVD, 8756.31ft VS



SDI Gyro Std Keeper (112 - 5197.01') : 0.59° Inc, 112.00ft MD, 112.00ft TVD, 0.34ft VS

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Zinn Pad	1427549.400	391912.370N	39°19'12.370"N	80°56'17.600"W
Local M (ft)	1427549.400	1427549.400	39°19'12.100"N	80°56'17.470"W
Local E (ft)	1877998.000	1427549.400	39°19'12.100"N	80°56'17.470"W
Local N (ft)	1877998.000	1427549.400	39°19'12.100"N	80°56'17.470"W
Local S (ft)	1877998.000	1427549.400	39°19'12.100"N	80°56'17.470"W
Local W (ft)	1877998.000	1427549.400	39°19'12.100"N	80°56'17.470"W
Local E (ft)	1877998.000	1427549.400	39°19'12.100"N	80°56'17.470"W
Local S (ft)	1877998.000	1427549.400	39°19'12.100"N	80°56'17.470"W
Local W (ft)	1877998.000	1427549.400	39°19'12.100"N	80°56'17.470"W
Local E (ft)	1877998.000	1427549.400	39°19'12.100"N	80°56'17.470"W
Local S (ft)	1877998.000	1427549.400	39°19'12.100"N	80°56'17.470"W
Local W (ft)	1877998.000	1427549.400	39°19'12.100"N	80°56'17.470"W

Well Name	Wellbore	Wellbore
Alliance Unit 2H	Alliance Unit 2H.AVE	Alliance Unit 2H.AMP Prog 15114'
Alliance Unit 2H	Alliance Unit 2H.PWB	Alliance Unit 2H.PWB Rev-A.0



BGGM (1945.0 to 2017.0) Dec 98.72° East 50985.07
Magnetic North is 8.45 degrees West of True North (at 542016)
Grid North is 024 degrees East of True North
To convert azimuth from Magnetic to Grid subtract 9.45 degrees
To convert azimuth from Magnetic to Grid subtract 9.45 degrees

Vertical Section (ft)

Azimuth 157.90° with reference 0.00 N, 0.00 E

Scale 1 inch = 1000



Actual Wellpath Report

Alliance Unit 2H AWP Proj: 15114'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Ritchie County, WV	Well	Alliance Unit 2H
Field	Ritchie	Wellbore	Alliance Unit 2H AWB
Facility	Zinn Pad		

REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Hareluk
Scale	0.999600	Report Generated	5/26/2016 at 2:36:13 PM
Convergence at slot	0.04° East	Database/Source file	WA_MPL_EASTERNUS_DefiniAlliance_Unit_2H_AWP_Proj_15114_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-25.31	16.51	1657898.60	14278466.10	39° 19' 12.120" N	80° 56' 17.470" W
Facility Reference Pt			1657882.10	14278491.40	39° 19' 12.370" N	80° 56' 17.680" W
Field Reference Pt			0.00	0.00	0° 00' 00.000" N	85° 29' 19.301" W

WELLPATH DATUM

Calculation method	Minimum curvature	Patterson 343 (RKB) to Facility Vertical Datum	25.00ft
Horizontal Reference Pt	Slot	Patterson 343 (RKB) to Mean Sea Level	1144.00ft
Vertical Reference Pt	Patterson 343 (RKB)	Patterson 343 (RKB) to Mud Line at Slot (Slot #08)	25.00ft
MD Reference Pt	Patterson 343 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	157.90°



Actual Wellpath Report

Alliance Unit 2H AWP Proj: 15114

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Ritchie County, WV	Well	Alliance Unit 2H
Field	Ritchie	Wellbore	Alliance Unit 2H AWB
Facility	Z Inn Pad		

WELLPATH DATA (331 stations) † = interpolated/extrapolated station

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Comments
0.00	0.000	117.340	0.00	0.00	0.00	0.00	1657898.60	14278466.10	39°19'12.120"N	80°56'17.470"W	0.00	0.000	0.00	
25.00	0.000	117.340	25.00	0.00	0.00	0.00	1657898.60	14278466.10	39°19'12.120"N	80°56'17.470"W	0.00	0.000	0.00	
112.00	0.590	117.340	112.00	0.34	-0.21	0.40	1657899.00	14278465.99	39°19'12.118"N	80°56'17.455"W	0.45	117.340	0.68	SDI Gyro Std Keeper (112' - 5197.01)
137.00	0.530	111.290	137.00	0.52	-0.31	0.62	1657899.22	14278465.79	39°19'12.117"N	80°56'17.463"W	0.69	116.331	0.34	
162.00	0.400	114.010	162.00	0.66	-0.38	0.81	1657899.41	14278465.72	39°19'12.116"N	80°56'17.450"W	0.89	115.453	0.53	
187.00	0.250	122.200	187.00	0.77	-0.45	0.93	1657899.53	14278465.65	39°19'12.115"N	80°56'17.459"W	1.04	115.686	0.63	
212.00	0.250	116.270	212.00	0.85	-0.50	1.03	1657899.63	14278465.60	39°19'12.115"N	80°56'17.457"W	1.14	116.024	0.10	
237.00	0.100	107.940	237.00	0.91	-0.53	1.10	1657899.70	14278465.57	39°19'12.115"N	80°56'17.456"W	1.22	115.891	0.61	
262.00	0.110	121.720	262.00	0.94	-0.55	1.14	1657899.74	14278465.55	39°19'12.114"N	80°56'17.456"W	1.27	115.864	0.11	
287.00	0.110	146.450	287.00	0.98	-0.59	1.17	1657899.77	14278465.51	39°19'12.114"N	80°56'17.456"W	1.31	116.537	0.20	
312.00	0.080	80.220	312.00	1.01	-0.60	1.20	1657899.80	14278465.50	39°19'12.114"N	80°56'17.455"W	1.34	116.637	0.44	
337.00	0.060	199.370	337.00	1.02	-0.61	1.21	1657899.81	14278465.49	39°19'12.114"N	80°56'17.455"W	1.36	116.747	0.48	
362.00	0.080	193.880	362.00	1.05	-0.64	1.21	1657899.81	14278465.46	39°19'12.114"N	80°56'17.455"W	1.37	118.005	0.08	
387.00	0.010	291.430	387.00	1.06	-0.66	1.20	1657899.80	14278465.44	39°19'12.113"N	80°56'17.455"W	1.37	118.725	0.33	
412.00	0.080	196.210	412.00	1.07	-0.67	1.19	1657899.79	14278465.43	39°19'12.113"N	80°56'17.455"W	1.37	119.446	0.33	
437.00	0.010	196.340	437.00	1.09	-0.69	1.19	1657899.79	14278465.41	39°19'12.113"N	80°56'17.455"W	1.38	120.239	0.28	
462.00	0.050	212.210	462.00	1.10	-0.70	1.18	1657899.78	14278465.40	39°19'12.113"N	80°56'17.455"W	1.38	120.781	0.16	
487.00	0.050	223.340	487.00	1.11	-0.72	1.17	1657899.77	14278465.38	39°19'12.113"N	80°56'17.456"W	1.37	121.681	0.04	
512.00	0.020	242.450	512.00	1.11	-0.73	1.16	1657899.76	14278465.37	39°19'12.113"N	80°56'17.456"W	1.37	122.285	0.13	
537.00	0.090	203.400	537.00	1.13	-0.75	1.16	1657899.75	14278465.35	39°19'12.112"N	80°56'17.456"W	1.37	123.164	0.26	
562.00	0.140	177.580	562.00	1.17	-0.80	1.14	1657899.74	14278465.30	39°19'12.112"N	80°56'17.456"W	1.39	124.896	0.31	
587.00	0.260	188.850	587.00	1.23	-0.86	1.14	1657899.74	14278465.24	39°19'12.111"N	80°56'17.456"W	1.43	127.133	0.14	
612.00	0.210	190.520	612.00	1.29	-0.94	1.12	1657899.72	14278465.16	39°19'12.111"N	80°56'17.456"W	1.46	129.940	0.20	
637.00	0.240	177.820	637.00	1.38	-1.04	1.12	1657899.72	14278465.06	39°19'12.110"N	80°56'17.456"W	1.52	132.901	0.23	
662.00	0.300	173.640	661.99	1.49	-1.15	1.13	1657899.73	14278464.95	39°19'12.108"N	80°56'17.456"W	1.61	135.733	0.25	
687.00	0.250	170.980	686.99	1.61	-1.27	1.14	1657899.74	14278464.83	39°19'12.107"N	80°56'17.456"W	1.71	138.135	0.21	
712.00	0.370	164.200	711.99	1.74	-1.41	1.17	1657899.77	14278464.70	39°19'12.106"N	80°56'17.456"W	1.83	140.172	0.50	
737.00	0.400	171.140	736.99	1.91	-1.57	1.21	1657899.81	14278464.53	39°19'12.104"N	80°56'17.455"W	1.98	142.423	0.22	
762.00	0.370	162.800	761.99	2.07	-1.73	1.24	1657899.84	14278464.37	39°19'12.103"N	80°56'17.455"W	2.13	144.304	0.25	
787.00	0.420	171.280	786.99	2.24	-1.90	1.28	1657899.88	14278464.20	39°19'12.101"N	80°56'17.454"W	2.29	145.983	0.31	



Actual Wellpath Report

Alliance Unit 2H AWP Proj: 15114'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Ritchie County, WV	Well	Alliance Unit 2H
Field	Ritchie	Wellbore	Alliance Unit 2H AWB
Facility	Zinn Pad		

WELLPATH DATA (331 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
812.00	0.490	160.360	811.99	2.44	-2.09	1.33	1657899.93	14278464.01	39°19'12.099"N	80°56'17.454"W	2.48	147.501	0.44	
837.00	0.620	161.930	836.99	2.68	-2.32	1.41	1657900.01	14278463.78	39°19'12.097"N	80°56'17.453"W	2.72	148.714	0.52	
862.00	0.670	162.130	861.99	2.96	-2.59	1.50	1657900.10	14278463.51	39°19'12.094"N	80°56'17.451"W	2.99	149.957	0.20	
887.00	0.660	165.140	886.99	3.25	-2.87	1.58	1657900.18	14278463.23	39°19'12.092"N	80°56'17.450"W	3.27	151.157	0.15	
912.00	0.690	162.390	911.99	3.54	-3.15	1.66	1657900.26	14278462.95	39°19'12.089"N	80°56'17.449"W	3.56	152.188	0.18	
937.00	0.620	154.180	936.98	3.83	-3.41	1.77	1657900.37	14278462.69	39°19'12.086"N	80°56'17.448"W	3.84	152.656	0.47	
962.00	0.670	157.030	961.98	4.11	-3.67	1.88	1657900.48	14278462.43	39°19'12.084"N	80°56'17.447"W	4.13	152.861	0.24	
987.00	0.670	160.960	986.98	4.40	-3.94	1.99	1657900.59	14278462.16	39°19'12.081"N	80°56'17.445"W	4.42	153.262	0.18	
1012.00	0.560	157.280	1011.98	4.67	-4.19	2.08	1657900.68	14278461.91	39°19'12.078"N	80°56'17.444"W	4.68	153.604	0.47	
1037.00	0.620	165.220	1036.98	4.93	-4.44	2.16	1657900.78	14278461.66	39°19'12.076"N	80°56'17.443"W	4.94	154.011	0.41	
1062.00	0.580	163.140	1061.98	5.19	-4.69	2.23	1657900.83	14278461.41	39°19'12.074"N	80°56'17.442"W	5.20	154.522	0.18	
1087.00	0.600	185.560	1086.98	5.43	-4.94	2.26	1657900.86	14278461.16	39°19'12.071"N	80°56'17.442"W	5.43	155.434	0.92	
1112.00	0.570	193.040	1111.97	5.65	-5.19	2.22	1657900.82	14278460.91	39°19'12.069"N	80°56'17.442"W	5.65	156.871	0.33	
1137.00	0.590	204.560	1136.97	5.84	-5.43	2.14	1657900.74	14278460.67	39°19'12.066"N	80°56'17.443"W	5.84	158.526	0.47	
1162.00	0.550	225.620	1161.97	5.97	-5.63	2.00	1657900.90	14278460.47	39°19'12.064"N	80°56'17.445"W	5.98	160.474	0.85	
1187.00	0.560	237.180	1186.97	6.04	-5.78	1.81	1657900.41	14278460.32	39°19'12.063"N	80°56'17.447"W	6.06	162.629	0.45	
1212.00	0.590	238.430	1211.97	6.08	-5.92	1.60	1657900.20	14278460.19	39°19'12.061"N	80°56'17.450"W	6.13	164.898	0.13	
1237.00	0.620	241.840	1236.97	6.12	-6.05	1.37	1657899.97	14278460.06	39°19'12.060"N	80°56'17.453"W	6.20	167.257	0.19	
1262.00	0.590	248.000	1261.97	6.13	-6.16	1.13	1657899.73	14278459.94	39°19'12.059"N	80°56'17.456"W	6.28	169.613	0.29	
1287.00	0.580	257.420	1286.96	6.11	-6.23	0.89	1657899.49	14278459.87	39°19'12.058"N	80°56'17.459"W	6.30	171.911	0.39	
1312.00	0.600	271.250	1311.96	6.04	-6.26	0.63	1657899.23	14278459.84	39°19'12.058"N	80°56'17.462"W	6.29	174.237	0.57	
1337.00	0.580	281.560	1336.96	5.92	-6.23	0.38	1657898.98	14278459.87	39°19'12.058"N	80°56'17.466"W	6.24	176.539	0.43	
1362.00	0.550	274.340	1361.96	5.79	-6.20	0.13	1657898.73	14278459.91	39°19'12.059"N	80°56'17.469"W	6.20	178.768	0.31	
1387.00	0.480	281.270	1386.96	5.68	-6.17	-0.09	1657898.51	14278459.94	39°19'12.059"N	80°56'17.472"W	6.17	180.828	0.37	
1412.00	0.250	307.630	1411.96	5.58	-6.11	-0.23	1657898.37	14278459.99	39°19'12.059"N	80°56'17.473"W	6.12	182.201	1.12	
1437.00	0.340	44.610	1436.96	5.50	-6.03	-0.23	1657898.37	14278460.08	39°19'12.060"N	80°56'17.473"W	6.03	182.148	1.78	
1462.00	0.630	57.290	1461.96	5.44	-5.90	-0.06	1657898.54	14278460.20	39°19'12.062"N	80°56'17.471"W	5.90	180.567	1.23	
1487.00	0.790	60.570	1486.96	5.40	-5.74	0.21	1657898.81	14278460.36	39°19'12.063"N	80°56'17.468"W	5.74	177.931	0.66	
1512.00	0.880	70.360	1511.95	5.38	-5.59	0.54	1657899.14	14278460.51	39°19'12.065"N	80°56'17.464"W	5.62	174.501	0.67	
1537.00	0.990	66.440	1536.95	5.38	-5.44	0.92	1657899.52	14278460.66	39°19'12.066"N	80°56'17.459"W	5.52	170.433	0.51	



Actual Wellpath Report

Alliance Unit 2H AWP Proj: 15114'
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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #08
Operator	ANTERO RESOURCES CORPORATION	Well	Alliance Unit 2H
Area	Ritchie County, WV	Wellbore	Alliance Unit 2H AWB
Field	Ritchie		
Facility	Zinn Pad		

WELLPATH DATA (331 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
1562.00	0.890	85.750	1561.95	5.44	-5.34	1.31	1657899.91	14278460.76	39°19'12.067"N	80°56'17.454"W	5.50	166.231	1.32	
1587.00	0.930	98.500	1586.94	5.60	-5.36	1.70	1657900.30	14278460.75	39°19'12.067"N	80°56'17.449"W	5.82	162.362	0.82	
1612.00	0.910	112.500	1611.94	5.85	-5.46	2.09	1657900.69	14278460.64	39°19'12.066"N	80°56'17.444"W	5.85	159.088	0.90	
1637.00	0.800	125.240	1636.94	6.13	-5.64	2.41	1657901.01	14278460.46	39°19'12.064"N	80°56'17.440"W	6.13	156.832	0.88	
1662.00	0.810	172.460	1661.94	6.41	-5.87	2.57	1657901.37	14278460.23	39°19'12.062"N	80°56'17.438"W	6.41	156.335	2.36	
1687.00	0.810	207.940	1686.93	6.65	-6.16	2.51	1657901.11	14278459.91	39°19'12.059"N	80°56'17.439"W	6.65	157.847	1.89	
1712.00	0.970	216.450	1711.93	6.87	-6.49	2.30	1657900.90	14278459.62	39°19'12.056"N	80°56'17.441"W	6.88	160.481	0.83	
1737.00	1.090	219.870	1736.93	7.10	-6.84	2.02	1657900.62	14278459.26	39°19'12.052"N	80°56'17.445"W	7.13	163.536	0.54	
1762.00	1.400	226.450	1761.92	7.32	-7.23	1.65	1657900.25	14278458.87	39°19'12.048"N	80°56'17.450"W	7.42	167.168	1.36	
1787.00	1.320	228.110	1786.91	7.53	-7.63	1.21	1657899.81	14278458.47	39°19'12.044"N	80°56'17.455"W	7.73	170.982	0.36	
1812.00	1.380	232.580	1811.91	7.71	-8.01	0.76	1657899.36	14278458.09	39°19'12.041"N	80°56'17.461"W	8.05	174.593	0.48	
1837.00	0.990	247.830	1836.90	7.79	-8.27	0.32	1657898.92	14278457.83	39°19'12.038"N	80°56'17.466"W	8.28	177.792	1.99	
1862.00	0.860	271.200	1861.90	7.71	-8.35	-0.07	1657898.53	14278457.75	39°19'12.037"N	80°56'17.471"W	8.35	180.471	1.58	
1887.00	0.860	276.870	1886.90	7.55	-8.32	-0.44	1657898.16	14278457.78	39°19'12.038"N	80°56'17.476"W	8.34	183.042	0.34	
1912.00	0.910	277.470	1911.89	7.36	-8.28	-0.83	1657897.77	14278457.83	39°19'12.038"N	80°56'17.481"W	8.32	185.696	0.20	
1937.00	0.880	273.230	1936.89	7.18	-8.24	-1.21	1657897.39	14278457.86	39°19'12.038"N	80°56'17.486"W	8.33	188.382	0.29	
1962.00	0.880	277.060	1961.89	7.00	-8.21	-1.60	1657897.00	14278457.90	39°19'12.039"N	80°56'17.491"W	8.36	191.009	0.24	
1987.00	0.990	272.140	1986.88	6.82	-8.17	-2.00	1657896.60	14278457.93	39°19'12.039"N	80°56'17.496"W	8.42	193.766	0.54	
2012.00	0.990	276.650	2011.88	6.63	-8.14	-2.43	1657896.17	14278457.96	39°19'12.039"N	80°56'17.501"W	8.50	196.639	0.31	
2037.00	0.850	297.220	2036.88	6.38	-8.03	-2.81	1657895.79	14278458.07	39°19'12.041"N	80°56'17.506"W	8.51	198.300	1.42	
2062.00	0.830	307.150	2061.87	6.09	-7.84	-3.12	1657895.48	14278458.27	39°19'12.042"N	80°56'17.510"W	8.44	201.719	0.59	
2087.00	0.830	326.010	2086.87	5.75	-7.58	-3.37	1657895.23	14278458.53	39°19'12.045"N	80°56'17.513"W	8.29	203.959	1.09	
2112.00	0.780	338.830	2111.87	5.41	-7.27	-3.53	1657895.07	14278458.83	39°19'12.048"N	80°56'17.515"W	8.08	205.903	0.75	
2137.00	0.710	340.750	2136.87	5.08	-6.96	-3.64	1657894.96	14278459.14	39°19'12.051"N	80°56'17.517"W	7.86	207.612	0.30	
2162.00	0.660	353.800	2161.87	4.76	-6.67	-3.71	1657894.89	14278459.43	39°19'12.054"N	80°56'17.518"W	7.64	209.062	0.65	
2187.00	0.690	346.790	2186.86	4.50	-6.38	-3.76	1657894.84	14278459.72	39°19'12.057"N	80°56'17.518"W	7.41	210.488	0.35	
2212.00	0.720	346.770	2211.86	4.20	-6.09	-3.83	1657894.77	14278460.02	39°19'12.060"N	80°56'17.519"W	7.19	212.182	0.12	
2237.00	0.570	343.760	2236.86	3.92	-5.81	-3.90	1657894.70	14278460.29	39°19'12.062"N	80°56'17.520"W	7.00	213.859	0.61	
2262.00	0.660	343.230	2261.86	3.65	-5.56	-3.98	1657894.63	14278460.55	39°19'12.065"N	80°56'17.521"W	6.83	215.593	0.36	
2287.00	0.530	355.140	2286.86	3.40	-5.30	-4.03	1657894.57	14278460.80	39°19'12.068"N	80°56'17.522"W	6.66	217.220	0.72	



Actual Wellpath Report

Alliance Unit 2H AWP Proj: 15114'

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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #08
Operator	ANTERO RESOURCES CORPORATION	Well	Alliance Unit 2H
Area	Ritchie County, WV	Wellbore	Alliance Unit 2H AWB
Field	Ritchie		
Facility	Zinn Pad		

WELLPATH DATA (331 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
2312.00	0.570	340.740	2311.86	3.16	-5.07	-4.08	1657894.52	14278461.03	39°19'12.070"N	80°56'17.522"W	6.51	218.815	0.57	
2337.00	0.620	351.900	2336.85	2.91	-4.82	-4.14	1657894.46	14278461.28	39°19'12.072"N	80°56'17.523"W	6.35	220.659	0.50	
2362.00	0.590	351.650	2361.85	2.65	-4.56	-4.18	1657894.43	14278461.54	39°19'12.075"N	80°56'17.524"W	6.18	222.502	0.12	
2387.00	0.650	343.740	2386.85	2.39	-4.29	-4.23	1657894.37	14278461.81	39°19'12.077"N	80°56'17.524"W	6.03	224.603	0.42	
2412.00	0.840	347.610	2411.85	2.06	-3.98	-4.31	1657894.29	14278462.12	39°19'12.081"N	80°56'17.525"W	5.87	227.314	0.79	
2437.00	0.740	327.880	2436.85	1.72	-3.66	-4.44	1657894.16	14278462.44	39°19'12.084"N	80°56'17.527"W	5.76	230.471	1.15	
2462.00	0.570	327.520	2461.85	1.44	-3.42	-4.59	1657894.01	14278462.68	39°19'12.086"N	80°56'17.529"W	5.73	233.303	0.68	
2487.00	0.630	319.490	2486.84	1.19	-3.21	-4.75	1657893.85	14278462.89	39°19'12.088"N	80°56'17.531"W	5.73	235.920	0.41	
2512.01	0.600	317.740	2511.85	0.94	-3.01	-4.92	1657893.68	14278463.09	39°19'12.090"N	80°56'17.533"W	5.77	238.564	0.14	
2537.01	0.660	316.780	2536.85	0.69	-2.81	-5.11	1657893.49	14278463.29	39°19'12.092"N	80°56'17.536"W	5.83	241.212	0.24	
2562.01	0.650	310.430	2561.85	0.42	-2.61	-5.32	1657893.28	14278463.49	39°19'12.094"N	80°56'17.538"W	5.92	243.844	0.29	
2587.01	0.690	314.410	2586.85	0.16	-2.42	-5.53	1657893.07	14278463.68	39°19'12.096"N	80°56'17.541"W	6.04	246.408	0.22	
2612.01	0.760	312.210	2611.85	-0.13	-2.20	-5.76	1657892.84	14278463.90	39°19'12.098"N	80°56'17.544"W	6.17	249.092	0.34	
2637.01	0.670	310.140	2636.84	-0.41	-2.00	-6.00	1657892.61	14278464.11	39°19'12.100"N	80°56'17.547"W	6.32	251.593	0.37	
2662.01	0.710	310.270	2661.84	-0.67	-1.80	-6.23	1657892.38	14278464.30	39°19'12.102"N	80°56'17.550"W	6.48	253.866	0.18	
2687.01	0.480	325.600	2686.84	-0.91	-1.61	-6.40	1657892.20	14278464.49	39°19'12.104"N	80°56'17.552"W	6.60	255.849	1.11	
2712.01	0.540	36.830	2711.84	-1.08	-1.43	-6.39	1657892.21	14278464.67	39°19'12.106"N	80°56'17.552"W	6.55	257.357	2.38	
2737.01	1.110	70.490	2736.84	-1.13	-1.26	-6.09	1657892.51	14278464.84	39°19'12.107"N	80°56'17.548"W	6.22	258.329	2.90	
2762.01	1.170	65.750	2761.83	-1.12	-1.07	-5.63	1657892.97	14278465.03	39°19'12.109"N	80°56'17.542"W	5.73	259.215	0.45	
2787.01	1.120	70.730	2786.83	-1.12	-0.89	-5.17	1657893.43	14278465.21	39°19'12.111"N	80°56'17.536"W	5.24	260.258	0.45	
2812.01	1.100	65.560	2811.82	-1.12	-0.71	-4.72	1657893.88	14278465.39	39°19'12.113"N	80°56'17.531"W	4.77	261.475	0.41	
2837.01	0.980	63.910	2836.82	-1.14	-0.51	-4.31	1657894.29	14278465.59	39°19'12.115"N	80°56'17.525"W	4.34	263.196	0.49	
2862.01	0.820	51.470	2861.82	-1.21	-0.31	-3.98	1657894.63	14278465.79	39°19'12.117"N	80°56'17.521"W	3.99	265.563	1.01	
2887.01	0.770	56.950	2886.81	-1.29	-0.11	-3.70	1657894.91	14278465.99	39°19'12.119"N	80°56'17.517"W	3.70	268.364	0.36	
2912.01	0.810	49.560	2911.81	-1.38	0.10	-3.42	1657895.18	14278466.20	39°19'12.121"N	80°56'17.514"W	3.42	271.686	0.44	
2937.01	0.820	49.120	2936.81	-1.49	0.33	-3.15	1657895.45	14278466.43	39°19'12.123"N	80°56'17.511"W	3.17	276.022	0.05	
2962.01	0.800	53.810	2961.81	-1.59	0.55	-2.87	1657895.73	14278466.65	39°19'12.125"N	80°56'17.507"W	2.93	280.880	0.28	
2987.01	0.780	50.620	2986.80	-1.69	0.76	-2.60	1657896.00	14278466.86	39°19'12.127"N	80°56'17.504"W	2.71	286.353	0.19	
3012.01	0.830	53.760	3011.80	-1.78	0.98	-2.32	1657896.28	14278467.08	39°19'12.130"N	80°56'17.500"W	2.52	292.829	0.27	
3037.01	0.740	61.380	3036.80	-1.84	1.16	-2.04	1657896.56	14278467.26	39°19'12.131"N	80°56'17.498"W	2.35	299.724	0.55	



Actual Wellpath Report

Alliance Unit 2H AWP Proj: 15114'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Ritchie County, WV	Well	Alliance Unit 2H
Field	Ritchie	Wellbore	Alliance Unit 2H AWB
Facility	Zinn Pad		

WELLPATH DATA (331 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
3062.01	0.750	114.590	3061.80	-1.74	1.17	-1.75	1657896.85	14278467.27	39°19'12.131"N	80°56'17.493"W	2.10	303.870	2.67	
3067.01	1.120	137.730	3086.79	-1.39	0.92	-1.43	1657897.17	14278467.02	39°19'12.129"N	80°56'17.489"W	1.70	302.790	2.09	
3112.01	1.260	138.650	3111.79	-0.91	0.54	-1.09	1657897.51	14278466.64	39°19'12.125"N	80°56'17.484"W	1.21	296.248	0.57	
3137.01	1.130	137.500	3136.78	-0.42	0.15	-0.74	1657897.86	14278466.25	39°19'12.121"N	80°56'17.480"W	0.75	281.326	0.53	
3162.01	1.170	137.520	3161.78	0.08	-0.22	-0.40	1657898.20	14278465.88	39°19'12.118"N	80°56'17.476"W	0.46	240.991	0.16	
3187.01	1.110	137.970	3186.77	0.52	-0.59	-0.07	1657898.53	14278465.51	39°19'12.114"N	80°56'17.471"W	0.59	186.358	0.24	
3212.01	0.950	133.980	3211.77	0.94	-0.91	0.25	1657898.85	14278465.19	39°19'12.111"N	80°56'17.467"W	0.95	164.962	0.70	
3237.01	0.900	131.270	3236.77	1.30	-1.19	0.54	1657899.14	14278464.91	39°19'12.108"N	80°56'17.464"W	1.31	155.454	0.27	
3262.01	0.870	131.580	3261.76	1.65	-1.44	0.83	1657899.43	14278464.66	39°19'12.106"N	80°56'17.460"W	1.67	150.036	0.12	
3287.01	0.910	132.780	3286.76	2.00	-1.70	1.12	1657899.72	14278464.40	39°19'12.103"N	80°56'17.456"W	2.04	146.690	0.18	
3312.01	0.890	134.180	3311.76	2.36	-1.97	1.40	1657900.00	14278464.13	39°19'12.100"N	80°56'17.453"W	2.42	144.566	0.12	
3337.01	0.920	132.410	3336.75	2.72	-2.24	1.69	1657900.29	14278463.86	39°19'12.098"N	80°56'17.449"W	2.81	142.990	0.16	
3362.01	0.930	132.960	3361.75	3.08	-2.52	1.99	1657900.59	14278463.58	39°19'12.095"N	80°56'17.445"W	3.21	141.701	0.05	
3387.01	0.930	132.480	3386.75	3.45	-2.79	2.29	1657900.89	14278463.31	39°19'12.092"N	80°56'17.441"W	3.61	140.696	0.03	
3412.01	0.920	130.900	3411.74	3.81	-3.06	2.59	1657901.19	14278463.04	39°19'12.090"N	80°56'17.438"W	4.01	139.793	0.11	
3437.01	0.940	133.010	3436.74	4.17	-3.33	2.88	1657901.48	14278462.77	39°19'12.087"N	80°56'17.434"W	4.40	139.085	0.14	
3462.01	0.940	133.330	3461.74	4.54	-3.60	3.18	1657901.78	14278462.50	39°19'12.084"N	80°56'17.430"W	4.81	138.589	0.12	
3487.01	0.930	132.790	3486.73	4.91	-3.88	3.48	1657902.08	14278462.22	39°19'12.081"N	80°56'17.426"W	5.21	138.157	0.05	
3512.01	0.910	132.620	3511.73	5.27	-4.16	3.77	1657902.37	14278461.95	39°19'12.079"N	80°56'17.422"W	5.61	137.768	0.08	
3537.01	0.990	131.900	3536.73	5.64	-4.43	4.08	1657902.68	14278461.67	39°19'12.076"N	80°56'17.419"W	6.02	137.387	0.29	
3562.01	0.910	133.980	3561.72	6.01	-4.71	4.38	1657902.98	14278461.39	39°19'12.073"N	80°56'17.415"W	6.43	137.096	0.31	
3587.01	0.570	157.170	3586.72	6.32	-4.97	4.57	1657903.17	14278461.14	39°19'12.071"N	80°56'17.412"W	6.75	137.367	1.79	
3612.01	0.660	249.970	3611.72	6.44	-5.13	4.48	1657903.08	14278460.97	39°19'12.069"N	80°56'17.413"W	6.81	138.840	3.57	
3637.01	0.720	255.960	3636.72	6.41	-5.22	4.20	1657902.79	14278460.89	39°19'12.068"N	80°56'17.417"W	6.69	141.186	0.37	
3662.01	0.730	257.060	3661.72	6.36	-5.29	3.89	1657902.49	14278460.81	39°19'12.066"N	80°56'17.421"W	6.57	143.664	0.06	
3687.01	0.700	253.830	3686.72	6.32	-5.37	3.59	1657902.19	14278460.73	39°19'12.066"N	80°56'17.425"W	6.46	146.216	0.18	
3712.01	0.680	255.250	3711.71	6.29	-5.45	3.30	1657901.90	14278460.65	39°19'12.066"N	80°56'17.428"W	6.37	148.788	0.11	
3737.01	0.550	251.990	3736.71	6.26	-5.52	3.04	1657901.64	14278460.58	39°19'12.065"N	80°56'17.432"W	6.31	151.142	0.54	
3762.01	0.490	253.410	3761.71	6.24	-5.59	2.83	1657901.43	14278460.51	39°19'12.065"N	80°56'17.435"W	6.26	153.176	0.25	
3787.01	0.410	257.710	3786.71	6.22	-5.64	2.64	1657901.24	14278460.46	39°19'12.064"N	80°56'17.437"W	6.23	154.941	0.35	



Actual Wellpath Report

Alliance Unit 2H AWP Proj: 15114'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Ritchie County, WV	Well	Alliance Unit 2H
Field	Ritchie	Wellbore	Alliance Unit 2H AWB
Facility	Zinn Pad		

WELLPATH DATA (331 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
3812.01	0.330	271.030	3811.71	6.17	-5.66	2.48	1657901.08	14278460.44	39°19'12.064"N	80°56'17.439"W	6.18	156.351	0.47	
3837.01	0.290	294.840	3836.71	6.10	-5.63	2.35	1657900.95	14278460.47	39°19'12.064"N	80°56'17.441"W	6.10	157.359	0.54	
3862.01	0.270	312.600	3861.71	6.00	-5.56	2.25	1657900.85	14278460.54	39°19'12.065"N	80°56'17.442"W	6.00	158.003	0.35	
3887.01	0.230	320.950	3886.71	5.90	-5.48	2.17	1657900.77	14278460.62	39°19'12.066"N	80°56'17.443"W	5.90	158.391	0.22	
3912.01	0.320	332.240	3911.71	5.78	-5.38	2.11	1657900.71	14278460.72	39°19'12.067"N	80°56'17.444"W	5.78	158.614	0.42	
3937.01	0.280	327.740	3936.71	5.65	-5.27	2.04	1657900.64	14278460.83	39°19'12.068"N	80°56'17.445"W	5.65	158.810	0.19	
3962.01	0.210	336.930	3961.71	5.55	-5.18	1.99	1657900.59	14278460.93	39°19'12.069"N	80°56'17.445"W	5.55	158.947	0.32	
3987.01	0.210	353.430	3986.71	5.46	-5.09	1.97	1657900.57	14278461.01	39°19'12.070"N	80°56'17.445"W	5.46	158.843	0.24	
4012.01	0.310	358.920	4011.71	5.35	-4.98	1.96	1657900.56	14278461.13	39°19'12.071"N	80°56'17.446"W	5.35	158.471	0.41	
4037.01	0.260	6.470	4036.71	5.24	-4.86	1.97	1657900.57	14278461.25	39°19'12.072"N	80°56'17.445"W	5.24	157.921	0.25	
4062.01	0.310	16.770	4061.71	5.13	-4.73	1.99	1657900.59	14278461.37	39°19'12.073"N	80°56'17.445"W	5.13	157.145	0.29	
4087.01	0.310	27.310	4086.71	5.04	-4.61	2.04	1657900.64	14278461.50	39°19'12.074"N	80°56'17.444"W	5.04	156.064	0.23	
4112.01	0.330	31.920	4111.71	4.95	-4.48	2.11	1657900.71	14278461.62	39°19'12.076"N	80°56'17.444"W	4.96	154.765	0.13	
4137.01	0.360	43.640	4136.71	4.88	-4.37	2.21	1657900.80	14278461.74	39°19'12.077"N	80°56'17.442"W	4.89	153.199	0.31	
4162.01	0.340	46.540	4161.71	4.82	-4.26	2.31	1657900.91	14278461.84	39°19'12.078"N	80°56'17.441"W	4.85	151.484	0.11	
4187.01	0.460	55.890	4186.70	4.77	-4.15	2.45	1657901.05	14278461.95	39°19'12.079"N	80°56'17.439"W	4.82	149.444	0.54	
4212.01	0.520	49.680	4211.70	4.71	-4.02	2.62	1657901.22	14278462.08	39°19'12.080"N	80°56'17.437"W	4.80	146.913	0.32	
4237.01	0.510	51.220	4236.70	4.64	-3.88	2.79	1657901.39	14278462.22	39°19'12.082"N	80°56'17.435"W	4.78	144.236	0.07	
4262.01	0.550	38.430	4261.70	4.55	-3.71	2.95	1657901.55	14278462.39	39°19'12.083"N	80°56'17.433"W	4.75	141.501	0.50	
4287.01	0.640	54.060	4286.70	4.46	-3.54	3.14	1657901.74	14278462.56	39°19'12.085"N	80°56'17.430"W	4.73	138.398	0.74	
4312.01	0.730	54.040	4311.70	4.39	-3.36	3.38	1657901.98	14278462.74	39°19'12.087"N	80°56'17.427"W	4.77	134.822	0.36	
4337.01	0.780	52.270	4336.70	4.31	-3.17	3.65	1657902.25	14278462.94	39°19'12.089"N	80°56'17.424"W	4.83	130.953	0.22	
4362.01	0.780	50.500	4361.69	4.21	-2.95	3.91	1657902.51	14278463.15	39°19'12.091"N	80°56'17.421"W	4.90	127.039	0.10	
4387.01	0.810	53.570	4386.69	4.11	-2.74	4.19	1657902.79	14278463.36	39°19'12.093"N	80°56'17.417"W	5.00	123.202	0.21	
4412.01	0.840	60.510	4411.69	4.05	-2.55	4.49	1657903.09	14278463.56	39°19'12.095"N	80°56'17.413"W	5.16	118.552	0.42	
4437.01	1.050	83.700	4436.69	4.09	-2.43	4.88	1657903.47	14278463.77	39°19'12.096"N	80°56'17.408"W	5.45	116.487	1.73	
4462.01	0.990	78.560	4461.68	4.19	-2.36	5.32	1657903.91	14278463.91	39°19'12.097"N	80°56'17.403"W	5.82	113.958	0.44	
4487.01	0.740	87.990	4486.68	4.28	-2.31	5.59	1657904.29	14278463.79	39°19'12.097"N	80°56'17.398"W	6.14	112.129	1.14	
4512.01	0.530	79.890	4511.68	4.36	-2.29	5.96	1657904.56	14278463.81	39°19'12.097"N	80°56'17.395"W	6.39	110.981	0.91	
4537.01	0.500	78.930	4536.68	4.41	-2.25	6.18	1657904.78	14278463.96	39°19'12.098"N	80°56'17.392"W	6.58	109.955	0.13	



Actual Wellpath Report

Alliance Unit 2H AWP Proj: 15114'

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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #08
Operator	ANTERO RESOURCES CORPORATION	Well	Alliance Unit 2H
Area	Ritchie County, WV	Wellbore	Alliance Unit 2H AWB
Field	Ritchie		
Facility	Zinn Pad		

WELLPATH DATA (331 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
4562.01	0.500	69.100	4561.68	4.43	-2.19	6.39	1657904.99	14278463.92	39°19'12.098"N	80°56'17.389"W	6.76	108.872	0.34	
4587.01	0.530	61.960	4586.67	4.42	-2.09	6.60	1657905.19	14278464.01	39°19'12.099"N	80°56'17.387"W	6.92	107.595	0.28	
4612.01	0.550	346.650	4611.67	4.29	-1.92	6.67	1657905.27	14278464.18	39°19'12.101"N	80°56'17.386"W	6.94	106.064	2.64	
4637.01	0.910	330.720	4636.67	3.97	-1.63	6.55	1657905.14	14278464.47	39°19'12.104"N	80°56'17.387"W	6.75	103.991	1.64	
4662.01	0.950	326.500	4661.67	3.57	-1.29	6.34	1657904.93	14278464.82	39°19'12.107"N	80°56'17.390"W	6.48	101.468	0.32	
4687.01	1.030	324.700	4686.66	3.15	-0.93	6.09	1657904.69	14278465.17	39°19'12.111"N	80°56'17.393"W	6.16	98.672	0.34	
4712.01	0.890	333.690	4711.66	2.74	-0.57	5.88	1657904.47	14278465.53	39°19'12.114"N	80°56'17.396"W	5.90	95.557	0.82	
4737.01	1.060	336.060	4736.66	2.32	-0.19	5.70	1657904.29	14278465.91	39°19'12.118"N	80°56'17.398"W	5.70	91.873	0.70	
4762.01	1.070	26.610	4761.65	1.93	0.23	5.71	1657904.30	14278466.33	39°19'12.122"N	80°56'17.398"W	5.71	87.653	3.64	
4787.01	1.580	46.450	4786.65	1.85	0.68	6.06	1657904.96	14278466.78	39°19'12.127"N	80°56'17.393"W	6.10	83.623	2.66	
4812.01	1.720	47.230	4811.64	1.39	1.17	6.58	1657905.18	14278467.27	39°19'12.131"N	80°56'17.387"W	6.68	79.949	0.65	
4837.01	1.700	49.010	4836.63	1.14	1.66	7.13	1657905.73	14278467.76	39°19'12.136"N	80°56'17.380"W	7.33	76.870	0.23	
4862.01	1.460	49.430	4861.62	0.92	2.11	7.66	1657906.25	14278468.21	39°19'12.141"N	80°56'17.373"W	7.94	74.561	0.96	
4887.01	1.400	39.950	4886.61	0.68	2.56	8.09	1657906.89	14278468.65	39°19'12.145"N	80°56'17.367"W	8.49	72.477	0.98	
4912.01	1.490	33.570	4911.60	0.35	3.06	8.47	1657907.07	14278469.16	39°19'12.150"N	80°56'17.363"W	9.01	70.133	0.74	
4937.01	1.390	25.220	4936.59	-0.04	3.61	8.78	1657907.38	14278469.70	39°19'12.155"N	80°56'17.359"W	9.49	67.671	0.93	
4962.01	1.370	30.030	4961.59	-0.43	4.14	9.06	1657907.65	14278470.24	39°19'12.161"N	80°56'17.355"W	9.96	65.443	0.47	
4987.01	0.950	56.370	4986.58	-0.65	4.51	9.38	1657907.98	14278470.61	39°19'12.164"N	80°56'17.351"W	10.41	64.310	2.67	
5012.01	0.910	123.050	5011.58	-0.53	4.52	9.72	1657908.32	14278470.62	39°19'12.164"N	80°56'17.347"W	10.72	65.064	4.09	
5037.01	1.580	157.760	5036.57	-0.02	4.09	10.02	1657908.61	14278470.19	39°19'12.160"N	80°56'17.343"W	10.82	67.779	3.92	
5062.01	2.270	164.680	5061.56	0.81	3.30	10.28	1657908.87	14278469.39	39°19'12.152"N	80°56'17.340"W	10.79	72.223	2.91	
5087.01	2.290	170.170	5086.54	1.79	2.33	10.49	1657909.09	14278468.42	39°19'12.143"N	80°56'17.337"W	10.75	77.504	0.88	
5112.01	2.030	168.340	5111.52	2.72	1.40	10.67	1657909.26	14278467.50	39°19'12.134"N	80°56'17.333"W	10.76	82.525	1.08	
5137.01	1.150	170.650	5136.51	3.40	0.72	10.80	1657909.39	14278466.82	39°19'12.127"N	80°56'17.333"W	10.82	86.193	3.53	
5162.01	0.470	168.400	5161.51	3.74	0.37	10.86	1657909.46	14278466.47	39°19'12.123"N	80°56'17.332"W	10.87	88.046	2.72	
5187.01	0.150	318.350	5186.51	3.81	0.29	10.86	1657909.45	14278466.39	39°19'12.123"N	80°56'17.333"W	10.86	88.446	2.42	
5197.01	0.410	323.970	5196.51	3.77	0.33	10.83	1657909.42	14278466.43	39°19'12.123"N	80°56'17.333"W	10.83	88.237	2.61	
5305.00	1.110	334.230	5304.49	2.35	1.59	10.15	1657908.74	14278467.69	39°19'12.136"N	80°56'17.341"W	10.27	81.107	0.66	BHIAT Curve <8-1/2">(5197.01)(5305-15089)
5380.00	0.310	343.030	5379.48	1.42	2.44	9.77	1657908.37	14278468.54	39°19'12.144"N	80°56'17.346"W	10.07	76.002	1.07	
5474.00	0.170	181.170	5473.48	1.29	2.54	9.89	1657908.29	14278468.84	39°19'12.145"N	80°56'17.347"W	10.02	75.320	0.50	



Actual Wellpath Report

Alliance Unit 2H AWP Proj: 15114'

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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #08
Operator	ANTERO RESOURCES CORPORATION	Well	Alliance Unit 2H
Area	Ritchie County, WV	Wellbore	Alliance Unit 2H AWB
Field	Ritchie		
Facility	Zinn Pad		

WELLPATH DATA (331 stations) † = interpolated/extrapolated station														
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert.Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist. (ft)	Closure Dir. (°)	DLS (ft/100ft)	Comments
5569.00	1.500	264.280	5568.47	1.07	2.27	8.45	1657907.05	14278468.37	39°19'12.142"N	80°56'17.363"W	8.78	74.940	1.57	
5617.00	6.130	268.770	5616.35	-0.02	2.16	5.27	1657903.86	14278468.26	39°19'12.141"N	80°56'17.403"W	5.69	67.722	9.66	
5664.00	9.290	268.870	5662.92	-2.27	2.03	-1.04	1657897.56	14278468.13	39°19'12.140"N	80°56'17.484"W	2.28	332.909	6.72	
5709.00	13.130	264.790	5707.05	-5.06	1.49	-9.76	1657888.84	14278467.59	39°19'12.135"N	80°56'17.595"W	9.88	278.693	8.71	
5758.00	17.640	262.020	5754.29	-8.49	-0.04	-23.66	1657875.94	14278466.06	39°19'12.120"N	80°56'17.759"W	22.66	269.988	9.32	
5805.00	22.220	259.830	5798.46	-12.06	-2.60	-38.47	1657860.14	14278463.50	39°19'12.094"N	80°56'17.960"W	38.56	266.129	9.87	
5847.00	26.540	261.360	5836.71	-15.89	-5.42	-55.57	1657843.05	14278460.69	39°19'12.067"N	80°56'18.178"W	55.84	264.433	10.39	
5898.00	30.800	263.320	5881.44	-22.02	-8.65	-79.82	1657818.81	14278457.45	39°19'12.035"N	80°56'18.486"W	80.29	263.816	8.55	
5942.00	34.840	263.900	5918.41	-28.48	-11.30	-103.51	1657795.13	14278454.81	39°19'12.009"N	80°56'18.788"W	104.13	263.772	9.21	
5986.00	36.400	267.890	5954.19	-34.16	-15.42	-128.78	1657769.88	14278450.69	39°19'11.988"N	80°56'19.109"W	129.70	263.172	8.98	
6036.00	35.190	245.230	5994.80	-36.03	-24.62	-156.40	1657742.27	14278441.49	39°19'11.878"N	80°56'19.461"W	158.32	261.054	14.67	
6081.00	34.730	233.320	6031.72	-32.21	-37.71	-178.48	1657720.19	14278428.40	39°19'11.748"N	80°56'19.742"W	182.42	258.069	15.26	
6130.00	34.540	272.800	6072.08	-22.69	-56.34	-199.05	1657699.63	14278409.78	39°19'11.564"N	80°56'20.004"W	206.87	254.197	12.74	
6177.00	35.430	213.970	6110.61	-9.33	-77.50	-215.64	1657683.04	14278388.63	39°19'11.355"N	80°56'20.215"W	229.15	250.233	10.37	
6220.00	38.980	198.030	6185.07	27.68	-127.35	-240.06	1657658.63	14278338.80	39°19'10.863"N	80°56'20.526"W	271.75	242.054	12.44	
6256.00	36.530	206.260	6149.47	7.94	-101.86	-229.75	1657688.84	14278364.28	39°19'11.115"N	80°56'20.395"W	251.32	246.089	9.71	
6319.00	42.440	190.500	6222.23	53.41	-158.29	-247.85	1657650.85	14278307.87	39°19'10.557"N	80°56'20.625"W	294.09	237.436	12.25	
6363.00†	45.986	184.762	6253.78	80.05	-188.68	-251.87	1657646.83	14278277.50	39°19'10.257"N	80°56'20.677"W	314.71	233.163	12.15	Middlesex: 6363 MD
6364.00	46.070	184.640	6254.47	80.70	-189.40	-251.93	1657646.77	14278276.78	39°19'10.250"N	80°56'20.678"W	315.18	233.065	12.15	
6413.00	50.420	179.560	6287.11	114.03	-225.90	-253.22	1657645.49	14278240.30	39°19'09.889"N	80°56'20.694"W	339.33	228.264	11.77	
6462.00	55.110	175.610	6316.75	150.76	-264.85	-251.53	1657647.17	14278201.36	39°19'09.504"N	80°56'20.673"W	365.26	223.523	11.52	
6508.00	58.840	172.800	6341.82	187.77	-303.20	-247.62	1657651.08	14278163.02	39°19'09.125"N	80°56'20.624"W	391.47	219.238	9.59	
6542.00†	61.630	168.889	6358.71	216.52	-332.33	-242.91	1657655.79	14278133.91	39°19'08.837"N	80°56'20.564"W	411.64	216.165	12.92	Burkett: 6542 MD
6556.00	62.810	167.340	6365.23	228.71	-344.45	-240.36	1657658.34	14278121.79	39°19'08.717"N	80°56'20.532"W	420.02	214.908	12.92	
6602.00	66.570	160.430	6384.91	270.03	-384.35	-228.79	1657659.90	14278081.91	39°19'08.323"N	80°56'20.385"W	447.29	210.764	15.85	
6607.00†	67.074	159.849	6386.88	274.62	-388.67	-227.23	1657671.46	14278077.52	39°19'08.280"N	80°56'20.365"W	450.22	210.312	13.90	Tully: 6607 MD
6651.00	71.010	154.890	6402.66	315.68	-426.55	-211.41	1657687.28	14278039.78	39°19'07.905"N	80°56'20.164"W	476.07	206.364	13.90	
6666.00†	72.950	154.970	6407.29	329.92	-439.47	-205.36	1657693.32	14278026.81	39°19'07.778"N	80°56'20.087"W	485.09	205.046	12.94	Marcellus: 6666 MD
6697.00	76.960	154.970	6415.33	359.81	-466.59	-192.68	1657705.98	14277999.70	39°19'07.510"N	80°56'19.926"W	504.81	202.439	12.94	
8745.00	79.570	156.820	6425.10	406.77	-508.45	-173.42	1657725.25	14277956.86	39°19'07.086"N	80°56'19.681"W	538.15	198.799	6.39	



Actual Wellpath Report

Alliance Unit 2H AWP Proj: 15114'
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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #08
Operator	ANTERO RESOURCES CORPORATION	Well	Alliance Unit 2H
Area	Ritchie County, WV	Wellbore	Alliance Unit 2H AWB
Field	Ritchie		
Facility	Zinn Pad		

WELLPATH DATA (331 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 P(100ft)	Comments
6791.00	84.830	158.000	6431.34	452.33	-551.48	-155.85	1657742.81	14277914.84	39°19'06.670"N	80°56'19.458"W	573.08	195.780	11.81	
6835.00	90.280	158.820	6433.21	496.27	-592.31	-139.61	1657749.05	14277874.03	39°19'06.267"N	80°56'19.252"W	608.54	193.263	12.47	
6885.00	90.150	158.780	6433.02	546.26	-638.90	-121.45	1657777.20	14277827.46	39°19'05.806"N	80°56'19.021"W	650.34	190.763	0.41	
6980.00	89.910	157.510	6432.98	641.26	-727.07	-86.08	1657812.55	14277739.33	39°19'04.934"N	80°56'18.572"W	732.14	186.752	1.36	
7074.00	90.370	156.420	6432.75	735.25	-813.57	-49.30	1657849.32	14277652.86	39°19'04.079"N	80°56'18.105"W	815.06	183.468	1.26	
7168.00	90.370	152.780	6432.14	829.07	-898.47	-8.99	1657889.61	14277567.99	39°19'03.240"N	80°56'17.593"W	898.51	180.573	3.87	
7263.00	90.220	152.960	6431.65	923.71	-983.01	34.33	1657932.92	14277483.48	39°19'02.404"N	80°56'17.042"W	983.61	178.000	0.25	
7357.00	90.000	155.180	6431.47	1017.49	-1067.54	75.43	1657974.00	14277398.98	39°19'01.568"N	80°56'16.520"W	1070.21	175.958	2.37	
7452.00	89.570	156.280	6431.83	1112.42	-1154.15	114.48	1658013.03	14277312.42	39°19'00.712"N	80°56'16.024"W	1159.81	174.335	1.24	
7546.00	89.880	156.170	6432.28	1206.41	-1240.81	150.87	1658049.40	14277225.79	39°18'59.855"N	80°56'15.562"W	1249.95	173.088	2.04	
7640.00	89.820	159.530	6432.52	1300.39	-1328.48	184.78	1658083.31	14277138.16	39°18'58.988"N	80°56'15.131"W	1341.27	172.081	1.45	
7734.00	90.030	161.520	6432.65	1394.29	-1417.10	216.12	1658114.63	14277049.57	39°18'58.112"N	80°56'14.733"W	1433.48	171.329	2.13	
7829.00	90.060	159.370	6432.57	1489.19	-1506.61	247.91	1658146.41	14276960.09	39°18'57.227"N	80°56'14.329"W	1526.87	170.656	2.26	
7924.00	90.740	156.410	6431.91	1584.18	-1594.61	283.67	1658182.15	14276872.13	39°18'56.357"N	80°56'13.875"W	1619.65	169.913	3.20	
8018.00	88.480	154.410	6431.73	1676.08	-1680.08	322.78	1658221.25	14276786.69	39°18'55.512"N	80°56'13.378"W	1710.81	169.125	2.51	
8112.00	88.370	157.000	6433.49	1771.98	-1765.73	361.44	1658259.90	14276701.08	39°18'54.666"N	80°56'12.887"W	1802.35	168.431	3.00	
8207.00	87.850	160.930	6436.63	1866.90	-1854.34	395.52	1658293.96	14276612.51	39°18'53.790"N	80°56'12.454"W	1896.05	167.960	4.17	
8301.00	88.120	166.420	6439.93	1960.33	-1944.46	421.91	1658320.34	14276522.43	39°18'52.899"N	80°56'12.119"W	1989.70	167.758	5.84	
8396.00	92.370	172.450	6439.53	2053.34	-2037.78	439.32	1658337.74	14276429.14	39°18'51.976"N	80°56'11.899"W	2084.60	167.834	7.76	
8490.00	93.480	166.600	6434.73	2145.25	-2130.05	456.38	1658354.78	14276336.90	39°18'51.064"N	80°56'11.683"W	2178.39	167.907	6.33	
8585.00	93.570	156.050	6428.87	2239.77	-2219.75	486.69	1658385.10	14276247.24	39°18'50.177"N	80°56'11.298"W	2272.48	167.633	11.08	
8679.00	90.490	153.530	6425.54	2333.55	-2304.73	526.70	1658425.09	14276162.30	39°18'49.337"N	80°56'10.789"W	2364.14	167.127	4.23	
8774.00	89.970	156.560	6425.16	2428.42	-2390.85	566.78	1658465.15	14276076.21	39°18'48.486"N	80°56'10.280"W	2457.11	166.664	3.24	
8869.00	90.120	158.320	6425.08	2523.42	-2478.57	603.22	1658501.58	14275988.52	39°18'47.618"N	80°56'09.817"W	2550.92	166.322	1.86	
8963.00	90.090	157.320	6424.91	2617.41	-2565.62	638.71	1658537.05	14275901.51	39°18'46.758"N	80°56'09.367"W	2643.92	166.020	1.06	
9058.00	90.150	156.500	6424.71	2712.40	-2653.01	675.96	1658574.29	14275814.16	39°18'45.894"N	80°56'08.893"W	2737.77	165.706	0.87	
9152.00	90.580	155.160	6424.11	2806.33	-2741.45	714.45	1658612.76	14275728.44	39°18'45.046"N	80°56'08.405"W	2830.42	165.379	1.50	
9247.00	90.000	154.620	6423.63	2901.20	-2824.78	754.76	1658653.06	14275642.45	39°18'44.195"N	80°56'07.892"W	2923.88	165.040	0.83	
9341.00	89.970	154.800	6423.66	2995.06	-2909.77	794.92	1658693.20	14275557.50	39°18'43.355"N	80°56'07.382"W	3016.40	164.720	0.19	
9435.00	89.850	154.960	6423.80	3088.92	-2994.88	834.92	1658733.09	14275472.42	39°18'42.514"N	80°56'06.875"W	3109.06	164.424	0.21	



Actual Wellpath Report

Alliance Unit 2H AWP Proj: 15114'
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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #08
Operator	ANTERO RESOURCES CORPORATION	Well	Alliance Unit 2H
Area	Ritchie County, WV	Wellbore	Alliance Unit 2H AWB
Field	Ritchie		
Facility	Zinn Pad		

WELLPATH DATA (331 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
9530.00	89.750	153.790	6424.14	3183.74	-3080.54	875.91	1658774.16	14275386.80	39°18'41.667"N	80°56'06.354"W	3202.64	164.128	1.24	
9624.00	88.770	154.150	6425.35	3277.51	-3184.99	917.16	1658815.39	14275302.38	39°18'40.832"N	80°56'05.830"W	3295.20	163.839	1.11	
9719.00	89.230	157.600	6427.01	3372.42	-3251.67	955.97	1658884.19	14275215.74	39°18'39.975"N	80°56'05.336"W	3389.28	163.617	3.66	
9813.00	88.950	155.130	6428.50	3466.37	-3337.77	993.65	1658891.85	14275129.68	39°18'39.124"N	80°56'04.858"W	3482.53	163.422	2.64	
9907.00	89.260	157.380	6429.97	3560.31	-3423.79	1031.49	1658929.68	14275043.68	39°18'38.273"N	80°56'04.377"W	3575.80	163.234	2.42	
10002.00	89.260	160.490	6431.20	3655.28	-3512.42	1065.63	1658963.81	14274955.09	39°18'37.397"N	80°56'03.944"W	3670.52	163.123	3.27	
10096.00	89.420	159.630	6432.28	3749.21	-3600.78	1097.69	1658995.85	14274866.76	39°18'36.523"N	80°56'03.537"W	3764.38	163.046	0.93	
10191.00	89.420	159.380	6433.24	3844.16	-3689.77	1130.95	1659029.09	14274777.82	39°18'35.644"N	80°56'03.114"W	3859.20	162.959	0.26	
10285.00	89.720	160.970	6433.95	3938.08	-3778.19	1162.83	1659060.96	14274689.43	39°18'34.769"N	80°56'02.710"W	3953.08	162.893	1.72	
10379.00	90.030	162.900	6434.15	4031.85	-3867.55	1191.97	1659090.10	14274600.10	39°18'33.886"N	80°56'02.340"W	4047.07	162.871	2.08	
10474.00	89.970	159.600	6434.15	4126.67	-3957.50	1222.51	1659120.62	14274510.19	39°18'32.997"N	80°56'01.952"W	4142.02	162.834	3.47	
10568.00	89.600	158.000	6434.50	4220.65	-4045.13	1256.50	1659154.59	14274422.59	39°18'32.130"N	80°56'01.520"W	4235.78	162.744	1.75	
10663.00	90.460	154.260	6434.45	4315.59	-4131.99	1294.93	1659193.01	14274335.77	39°18'31.272"N	80°56'01.032"W	4330.15	162.599	4.04	
10757.00	89.970	153.210	6434.10	4409.34	-4216.28	1336.53	1659234.59	14274241.51	39°18'30.438"N	80°56'00.504"W	4423.05	162.412	1.23	
10852.00	90.400	150.000	6433.80	4503.76	-4299.84	1381.70	1659279.75	14274157.99	39°18'29.612"N	80°55'59.930"W	4516.38	162.186	3.41	
10946.00	89.880	147.880	6433.57	4596.60	-4380.36	1430.20	1659328.22	14274073.50	39°18'28.816"N	80°55'59.314"W	4607.93	161.918	2.32	
11041.00	90.030	152.910	6433.64	4690.76	-4462.93	1477.11	1659375.12	14274004.96	39°18'27.999"N	80°55'58.718"W	4701.02	161.687	5.30	
11135.00	90.000	155.290	6433.62	4784.54	-4547.48	1518.17	1659416.16	14273920.44	39°18'27.163"N	80°55'58.196"W	4794.21	161.539	2.53	
11229.00	91.050	159.960	6432.75	4878.51	-4634.38	1553.94	1659451.92	14273833.58	39°18'26.304"N	80°55'57.742"W	4887.96	161.463	5.09	
11324.00	90.860	158.740	6431.17	4973.44	-4723.55	1586.66	1659494.62	14273744.45	39°18'25.423"N	80°55'57.327"W	4982.91	161.433	0.31	
11418.00	91.290	158.270	6429.41	5067.41	-4811.29	1620.33	1659518.28	14273656.74	39°18'24.555"N	80°55'56.899"W	5076.81	161.388	1.63	
11513.00	91.110	162.340	6427.42	5162.28	-4900.70	1652.33	1659550.27	14273567.37	39°18'23.671"N	80°55'56.493"W	5171.75	161.368	4.29	
11607.00	90.920	164.810	6425.75	5255.80	-4990.84	1678.91	1659576.83	14273477.27	39°18'22.780"N	80°55'56.156"W	5265.66	161.407	2.64	
11702.00	91.110	159.370	6424.07	5350.50	-5081.19	1708.11	1659606.02	14273386.95	39°18'21.887"N	80°55'55.785"W	5360.60	161.419	5.73	
11796.00	91.170	160.750	6422.19	5444.27	-5166.32	1747.70	1659645.60	14273301.85	39°18'21.045"N	80°55'55.282"W	5453.93	161.310	9.17	
11891.00	91.110	158.940	6420.30	5538.90	-5255.04	1790.59	1659688.47	14273217.17	39°18'20.208"N	80°55'54.737"W	5547.94	161.171	5.04	
11985.00	91.080	158.010	6418.51	5632.86	-5337.40	1827.65	1659725.52	14273130.85	39°18'19.354"N	80°55'54.267"W	5641.64	161.098	2.83	
12079.00	91.020	157.890	6416.78	5726.84	-5424.51	1862.93	1659760.79	14273043.77	39°18'18.493"N	80°55'53.819"W	5735.49	161.046	0.14	
12174.00	91.170	157.120	6414.97	5821.82	-5512.26	1899.27	1659797.11	14272956.05	39°18'17.625"N	80°55'53.357"W	5830.29	160.988	0.83	
12268.00	91.020	157.810	6413.17	5915.80	-5599.00	1935.44	1659833.27	14272869.34	39°18'16.767"N	80°55'52.998"W	5924.08	160.931	0.55	



Actual Wellpath Report

Alliance Unit 2H AWP Proj: 15114'

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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #08
Operator	ANTERO RESOURCES CORPORATION	Well	Alliance Unit 2H
Area	Ritchie County, WV	Wellbore	Alliance Unit 2H AWB
Field	Ritchie		
Facility	Zinn Pad		

WELLPATH DATA (331 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
12363.00	91.230	160.630	6411.31	6010.75	-5687.74	1989.29	1659867.10	14272780.65	39°18'15.890"N	80°55'52.468"W	6019.01	160.902	3.19	
12457.00	90.620	163.000	6409.79	6104.51	-5777.03	1998.62	1659896.42	14272691.39	39°18'15.007"N	80°55'52.096"W	6112.98	160.916	2.60	
12552.00	90.120	163.850	6409.17	6199.07	-5866.07	2025.72	1659923.51	14272600.38	39°18'14.107"N	80°55'51.752"W	6207.89	160.955	1.04	
12646.00	89.820	161.870	6409.22	6292.71	-5957.90	2053.42	1659951.20	14272510.60	39°18'13.219"N	80°55'51.401"W	6301.83	160.983	2.13	
12740.00	89.760	160.610	6409.55	6386.55	-6046.90	2083.65	1659981.42	14272421.63	39°18'12.339"N	80°55'51.017"W	6395.83	160.987	1.34	
12835.00	88.550	159.940	6410.94	6481.45	-6136.31	2115.71	1660013.46	14272332.25	39°18'11.455"N	80°55'50.610"W	6490.81	160.977	1.47	
12929.00	88.520	159.610	6413.34	6575.37	-6224.49	2148.20	1660045.94	14272244.11	39°18'10.594"N	80°55'50.198"W	6584.76	160.959	0.35	
13024.00	88.370	159.290	6415.92	6670.30	-6313.41	2181.53	1660079.26	14272155.23	39°18'09.704"N	80°55'49.774"W	6679.69	160.938	0.37	
13118.00	88.920	158.090	6418.14	6764.26	-6400.96	2215.68	1660113.39	14272067.71	39°18'08.839"N	80°55'49.341"W	6773.59	160.907	1.40	
13213.00	88.860	155.980	6419.98	6859.23	-6488.41	2252.74	1660150.44	14271980.30	39°18'07.974"N	80°55'48.870"W	6868.35	160.853	2.22	
13307.00	88.890	156.010	6421.83	6953.16	-6574.26	2290.97	1660188.65	14271894.48	39°18'07.126"N	80°55'48.385"W	6962.00	160.788	0.05	
13401.00	88.950	158.840	6423.60	7047.13	-6661.03	2327.05	1660224.72	14271807.74	39°18'06.288"N	80°55'47.927"W	7055.81	160.743	3.01	
13495.00	88.980	159.470	6425.31	7142.09	-6749.80	2360.85	1660258.50	14271719.01	39°18'05.390"N	80°55'47.498"W	7150.76	160.722	0.66	
13590.00	89.200	157.820	6426.81	7236.07	-6837.33	2395.07	1660292.71	14271631.51	39°18'04.525"N	80°55'47.063"W	7244.69	160.695	1.77	
13685.00	89.230	157.770	6428.11	7331.06	-6925.28	2430.97	1660328.60	14271543.60	39°18'03.655"N	80°55'46.607"W	7339.56	160.657	0.08	
13779.00	89.140	157.740	6429.45	7425.05	-7012.27	2466.55	1660364.16	14271456.64	39°18'02.795"N	80°55'46.156"W	7433.43	160.621	0.10	
13874.00	89.140	157.670	6430.87	7520.04	-7100.16	2502.59	1660400.19	14271368.79	39°18'01.926"N	80°55'45.698"W	7528.30	160.584	0.07	
13969.00	89.940	159.320	6431.63	7615.03	-7188.54	2537.41	1660434.99	14271280.45	39°18'01.052"N	80°55'45.256"W	7623.23	160.558	1.93	
14063.00	89.970	169.390	6431.76	7708.31	-7278.94	2562.73	1660460.30	14271190.08	39°18'00.159"N	80°55'44.835"W	7716.90	160.604	10.71	
14158.00	89.970	164.670	6431.86	7802.08	-7371.48	2584.05	1660481.61	14271097.57	39°17'59.244"N	80°55'44.665"W	7811.29	160.682	4.97	
14252.00	89.600	157.530	6432.21	7895.87	-7460.37	2614.47	1660512.02	14271008.73	39°17'58.365"N	80°55'44.278"W	7905.22	160.687	7.61	
14347.00	89.940	154.350	6432.59	7990.80	-7547.10	2653.20	1660550.73	14270922.03	39°17'57.507"N	80°55'43.787"W	7999.89	160.631	3.37	
14441.00	89.720	153.990	6432.87	8084.60	-7631.71	2694.16	1660591.67	14270837.46	39°17'56.671"N	80°55'43.267"W	8093.30	160.556	0.45	
14536.00	89.850	153.990	6433.23	8179.38	-7717.09	2735.82	1660633.32	14270752.11	39°17'55.827"N	80°55'42.738"W	8187.68	160.480	0.14	
14630.00	90.000	150.840	6433.35	8272.94	-7800.39	2779.34	1660676.82	14270668.84	39°17'55.003"N	80°55'42.185"W	8280.75	160.389	3.35	
14725.00	90.000	154.950	6433.35	8367.56	-7884.94	2822.61	1660720.08	14270584.33	39°17'54.167"N	80°55'41.635"W	8374.93	160.304	4.33	
14819.00	89.970	157.750	6433.37	8461.51	-7971.04	2860.32	1660767.77	14270498.27	39°17'53.316"N	80°55'41.156"W	8468.70	160.260	2.98	
14913.00	89.850	155.360	6433.52	8555.48	-8057.27	2897.71	1660810.15	14270412.07	39°17'52.483"N	80°55'40.682"W	8562.49	160.219	2.55	
15008.00	89.970	154.480	6433.72	8650.35	-8143.31	2937.98	1660853.40	14270326.06	39°17'51.612"N	80°55'40.170"W	8657.09	160.161	0.93	
15089.00	89.760	159.330	6433.94	8731.31	-8217.80	2989.75	1660897.15	14270251.60	39°17'50.876"N	80°55'39.767"W	8737.94	160.131	5.99	



Actual Wellpath Report

Alliance Unit 2H AWP Proj: 15114'

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REFERENCE WELLPATH IDENTIFICATION									
Operator	ANTERO RESOURCES CORPORATION								
Area	Ritchie County, WV								
Field	Ritchie								
Facility	Zinn Pad								
	Slot	Slot #08							
	Well	Alliance Unit 2H							
	Wellbore	Alliance Unit 2H AWB							

WELLPATH DATA (331 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 P/100ft	Comments
15114.00	89.780	159.330	6434.04	8756.31	-8241.19	2978.57	1660875.97	1427028.22	39°17'50.645"N	80°55'39.655"W	8762.94	160.129	0.00	Projected MD @ ID: 15114'

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Alliance Unit 2H POE - Rev1	6406.00	-422.10	-205.40	1657693.28	14278044.17	39°19'07.949"N	80°56'20.088"W	point
Alliance Unit 2H BHL - Rev1	6430.00	-8221.40	2960.89	1660858.30	14270248.00	39°17'50.840"N	80°55'39.880"W	point
Alliance Unit 2H Landing Pt. - Rev1	6430.00	-560.60	-149.18	1657749.48	14277905.73	39°19'06.560"N	80°56'19.373"W	point

WELLPATH COMPOSITION - Ref Wellbore: Alliance Unit 2H AWB				Ref Wellpath: Alliance Unit 2H AWP Proj: 15114'			
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Start MD [ft]	End MD [ft]	Positional Uncertainty Model
25.00	5197.01	SJD Keeper v1.04	01 - SJD Gyro Sid Keeper (100' - 5185.01')	Alliance Unit 2H AWB	25.00	5197.01	SJD Keeper v1.04
5197.01	15089.00	BHI AutoTrak Curve (Short)	02 - BHI AT Curve <8-1/2"> (5197.01)(6305'-15089')	Alliance Unit 2H AWB	5197.01	15089.00	BHI AutoTrak Curve (Short)
15089.00	15114.00	Blind Drilling (std)	Projection to bit	Alliance Unit 2H AWB	15089.00	15114.00	Blind Drilling (std)



Actual Wellpath Report

Alliance Unit 2H AWP Proj: 15114'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Ritchie County, WV	Well	Alliance Unit 2H
Field	Ritchie	Wellbore	Alliance Unit 2H AWB
Facility	Zinn Pad		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
112.00	0.590	117.340	112.00	SDI Gyro Std Keeper (112' - 5197.01')
5305.00	1.110	334.230	5304.49	BHI AT Curve <8-1/2">(5197.01')(5305'-15089')
6363.00	45.986	184.762	6253.78	Middlesex: 6363' MD
6542.00	61.630	168.889	6358.71	Burkett: 6542' MD
6607.00	67.014	159.849	6386.88	Tully: 6607' MD
6666.00	72.950	154.917	6407.29	Marcellus: 6666' MD
15114.00	89.780	159.330	6434.04	Projected MD @ TD: 15114'

COMMENTS

Wellpath general comments

API: 47-085-10275-0000
 BHI Job #: 7927945
 Rig: Patterson 343
 Duration: 05.05.2016-05.10.2016
 SDI Gyro Std Keeper (112' - 5197.01')
 BHI AT Curve <8-1/2">(5197.01')(5305'-15089')
 Middlesex: 6363' MD
 Burkett: 6542' MD
 Tully: 6607' MD
 Marcellus: 6666' MD
 Projected MD @ TD: 15114'