



ANTERO RESOURCES CORPORATION

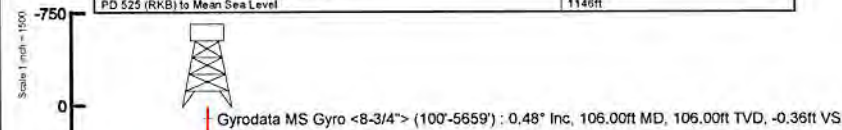
Location: Ritchie County, WV
 Field: Ritchie
 Facility: Kelly Pad

Slot: Slot #04
 Well: Duchene Unit 1H
 Wellbore: Duchene Unit 1H PWB



Plot reference wellpath is Duchene Unit 1H PWB Rev-A.0	Grid System NAD27 / UTM Zone 17 North US feet
True vertical depths are referenced to PD 525 (RKB)	* Wellbore was transformed from a different geoidic datum
Measured depths are referenced to PD 525 (RKB)	North Reference: Grid north
PD 525 (RKB) to Mean Sea Level: 1148 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: Slot #04): -1127 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: adsjarj on 2016-11-13
	Database: WA_MPL_EASTERNUS_Data

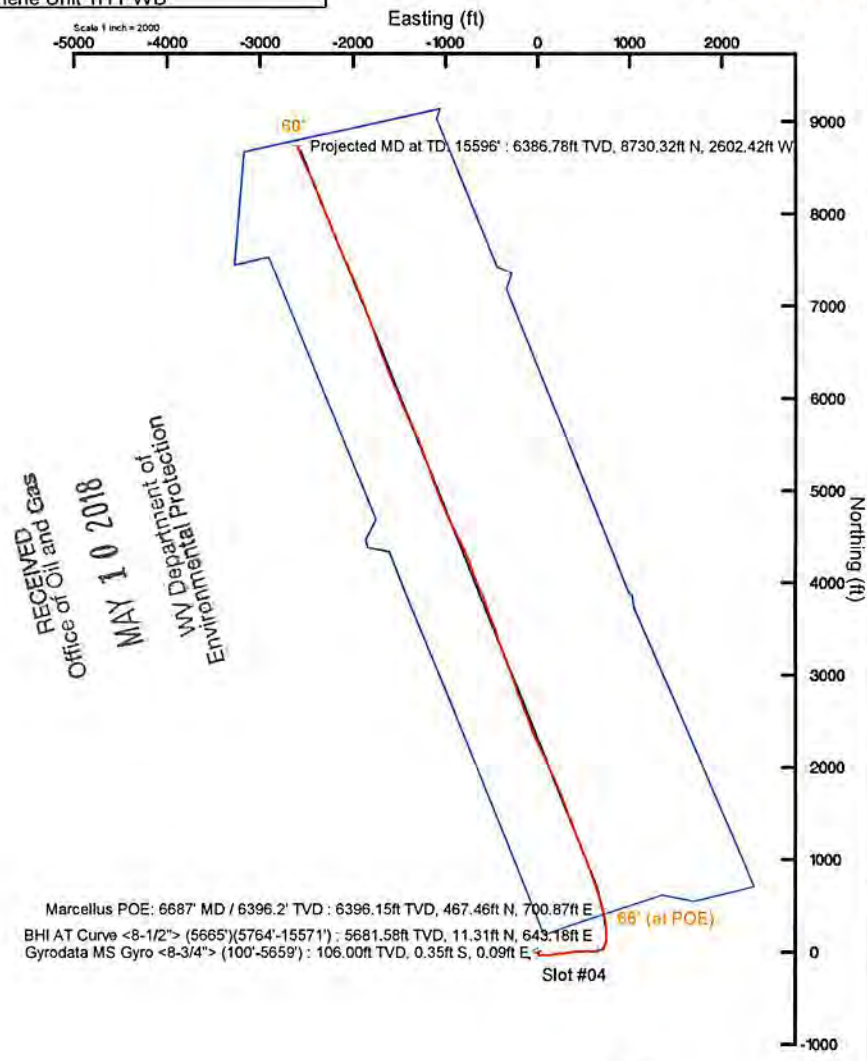
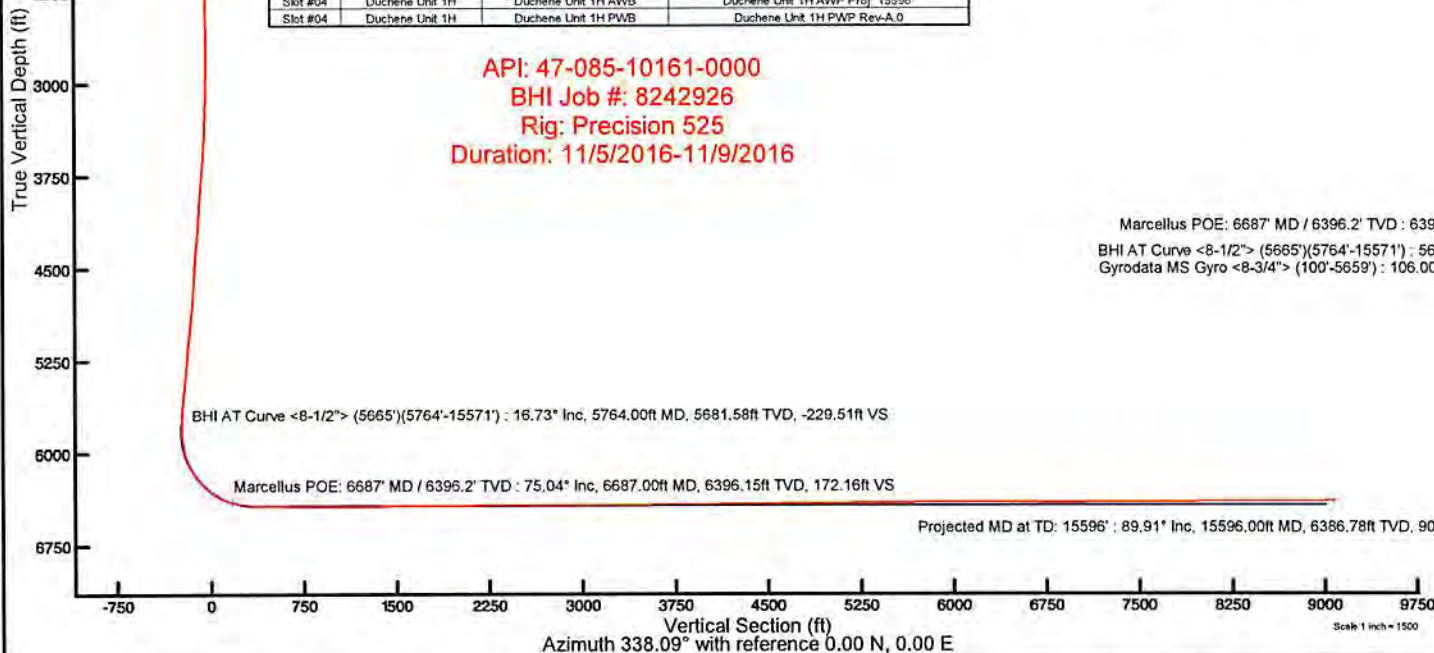
Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Kelly Pad	1650927.295	14276358.660	39°18'51.320"N	80°57'46.220"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Longitude
Slot #04	7.09	18.86	1650946.150	14276365.750	80°57'45.980"W
Comment: Duchene Unit 1H					
PD 525 (RKB) to Mud line (At Slot: Slot #04)			19ft		
Mean Sea Level to Mud line (At Slot: Slot #04)			-1127ft		
PD 525 (RKB) to Mean Sea Level			1148ft		



Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	5665.00	17.300	81.770	5586.91	6.32	614.65	0.00	-223.49
Proj. to Bottom	5829.00	16.760	78.860	5743.72	14.38	661.99	0.82	-233.68
Curve KOP	5887.00	16.760	78.860	5799.25	17.61	678.40	0.00	-236.80
End of 3D Arc	6508.01	54.797	350.903	6317.36	308.94	730.32	9.00	-14.11
Landing Pt	6865.88	90.000	344.000	6424.00	636.02	655.43	10.00	345.51
On Azimuth	7062.98	90.000	338.087	6424.00	822.35	591.43	3.00	542.26
BHL	15524.98	90.000	338.087	6424.00	8672.98	-2566.57	0.00	8004.26

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #04	Duchene Unit 1H	Duchene Unit 1H AWB	Duchene Unit 1H AWP Proj: 15596'
Slot #04	Duchene Unit 1H	Duchene Unit 1H PWB	Duchene Unit 1H PWP Rev-A.0

API: 47-085-10161-0000
 BHI Job #: 8242926
 Rig: Precision 525
 Duration: 11/5/2016-11/9/2016



Scale 1 inch = 1500

User specified Dip: 66.62° Field: 52019 nT
 Magnetic North is 7.78 degrees West of True North (at 11/4/2016)
 Grid North is 0.02 degrees East of True North
 To correct azimuth from True to Grid subtract 0.02 degrees
 To correct azimuth from Magnetic to Grid subtract 7.80 degrees



Actual Wellpath Report

Duchene Unit 1H AWP Proj: 15596'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Ritchie County, WV	Well	Duchene Unit 1H
Field	Ritchie	Wellbore	Duchene Unit 1H AWB
Facility	Kelly Pad		

REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Edsaryar
Scale	0.999600	Report Generated	11/13/2016 at 1:01:13 PM
Convergence at slot	0.03° East	Database/Source file	WA_MPL_EASTERNUS_Defn/Duchene_Unit_1H_AWP_Proj_15596_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	7.09	18.86	1650946.15	14276365.75	39°18'51.390"N	80°57'45.980"W
Facility Reference Pt			1650927.30	14276358.66	39°18'51.320"N	80°57'46.220"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM

Calculation method	Minimum curvature	PD 525 (RKB) to Facility Vertical Datum	19.00ft
Horizontal Reference Pt	Slot	PD 525 (RKB) to Mean Sea Level	1146.00ft
Vertical Reference Pt	PD 525 (RKB)	PD 525 (RKB) to Mud Line at Slot (Slot #04)	19.00ft
MD Reference Pt	PD 525 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	338.09°



Actual Wellpath Report

Duchene Unit 1H AWP Proj: 15596'

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REFERENCE WELLPATH IDENTIFICATION			
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Area	Ritchie County, WV	Well	Duchene Unit 1H
Field	Ritchie	Wellbore	Duchene Unit 1H AWB
Facility	Kelly Pad		

WELLPATH DATA (188 stations) † = interpolated/extrapolated station																
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS ["/100ft]	Build Rate ["/100ft]	Turn Rate ["/100ft]	Comments
0.00	0.00	165.580	0.00	0.00	0.00	0.00	1650946.15	14276365.75	39°18'51.390"N	80°57'45.980"W	0.00	0.000	0.00	0.00	0.00	
19.00	0.00	165.580	19.00	0.00	0.00	0.00	1650946.15	14276365.75	39°18'51.390"N	80°57'45.980"W	0.00	0.000	0.00	0.00	0.00	
106.00	0.480	165.580	106.00	-0.36	-0.35	0.09	1650946.24	14276365.40	39°18'51.387"N	80°57'45.979"W	0.36	165.580	0.55	0.55	190.32	Gyrodata MS Gyro <8-3/4"> (100'-5659')
206.00	0.450	145.280	206.00	-1.16	-1.08	0.42	1650946.57	14276364.67	39°18'51.379"N	80°57'45.975"W	1.16	158.833	0.17	-0.03	-20.30	
306.00	0.490	124.830	305.99	-1.90	-1.65	0.99	1650947.14	14276364.10	39°18'51.374"N	80°57'45.967"W	1.92	148.925	0.17	0.04	-20.45	
406.00	0.360	143.110	405.99	-2.56	-2.14	1.53	1650947.68	14276363.61	39°18'51.369"N	80°57'45.960"W	2.64	144.433	0.19	-0.13	18.28	
506.00	0.520	226.960	505.99	-3.03	-2.70	1.39	1650947.54	14276363.05	39°18'51.363"N	80°57'45.962"W	3.04	152.803	0.60	0.16	83.85	
606.00	1.080	204.500	605.98	-3.84	-3.87	0.67	1650946.82	14276361.88	39°18'51.352"N	80°57'45.972"W	3.93	170.220	0.63	0.56	-22.46	
706.00	2.060	180.690	705.94	-6.15	-6.53	0.25	1650946.40	14276359.23	39°18'51.326"N	80°57'45.977"W	6.53	177.763	1.16	0.98	-23.81	
806.00	3.900	158.100	805.80	-11.21	-11.48	1.50	1650947.65	14276354.27	39°18'51.277"N	80°57'45.961"W	11.58	172.547	2.15	1.84	-22.59	
906.00	4.350	152.700	905.54	-18.39	-18.01	4.51	1650950.66	14276347.75	39°18'51.212"N	80°57'45.923"W	18.56	165.939	0.59	0.45	-5.40	
1006.00	4.060	147.130	1005.28	-25.64	-24.35	8.17	1650954.32	14276341.41	39°18'51.149"N	80°57'45.876"W	25.68	161.450	0.50	-0.29	-5.57	
1106.00	2.570	121.680	1105.11	-30.92	-28.50	12.00	1650958.15	14276337.26	39°18'51.108"N	80°57'45.827"W	30.92	157.166	2.06	-1.49	-25.45	
1206.00	1.620	100.610	1205.04	-33.48	-29.94	15.30	1650961.44	14276335.82	39°18'51.094"N	80°57'45.786"W	33.62	152.934	1.21	-0.95	-21.07	
1306.00	0.580	212.320	1305.03	-34.54	-30.63	16.42	1650962.56	14276335.14	39°18'51.087"N	80°57'45.771"W	34.75	151.807	1.91	-1.04	111.71	
1406.00	2.520	256.100	1404.99	-34.53	-31.58	14.01	1650960.16	14276334.18	39°18'51.078"N	80°57'45.802"W	34.55	156.075	2.14	1.94	43.78	
1506.00	2.700	259.130	1504.89	-33.77	-32.55	9.56	1650955.71	14276333.21	39°18'51.068"N	80°57'45.858"W	33.93	163.627	0.23	0.18	3.03	
1606.00	1.800	239.140	1604.81	-33.57	-33.80	5.90	1650952.05	14276331.96	39°18'51.056"N	80°57'45.905"W	34.32	170.095	1.18	-0.90	-19.99	
1706.00	0.700	160.350	1704.79	-34.42	-35.18	4.76	1650950.91	14276330.58	39°18'51.042"N	80°57'45.920"W	35.51	172.295	1.80	-1.10	-78.79	
1806.00	0.810	112.310	1804.78	-35.52	-36.03	5.62	1650951.77	14276329.74	39°18'51.034"N	80°57'45.909"W	36.46	171.135	0.62	0.11	-48.04	
1906.00	0.540	62.010	1904.78	-35.97	-36.08	6.69	1650952.84	14276329.69	39°18'51.033"N	80°57'45.895"W	36.69	169.495	0.62	-0.27	-50.30	
2006.00	0.380	39.450	2004.77	-35.76	-35.60	7.32	1650953.46	14276330.17	39°18'51.038"N	80°57'45.887"W	36.34	168.386	0.24	-0.16	-22.56	
2106.00	0.300	32.150	2104.77	-35.44	-35.12	7.67	1650953.81	14276330.64	39°18'51.043"N	80°57'45.883"W	35.95	167.686	0.09	-0.08	-7.30	
2206.00	0.190	145.890	2204.77	-35.45	-35.04	7.90	1650954.05	14276330.73	39°18'51.044"N	80°57'45.880"W	35.92	167.295	0.41	-0.11	113.74	
2306.00	0.370	201.290	2304.77	-35.85	-35.47	7.87	1650954.02	14276330.29	39°18'51.039"N	80°57'45.880"W	36.34	167.485	0.31	0.18	55.40	
2406.00	0.540	208.480	2404.77	-36.39	-36.19	7.53	1650953.68	14276329.57	39°18'51.032"N	80°57'45.884"W	36.97	168.242	0.18	0.17	7.19	
2506.00	0.990	24.210	2504.76	-36.09	-35.82	7.66	1650953.81	14276329.95	39°18'51.036"N	80°57'45.883"W	36.63	167.925	1.53	0.45	175.73	
2606.00	1.450	12.400	2604.74	-34.44	-33.79	8.29	1650954.43	14276331.97	39°18'51.056"N	80°57'45.875"W	34.79	166.219	0.52	0.46	-11.81	
2706.00	1.770	21.060	2704.70	-32.27	-31.12	9.11	1650955.26	14276334.65	39°18'51.082"N	80°57'45.864"W	32.42	163.673	0.40	0.32	8.66	
2806.00	1.400	122.920	2804.68	-32.14	-30.34	10.70	1650956.84	14276335.42	39°18'51.090"N	80°57'45.844"W	32.17	160.580	2.47	-0.37	101.86	



Actual Wellpath Report

Duchene Unit 1H AWP Proj: 15596'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Ritchie County, WV	Well	Duchene Unit 1H
Field	Ritchie	Wellbore	Duchene Unit 1H AWB
Facility	Kelly Pad		

WELLPATH DATA (188 stations)																
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
2906.00	1.670	142.410	2904.64	-34.54	-32.16	12.61	1650958.75	14276333.61	39°18'51.072"N	80°57'45.820"W	34.54	158.588	0.58	0.27	19.49	
3006.00	1.910	84.030	3004.60	-36.40	-33.14	15.16	1650961.30	14276332.63	39°18'51.062"N	80°57'45.787"W	36.44	155.422	1.76	0.24	-58.38	
3106.00	4.160	96.060	3104.46	-38.56	-33.35	20.42	1650966.56	14276332.42	39°18'51.060"N	80°57'45.720"W	39.10	148.518	2.33	2.25	12.03	
3206.00	5.090	93.040	3204.13	-42.13	-33.97	28.46	1650974.60	14276331.80	39°18'51.054"N	80°57'45.618"W	44.31	140.042	0.96	0.93	-3.02	
3306.00	5.220	86.170	3303.73	-45.41	-33.90	37.43	1650983.56	14276331.87	39°18'51.055"N	80°57'45.504"W	50.50	132.167	0.63	0.13	-6.87	
3406.00	6.900	81.650	3403.16	-48.23	-32.72	47.91	1650994.04	14276333.04	39°18'51.066"N	80°57'45.371"W	58.02	124.332	1.75	1.68	-4.52	
3506.00	8.600	90.320	3502.25	-52.47	-31.89	61.33	1651007.46	14276333.87	39°18'51.075"N	80°57'45.200"W	69.13	117.473	2.06	1.70	8.67	
3606.00	10.390	92.930	3600.88	-59.09	-32.39	77.81	1651023.93	14276333.37	39°18'51.070"N	80°57'44.990"W	84.29	112.601	1.84	1.79	2.61	
3706.00	12.440	89.230	3698.89	-66.76	-32.71	97.59	1651043.70	14276333.05	39°18'51.066"N	80°57'44.738"W	102.93	108.529	2.18	2.05	-3.70	
3806.00	14.090	89.480	3796.22	-75.09	-32.45	120.54	1651066.64	14276333.31	39°18'51.069"N	80°57'44.447"W	124.83	105.069	1.65	1.65	0.25	
3906.00	16.970	86.100	3892.56	-84.04	-31.35	147.27	1651093.36	14276334.41	39°18'51.080"N	80°57'44.106"W	150.57	102.017	3.02	2.88	-3.38	
4006.00	18.100	78.710	3987.93	-91.42	-27.32	177.07	1651123.15	14276338.44	39°18'51.119"N	80°57'43.727"W	179.17	98.770	2.49	1.13	-7.39	
4106.00	17.210	75.590	4083.22	-96.21	-20.59	206.63	1651152.70	14276345.17	39°18'51.186"N	80°57'43.351"W	207.66	95.691	1.30	-0.89	-3.12	
4206.00	14.760	86.340	4179.37	-102.13	-16.10	233.68	1651179.74	14276349.66	39°18'51.230"N	80°57'43.007"W	234.24	93.940	3.83	-2.45	10.75	
4306.00	14.990	87.350	4276.02	-110.39	-14.69	259.32	1651205.36	14276351.07	39°18'51.244"N	80°57'42.681"W	259.73	93.241	0.35	0.23	1.01	
4406.00	16.120	85.580	4372.35	-118.83	-13.02	286.08	1651232.11	14276352.74	39°18'51.260"N	80°57'42.340"W	286.37	92.605	1.23	1.13	-1.77	
4506.00	15.870	80.730	4468.48	-125.99	-9.75	313.41	1651259.44	14276356.01	39°18'51.292"N	80°57'41.992"W	313.57	91.781	1.36	-0.25	-4.85	
4606.00	15.470	78.560	4564.77	-131.41	-4.90	339.98	1651285.99	14276360.85	39°18'51.340"N	80°57'41.654"W	340.02	90.825	0.71	-0.40	-2.17	
4706.00	13.240	82.240	4661.64	-136.63	-0.71	364.40	1651310.41	14276365.04	39°18'51.382"N	80°57'41.344"W	364.40	90.111	2.41	-2.23	3.68	
4806.00	14.760	86.730	4758.67	-143.50	1.57	388.47	1651334.46	14276367.32	39°18'51.404"N	80°57'41.037"W	388.47	89.769	1.87	1.52	4.49	
4906.00	15.580	90.730	4855.19	-152.74	2.12	414.62	1651360.60	14276367.87	39°18'51.409"N	80°57'40.705"W	414.62	89.707	1.33	0.82	4.00	
5006.00	15.750	85.720	4951.48	-162.02	2.97	441.58	1651387.55	14276368.71	39°18'51.417"N	80°57'40.362"W	441.59	89.615	1.36	0.17	-5.01	
5106.00	16.940	89.180	5047.44	-171.38	4.19	469.68	1651415.64	14276369.93	39°18'51.429"N	80°57'40.004"W	469.70	89.489	1.54	1.19	3.46	
5206.00	16.850	85.530	5143.12	-180.96	5.52	498.70	1651444.65	14276371.27	39°18'51.443"N	80°57'39.635"W	498.73	89.365	1.06	-0.09	-3.65	
5306.00	15.730	84.790	5239.11	-189.20	7.89	526.65	1651472.59	14276373.63	39°18'51.466"N	80°57'39.279"W	526.71	89.142	1.14	-1.12	-0.74	
5406.00	12.020	94.690	5336.19	-197.76	8.26	550.54	1651496.47	14276374.01	39°18'51.469"N	80°57'38.975"W	550.60	89.140	4.39	-3.71	9.90	
5506.00	13.010	98.780	5433.81	-208.17	5.70	572.04	1651517.96	14276371.44	39°18'51.444"N	80°57'38.702"W	572.07	89.430	1.33	0.99	4.09	
5606.00	16.680	87.260	5530.48	-218.64	4.66	597.51	1651543.42	14276370.41	39°18'51.434"N	80°57'38.378"W	597.53	89.553	4.69	3.67	-11.52	
5665.00	17.300	81.770	5586.91	-223.49	6.32	614.65	1651560.56	14276372.07	39°18'51.450"N	80°57'38.160"W	614.69	89.411	2.91	1.05	-9.31	
5764.00	16.730	78.330	5681.58	-229.51	11.31	643.18	1651589.07	14276377.06	39°18'51.499"N	80°57'37.797"W	643.28	88.992	1.17	-0.58	-3.47	BHI AT Curve <8-1/2"> (5665')(5764'-15571')



Actual Wellpath Report

Duchene Unit 1H AWP Proj: 15596'

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REFERENCE WELLPATH IDENTIFICATION			
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Field	Ritchie	Wellbore	Duchene Unit 1H AWB
Facility	Kelly Pad		

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5815.00	17.330	72.730	5730.34	-231.43	15.05	657.62	1651603.51	14276380.80	39°18'51.536"N	80°57'37.613"W	657.79	88.689	3.42	1.18	-10.98	
5852.00	16.790	71.380	5765.71	-232.18	18.40	667.95	1651613.83	14276384.14	39°18'51.569"N	80°57'37.482"W	668.20	88.422	1.81	-1.46	-3.65	
5897.00	16.720	66.670	5808.81	-232.39	23.03	680.05	1651625.93	14276388.77	39°18'51.615"N	80°57'37.328"W	680.44	88.060	3.02	-0.16	-10.47	
5942.00	17.200	52.720	5851.87	-230.47	29.63	691.29	1651637.17	14276395.37	39°18'51.680"N	80°57'37.184"W	691.93	87.546	9.08	1.07	-31.00	
5987.00	18.230	46.490	5894.74	-226.11	38.51	701.69	1651647.56	14276404.24	39°18'51.768"N	80°57'37.052"W	702.75	86.859	4.79	2.29	-13.84	
6031.00	19.120	42.800	5936.42	-220.50	48.53	711.58	1651657.45	14276414.26	39°18'51.867"N	80°57'36.926"W	713.24	86.098	3.36	2.02	-8.39	
6076.00	20.690	34.590	5978.74	-212.96	60.49	721.11	1651666.97	14276426.21	39°18'51.985"N	80°57'36.805"W	723.64	85.205	7.12	3.49	-18.24	
6121.00	23.760	20.740	6020.42	-201.90	75.52	728.84	1651674.69	14276441.24	39°18'52.133"N	80°57'36.707"W	732.74	84.084	13.45	6.82	-30.78	
6166.00	27.070	12.320	6061.07	-186.75	94.02	734.23	1651680.09	14276459.73	39°18'52.316"N	80°57'36.638"W	740.23	82.703	10.87	7.36	-18.71	
6211.00	29.890	8.230	6100.63	-168.58	115.12	738.03	1651683.88	14276480.83	39°18'52.525"N	80°57'36.589"W	746.95	81.134	7.62	6.27	-9.09	
6256.00	32.710	4.260	6139.08	-147.97	138.35	740.53	1651686.39	14276504.05	39°18'52.754"N	80°57'36.557"W	753.35	79.417	7.76	6.27	-8.82	
6273.00†	33.919	3.489	6153.28	-139.56	147.67	741.16	1651687.02	14276513.36	39°18'52.846"N	80°57'36.549"W	755.73	78.732	7.54	7.11	-4.53	Sycamore: 6273' MD / 6153.3' TVD
6301.00	35.920	2.320	6176.24	-125.01	163.68	741.97	1651687.82	14276529.36	39°18'53.005"N	80°57'36.539"W	759.81	77.560	7.54	7.15	-4.18	
6345.00	40.070	0.610	6210.91	-100.15	190.74	742.65	1651688.50	14276556.42	39°18'53.272"N	80°57'36.530"W	766.75	75.595	9.73	9.43	-3.89	
6390.00	44.080	359.520	6244.31	-72.19	220.89	742.67	1651688.52	14276586.55	39°18'53.570"N	80°57'36.530"W	774.82	73.436	9.06	8.91	-2.42	
6392.00†	44.286	359.420	6245.74	-70.89	222.29	742.66	1651688.51	14276587.95	39°18'53.584"N	80°57'36.530"W	775.21	73.337	10.87	10.29	-5.00	Middlesex: 6392' MD / 6245.7' TVD
6435.00	48.730	357.430	6275.33	-41.64	253.46	741.78	1651687.63	14276619.11	39°18'53.892"N	80°57'36.541"W	783.89	71.135	10.87	10.34	-4.63	
6480.00	52.420	354.150	6303.91	-8.53	288.11	739.20	1651685.06	14276653.74	39°18'54.234"N	80°57'36.574"W	793.36	68.706	9.95	8.20	-7.29	
6525.00	56.720	351.260	6329.99	26.94	324.46	734.52	1651680.38	14276690.08	39°18'54.594"N	80°57'36.633"W	802.99	66.168	10.89	9.56	-6.42	
6569.00	60.780	348.810	6352.82	63.73	361.49	728.00	1651673.86	14276727.10	39°18'54.960"N	80°57'36.716"W	812.81	63.593	10.38	9.23	-5.57	Burkett: 6569' MD / 6352.8' TVD
6614.00	66.990	346.160	6372.62	103.57	400.91	719.22	1651665.09	14276766.50	39°18'55.349"N	80°57'36.827"W	823.42	60.864	14.78	13.80	-5.89	
6635.00†	69.456	345.176	6380.41	122.90	419.80	714.40	1651660.26	14276785.38	39°18'55.536"N	80°57'36.888"W	828.61	59.560	12.52	11.74	-4.68	Tully: 6635' MD / 6380.4' TVD
6659.00	72.280	344.090	6388.27	145.43	441.66	708.39	1651654.25	14276807.24	39°18'55.752"N	80°57'36.965"W	834.79	58.057	12.52	11.77	-4.53	
6687.00†	75.036	343.406	6396.15	172.16	467.46	700.87	1651646.74	14276833.02	39°18'56.007"N	80°57'37.060"W	842.45	56.298	10.12	9.84	-2.44	Marcellus POE: 6687' MD / 6396.2' TVD
6704.00	76.710	343.000	6400.30	188.58	483.24	696.10	1651641.97	14276848.79	39°18'56.163"N	80°57'37.121"W	847.39	55.231	10.12	9.85	-2.39	
6749.00	79.950	343.050	6409.40	232.48	525.38	683.24	1651629.11	14276890.92	39°18'56.580"N	80°57'37.284"W	861.88	52.441	7.20	7.20	0.11	
6793.00	83.030	343.320	6415.91	275.82	567.03	670.65	1651616.53	14276932.55	39°18'56.992"N	80°57'37.444"W	878.24	49.786	7.03	7.00	0.61	
6838.00	84.860	343.480	6420.66	320.38	609.91	657.87	1651603.75	14276975.42	39°18'57.415"N	80°57'37.607"W	897.10	47.166	4.08	4.07	0.36	
6883.00	87.170	343.560	6423.78	365.06	652.96	645.13	1651591.03	14277018.45	39°18'57.841"N	80°57'37.768"W	917.91	44.655	5.14	5.13	0.18	
6928.00	89.080	342.740	6425.26	409.86	696.00	632.10	1651577.99	14277061.47	39°18'58.266"N	80°57'37.934"W	940.19	42.245	4.62	4.24	-1.82	



Actual Wellpath Report

Duchene Unit 1H AWP Proj: 15596'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Ritchie County, WV	Well	Duchene Unit 1H
Field	Ritchie	Wellbore	Duchene Unit 1H AWB
Facility	Kelly Pad		

WELLPATH DATA (188 stations)																
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
7017.00	89.690	339.510	6426.21	498.72	780.20	603.31	1651549.22	14277145.63	39°18'59.099"N	80°57'38.300"W	986.25	37.714	3.69	0.69	-3.63	
7107.00	89.660	339.300	6426.72	588.69	864.44	571.65	1651517.57	14277229.85	39°18'59.932"N	80°57'38.702"W	1036.37	33.476	0.24	-0.03	-0.23	
7197.00	89.600	339.620	6427.30	678.67	948.72	540.08	1651486.01	14277314.09	39°19'00.765"N	80°57'39.103"W	1091.68	29.651	0.36	-0.07	0.36	
7286.00	89.690	338.640	6427.86	767.65	1031.88	508.37	1651454.32	14277397.22	39°19'01.587"N	80°57'39.506"W	1150.31	26.228	1.11	0.10	-1.10	
7376.00	89.630	338.120	6428.39	857.65	1115.55	475.21	1651421.17	14277480.85	39°19'02.414"N	80°57'39.928"W	1212.55	23.074	0.58	-0.07	-0.58	
7466.00	90.000	337.370	6428.68	947.64	1198.84	441.13	1651387.10	14277564.11	39°19'03.237"N	80°57'40.361"W	1277.42	20.202	0.93	0.41	-0.83	
7555.00	90.180	338.640	6428.54	1036.64	1281.36	407.79	1651353.78	14277646.60	39°19'04.053"N	80°57'40.785"W	1344.69	17.654	1.44	0.20	1.43	
7645.00	90.090	339.850	6428.33	1126.62	1365.52	375.90	1651321.90	14277730.72	39°19'04.885"N	80°57'41.190"W	1416.31	15.391	1.35	-0.10	1.34	
7735.00	90.400	339.350	6427.94	1216.59	1449.87	344.53	1651290.54	14277815.04	39°19'05.719"N	80°57'41.589"W	1490.25	13.367	0.65	0.34	-0.56	
7824.00	90.370	340.450	6427.35	1305.54	1533.45	313.95	1651259.97	14277898.58	39°19'06.545"N	80°57'41.977"W	1565.26	11.570	1.24	-0.03	1.24	
7914.00	90.370	339.700	6426.76	1395.48	1618.06	283.28	1651229.31	14277983.16	39°19'07.381"N	80°57'42.367"W	1642.67	9.930	0.83	0.00	-0.83	
8004.00	90.310	338.330	6426.23	1485.47	1702.09	251.05	1651197.10	14278067.15	39°19'08.212"N	80°57'42.777"W	1720.50	8.390	1.52	-0.07	-1.52	
8093.00	90.430	335.910	6425.66	1574.45	1784.08	216.45	1651162.51	14278149.11	39°19'09.022"N	80°57'43.217"W	1797.16	6.917	2.72	0.13	-2.72	
8183.00	90.430	335.160	6424.98	1664.36	1865.99	179.18	1651125.25	14278230.99	39°19'09.832"N	80°57'43.690"W	1874.58	5.485	0.83	0.00	-0.83	
8273.00	90.460	334.770	6424.28	1754.22	1947.53	141.09	1651087.18	14278312.50	39°19'10.638"N	80°57'44.175"W	1952.64	4.144	0.43	0.03	-0.43	
8363.00	90.280	334.670	6423.70	1844.06	2028.91	102.66	1651048.77	14278393.85	39°19'11.443"N	80°57'44.663"W	2031.51	2.897	0.23	-0.20	-0.11	
8452.00	90.400	334.040	6423.17	1932.87	2109.14	64.14	1651010.26	14278474.05	39°19'12.236"N	80°57'45.153"W	2110.12	1.742	0.72	0.13	-0.71	
8542.00	90.430	334.060	6422.52	2022.64	2190.07	24.76	1650970.90	14278554.94	39°19'13.036"N	80°57'45.653"W	2190.21	0.648	0.04	0.03	0.02	
8632.00	90.370	334.770	6421.89	2112.46	2271.24	-14.11	1650932.05	14278636.08	39°19'13.838"N	80°57'46.148"W	2271.28	359.644	0.79	-0.07	0.79	
8721.00	90.400	336.790	6421.29	2201.38	2352.40	-50.62	1650895.55	14278717.21	39°19'14.641"N	80°57'46.612"W	2352.95	358.767	2.27	0.03	2.27	
8811.00	89.850	339.750	6421.10	2291.37	2436.00	-83.93	1650862.25	14278800.77	39°19'15.467"N	80°57'47.035"W	2437.44	358.027	3.35	-0.61	3.29	
8901.00	89.940	339.530	6421.26	2381.33	2520.37	-115.25	1650830.95	14278885.11	39°19'16.301"N	80°57'47.433"W	2523.01	357.382	0.26	0.10	-0.24	
8990.00	90.000	337.870	6421.31	2470.32	2603.29	-147.57	1650798.64	14278967.99	39°19'17.121"N	80°57'47.844"W	2607.47	356.756	1.87	0.07	-1.87	
9080.00	89.940	338.340	6421.36	2560.32	2686.80	-181.13	1650765.09	14279051.47	39°19'17.946"N	80°57'48.271"W	2692.90	356.143	0.53	-0.07	0.52	
9169.00	89.940	340.110	6421.45	2649.30	2770.01	-212.70	1650733.53	14279134.85	39°19'18.769"N	80°57'48.672"W	2778.16	355.609	1.99	0.00	1.99	
9259.00	90.000	341.060	6421.50	2739.22	2854.89	-242.62	1650703.63	14279219.49	39°19'19.608"N	80°57'49.052"W	2865.18	355.142	1.06	0.07	1.06	
9349.00	89.910	341.280	6421.57	2829.09	2940.07	-271.67	1650674.59	14279304.64	39°19'20.450"N	80°57'49.421"W	2952.60	354.721	0.26	-0.10	0.24	
9438.00	90.340	339.730	6421.37	2918.00	3023.97	-301.37	1650644.90	14279388.50	39°19'21.279"N	80°57'49.799"W	3038.95	354.309	1.81	0.48	-1.74	
9528.00	90.800	339.480	6420.48	3007.97	3108.32	-332.73	1650613.55	14279472.82	39°19'22.113"N	80°57'50.198"W	3126.08	353.890	0.58	0.51	-0.28	
9618.00	90.340	339.390	6419.58	3097.94	3192.58	-364.34	1650581.95	14279557.05	39°19'22.946"N	80°57'50.599"W	3213.30	353.489	0.52	-0.51	-0.10	



Actual Wellpath Report

Duchene Unit 1H AWP Proj: 15596'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Ritchie County, WV	Well	Duchene Unit 1H
Field	Ritchie	Wellbore	Duchene Unit 1H AWB
Facility	Kelly Pad		

WELLPATH DATA (188 stations)																
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]			[ft]	[°]	[°/100ft]	[°/100ft]	[°/100ft]	
9708.00	90.340	340.410	6419.05	3187.89	3277.10	-395.27	1650551.04	14279641.53	39°19'23.781"N	80°57'50.992"W	3300.85	353.122	1.13	0.00	1.13	
9797.00	90.370	342.660	6418.50	3276.72	3361.51	-423.46	1650522.86	14279725.91	39°19'24.616"N	80°57'51.351"W	3388.08	352.820	2.53	0.03	2.53	
9887.00	90.340	341.190	6417.94	3366.52	3447.06	-451.38	1650494.95	14279811.43	39°19'25.461"N	80°57'51.706"W	3476.49	352.540	1.63	-0.03	-1.63	
9976.00	90.340	338.850	6417.41	3455.46	3530.70	-481.79	1650464.56	14279895.03	39°19'26.288"N	80°57'52.092"W	3563.42	352.230	2.63	0.00	-2.63	
10066.00	90.370	338.420	6416.85	3545.45	3614.51	-514.57	1650431.78	14279978.81	39°19'27.117"N	80°57'52.509"W	3650.96	351.898	0.48	0.03	-0.48	
10156.00	90.400	341.970	6416.25	3635.38	3699.17	-545.06	1650401.31	14280063.44	39°19'27.954"N	80°57'52.896"W	3739.11	351.618	3.94	0.03	3.94	
10245.00	90.490	340.430	6415.56	3724.24	3783.42	-573.74	1650372.64	14280147.65	39°19'28.786"N	80°57'53.261"W	3826.68	351.377	1.73	0.10	-1.73	
10335.00	90.580	334.540	6414.72	3814.19	3866.52	-608.19	1650338.21	14280230.72	39°19'29.608"N	80°57'53.699"W	3914.06	351.061	6.54	0.10	-6.54	
10424.00	90.490	337.270	6413.88	3903.11	3947.75	-644.52	1650301.89	14280311.92	39°19'30.411"N	80°57'54.161"W	4000.02	350.728	3.07	-0.10	3.07	
10514.00	90.550	342.330	6413.07	3993.04	4032.19	-675.58	1650270.84	14280396.32	39°19'31.245"N	80°57'54.556"W	4088.39	350.489	5.62	0.07	5.62	
10603.00	90.740	339.120	6412.06	4081.93	4116.18	-704.96	1650241.48	14280480.28	39°19'32.076"N	80°57'54.929"W	4176.11	350.282	3.61	0.21	-3.61	
10693.00	90.490	339.210	6411.10	4171.91	4200.29	-736.97	1650209.48	14280564.35	39°19'32.907"N	80°57'55.336"W	4264.45	350.048	0.30	-0.28	0.10	
10782.00	90.550	336.640	6410.29	4260.90	4282.76	-770.41	1650176.05	14280646.79	39°19'33.722"N	80°57'55.761"W	4351.50	349.802	2.89	0.07	-2.89	
10872.00	90.520	334.590	6409.45	4350.80	4364.72	-807.56	1650138.91	14280728.72	39°19'34.533"N	80°57'56.233"W	4438.80	349.518	2.28	-0.03	-2.28	
10961.00	90.620	333.460	6408.56	4439.57	4444.73	-846.54	1650099.95	14280808.69	39°19'35.324"N	80°57'56.729"W	4524.62	349.217	1.27	0.11	-1.27	
11051.00	90.650	332.570	6407.57	4529.22	4524.92	-887.38	1650059.13	14280888.85	39°19'36.116"N	80°57'57.248"W	4611.11	348.905	0.99	0.03	-0.99	
11140.00	90.310	332.840	6406.82	4617.82	4604.01	-928.19	1650018.33	14280967.91	39°19'36.898"N	80°57'57.767"W	4696.64	348.602	0.49	-0.38	0.30	
11230.00	90.580	335.660	6406.12	4707.61	4685.06	-967.28	1649979.26	14281048.93	39°19'37.699"N	80°57'58.264"W	4783.87	348.335	3.15	0.30	3.13	
11319.00	90.520	337.260	6405.27	4796.56	4766.65	-1002.83	1649943.73	14281130.48	39°19'38.506"N	80°57'58.716"W	4870.99	348.119	1.80	-0.07	1.80	
11409.00	90.490	336.730	6404.47	4886.54	4849.49	-1038.00	1649908.57	14281213.29	39°19'39.325"N	80°57'59.163"W	4959.33	347.919	0.59	-0.03	-0.59	
11498.00	90.430	337.160	6403.76	4975.52	4931.37	-1072.85	1649873.73	14281295.14	39°19'40.134"N	80°57'59.607"W	5046.73	347.726	0.49	-0.07	0.48	
11588.00	90.550	340.060	6402.99	5065.50	5015.16	-1105.67	1649840.92	14281378.90	39°19'40.963"N	80°58'00.024"W	5135.60	347.567	3.22	0.13	3.22	
11677.00	90.580	340.770	6402.11	5154.43	5099.01	-1135.50	1649811.10	14281462.71	39°19'41.791"N	80°58'00.403"W	5223.91	347.446	0.80	0.03	0.80	
11767.00	90.520	339.000	6401.25	5244.37	5183.51	-1166.45	1649780.17	14281547.18	39°19'42.627"N	80°58'00.797"W	5313.14	347.318	1.97	-0.07	-1.97	
11857.00	90.580	340.400	6400.38	5334.33	5267.92	-1197.67	1649748.96	14281631.55	39°19'43.461"N	80°58'01.193"W	5402.35	347.191	1.56	0.07	1.56	
11946.00	90.620	342.630	6399.45	5423.16	5352.32	-1225.89	1649720.76	14281715.91	39°19'44.295"N	80°58'01.552"W	5490.91	347.100	2.51	0.04	2.51	
12036.00	90.650	339.910	6398.46	5513.01	5437.54	-1254.78	1649691.87	14281801.10	39°19'45.138"N	80°58'01.919"W	5580.44	347.006	3.02	0.03	-3.02	
12125.00	90.460	337.750	6397.59	5601.99	5520.52	-1286.92	1649659.75	14281884.05	39°19'45.958"N	80°58'02.328"W	5668.54	346.878	2.44	-0.21	-2.43	
12215.00	90.550	335.620	6396.80	5691.96	5603.16	-1322.54	1649624.14	14281966.66	39°19'46.775"N	80°58'02.781"W	5757.13	346.719	2.37	0.10	-2.37	
12304.00	90.520	334.760	6395.97	5780.84	5683.95	-1359.88	1649586.82	14282047.41	39°19'47.573"N	80°58'03.256"W	5844.36	346.545	0.97	-0.03	-0.97	



Actual Wellpath Report

Duchene Unit 1H AWP Proj: 15596'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Ritchie County, WV	Well	Duchene Unit 1H
Field	Ritchie	Wellbore	Duchene Unit 1H AWB
Facility	Kelly Pad		

WELLPATH DATA (188 stations)																
MD (ft)	Inclination [°]	Azimuth [°]	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist (ft)	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
12394.00	90.580	332.520	6395.10	5870.56	5764.58	-1399.84	1649546.88	14282128.01	39°19'48.371"N	80°58'03.764"W	5932.11	346.351	2.49	0.07	-2.49	
12483.00	90.490	335.860	6394.27	5959.34	5844.68	-1438.58	1649508.15	14282208.09	39°19'49.162"N	80°58'04.257"W	6019.12	346.172	3.75	-0.10	3.75	
12573.00	89.970	339.520	6393.91	6049.32	5927.93	-1472.74	1649474.00	14282291.30	39°19'49.985"N	80°58'04.691"W	6108.14	346.048	4.11	-0.58	4.07	
12663.00	90.000	336.480	6393.94	6139.31	6011.37	-1506.45	1649440.31	14282374.70	39°19'50.810"N	80°58'05.119"W	6197.25	345.931	3.38	0.03	-3.38	
12752.00	89.850	334.940	6394.05	6228.23	6092.49	-1543.06	1649403.71	14282455.79	39°19'51.612"N	80°58'05.585"W	6284.86	345.787	1.74	-0.17	-1.73	
12842.00	89.880	337.350	6394.26	6318.17	6174.79	-1579.45	1649367.33	14282538.06	39°19'52.426"N	80°58'06.048"W	6373.60	345.652	2.68	0.03	2.68	
12931.00	89.510	337.790	6394.74	6407.16	6257.06	-1613.41	1649333.39	14282620.29	39°19'53.239"N	80°58'06.480"W	6461.72	345.541	0.65	-0.42	0.49	
13021.00	89.540	338.740	6395.48	6497.16	6340.66	-1646.74	1649300.07	14282703.86	39°19'54.065"N	80°58'06.903"W	6551.01	345.441	1.06	0.03	1.06	
13111.00	89.510	338.360	6396.23	6587.15	6424.42	-1679.65	1649267.18	14282787.59	39°19'54.893"N	80°58'07.322"W	6640.36	345.348	0.42	-0.03	-0.42	
13200.00	89.510	339.600	6396.99	6676.14	6507.49	-1711.57	1649235.27	14282870.63	39°19'55.714"N	80°58'07.728"W	6728.81	345.264	1.39	0.00	1.39	
13290.00	89.480	340.390	6397.78	6766.08	6592.06	-1742.36	1649204.49	14282955.16	39°19'56.550"N	80°58'08.119"W	6818.43	345.195	0.88	-0.03	0.88	
13380.00	90.220	341.270	6398.02	6855.98	6677.07	-1771.91	1649174.95	14283040.13	39°19'57.391"N	80°58'08.495"W	6908.18	345.138	1.28	0.82	0.98	
13469.00	90.370	341.420	6397.56	6944.83	6761.39	-1800.38	1649146.49	14283124.42	39°19'58.224"N	80°58'08.857"W	6996.98	345.090	0.24	0.17	0.17	
13559.00	90.340	340.230	6397.00	7034.73	6846.39	-1829.94	1649116.95	14283209.39	39°19'59.064"N	80°58'09.233"W	7086.73	345.035	1.32	-0.03	-1.32	
13649.00	90.310	339.680	6396.49	7124.68	6930.94	-1860.79	1649086.11	14283293.90	39°19'59.900"N	80°58'09.625"W	7176.38	344.972	0.61	-0.03	-0.61	
13738.00	90.340	339.000	6395.99	7213.65	7014.21	-1892.19	1649054.72	14283377.14	39°20'00.723"N	80°58'10.024"W	7264.95	344.903	0.76	0.03	-0.76	
13828.00	90.340	338.760	6395.45	7303.64	7098.17	-1924.62	1649022.31	14283461.06	39°20'01.553"N	80°58'10.436"W	7354.46	344.829	0.27	0.00	-0.27	
13918.00	90.310	338.210	6394.94	7393.64	7181.89	-1957.62	1648989.31	14283544.76	39°20'02.381"N	80°58'10.856"W	7443.92	344.753	0.61	-0.03	-0.61	
14008.00	90.220	337.660	6394.53	7483.64	7265.30	-1991.43	1648955.52	14283628.13	39°20'03.205"N	80°58'11.286"W	7533.29	344.672	0.62	-0.10	-0.61	
14097.00	90.340	337.210	6394.09	7572.63	7347.49	-2025.58	1648921.38	14283710.28	39°20'04.018"N	80°58'11.720"W	7621.58	344.587	0.52	0.13	-0.51	
14187.00	90.250	336.860	6393.63	7662.61	7430.35	-2060.70	1648886.28	14283793.12	39°20'04.837"N	80°58'12.167"W	7710.81	344.499	0.40	-0.10	-0.39	
14277.00	90.310	336.020	6393.19	7752.58	7512.85	-2096.67	1648850.32	14283875.58	39°20'05.652"N	80°58'12.624"W	7799.93	344.407	0.94	0.07	-0.93	
14366.00	90.430	336.210	6392.62	7841.52	7594.22	-2132.71	1648814.30	14283956.92	39°20'06.457"N	80°58'13.083"W	7888.01	344.314	0.25	0.13	0.21	
14456.00	90.370	337.380	6391.99	7931.49	7676.94	-2168.17	1648778.85	14284039.60	39°20'07.274"N	80°58'13.534"W	7977.24	344.229	1.30	-0.07	1.30	
14546.00	90.280	338.830	6391.48	8021.49	7760.44	-2201.73	1648745.31	14284123.08	39°20'08.100"N	80°58'13.960"W	8066.73	344.161	1.61	-0.10	1.61	
14635.00	90.280	339.000	6391.04	8110.48	7843.48	-2233.74	1648713.30	14284206.08	39°20'08.921"N	80°58'14.367"W	8155.36	344.104	0.19	0.00	0.19	
14725.00	90.280	338.410	6390.60	8200.47	7927.34	-2266.43	1648680.63	14284289.90	39°20'09.749"N	80°58'14.783"W	8244.96	344.045	0.66	0.00	-0.66	
14814.00	90.250	338.490	6390.19	8289.47	8010.12	-2299.12	1648647.95	14284372.65	39°20'10.568"N	80°58'15.199"W	8333.54	343.985	0.10	-0.03	0.09	
14904.00	90.310	339.130	6389.75	8379.46	8094.03	-2331.65	1648615.44	14284456.53	39°20'11.397"N	80°58'15.612"W	8423.18	343.930	0.71	0.07	0.71	
14994.00	90.280	339.050	6389.29	8469.45	8178.10	-2363.77	1648583.33	14284540.56	39°20'12.228"N	80°58'16.021"W	8512.86	343.879	0.09	-0.03	-0.09	



Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Ritchie County, WV	Well	Duchene Unit 1H
Field	Ritchie	Wellbore	Duchene Unit 1H AWB
Facility	Kelly Pad		

WELLPATH DATA (188 stations)																
MD (ft)	Inclination [°]	Azimuth [°]	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
15083.00	90.370	337.830	6388.78	8558.44	8260.87	-2396.48	1648550.64	14284623.30	39°20'13.046"N	80°58'16.437"W	8601.46	343.823	1.37	0.10	-1.37	
15173.00	90.180	335.670	6388.35	8648.41	8343.56	-2432.00	1648515.13	14284705.95	39°20'13.864"N	80°58'16.889"W	8690.77	343.750	2.41	-0.21	-2.40	
15263.00	90.280	335.080	6387.99	8738.31	8425.37	-2469.50	1648477.64	14284787.73	39°20'14.672"N	80°58'17.366"W	8779.82	343.664	0.66	0.11	-0.66	
15352.00	90.250	333.490	6387.58	8827.11	8505.55	-2508.12	1648439.04	14284867.88	39°20'15.465"N	80°58'17.857"W	8867.64	343.570	1.79	-0.03	-1.79	
15442.00	90.250	335.390	6387.18	8916.92	8586.74	-2546.94	1648400.23	14284949.04	39°20'16.268"N	80°58'18.351"W	8956.51	343.479	2.11	0.00	2.11	
15531.00	90.250	339.740	6386.80	9005.90	8668.98	-2580.90	1648366.29	14285031.25	39°20'17.081"N	80°58'18.782"W	9045.02	343.421	4.89	0.00	4.89	
15571.00	89.910	341.080	6386.74	9045.86	8706.67	-2594.31	1648352.88	14285068.92	39°20'17.453"N	80°58'18.953"W	9084.96	343.408	3.46	-0.85	3.35	
15596.00	89.910	341.080	6386.78	9070.83	8730.32	-2602.42	1648344.78	14285092.56	39°20'17.687"N	80°58'19.056"W	9109.94	343.401	0.00	0.00	0.00	Projected MD at TD: 15596'

HOLE & CASING SECTIONS - Ref Wellbore: Duchene Unit 1H AWB Ref Wellpath: Duchene Unit 1H AWP Proj: 15596'									
String/Diameter	Start MD (ft)	End MD (ft)	Interval (ft)	Start TVD (ft)	End TVD (ft)	Start N/S (ft)	Start E/W (ft)	End N/S (ft)	End E/W (ft)
13.375in Casing Surface	19.00	510.00	491.00	19.00	509.99	0.00	0.00	-2.73	1.36
9.625in Casing Intermediate	19.00	2571.00	2552.00	19.00	2569.75	0.00	0.00	-34.60	8.09



Actual Wellpath Report

Duchene Unit 1H AWP Proj: 15596'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Ritchie County, WV	Well	Duchene Unit 1H
Field	Ritchie	Wellbore	Duchene Unit 1H AWB
Facility	Kelly Pad		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Duchene Unit 1H AZI Rev-1	6424.00	822.35	591.43	1651537.35	14277187.77	39°18'59.515"N	80°57'38.451"W	point
Duchene Unit 1H BHL - AC Rev-1	6424.00	8659.07	-2560.98	1648386.20	14285021.34	39°20'16.982"N	80°58'18.529"W	point
Duchene Unit 1H BHL Rev-1	6424.00	8672.98	-2566.57	1648380.61	14285035.25	39°20'17.120"N	80°58'18.600"W	point
Duchene Unit 1H LP Rev-1	6424.00	636.02	655.43	1651601.32	14277001.52	39°18'57.674"N	80°57'37.637"W	point
Duchene Unit 1H 20' L/R Hard Line	6600.00	4747.67	-987.57	1649958.98	14281111.51	39°19'38.318"N	80°57'58.522"W	rectangle

WELLPATH COMPOSITION - Ref Wellbore: Duchene Unit 1H AWB Ref Wellpath: Duchene Unit 1H AWP Proj: 15596'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
19.00	5665.00	Gyrodatta standard - Drop gyro or Multi-shot	03 Gyrodatta MS Gyro <8-3/4"> (100'-5659')	Duchene Unit 1H AWB
5665.00	15571.00	BHI AutoTrak Curve (Axial)	04 BHI AT Curve <8-1/2"> (5665')(5764'-15571')	Duchene Unit 1H AWB
15571.00	15596.00	Blind Drilling (std)	Projection to bit	Duchene Unit 1H AWB



Actual Wellpath Report

Duchene Unit 1H AWP Proj: 15596'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Ritchie County, WV	Well	Duchene Unit 1H
Field	Ritchie	Wellbore	Duchene Unit 1H AWB
Facility	Kelly Pad		

COMMENTS
<p>Wellpath general comments API: 47-085-10161-0000 BHI Job #: 8242926 Rig: Precision 525 Duration: 11/5/2016-11/9/2016 Gyrodata MS Gyro <8-3/4"> (100'-5659') BHI AT Curve <8-1/2"> (5665')(5764'-15571') Sycamore: 6273' MD Middlesex: 6392' MD Burkett: 6569' MD Tully: 6635' MD Marcellus POE: 6687' MD Projected MD at TD: 15596'</p>