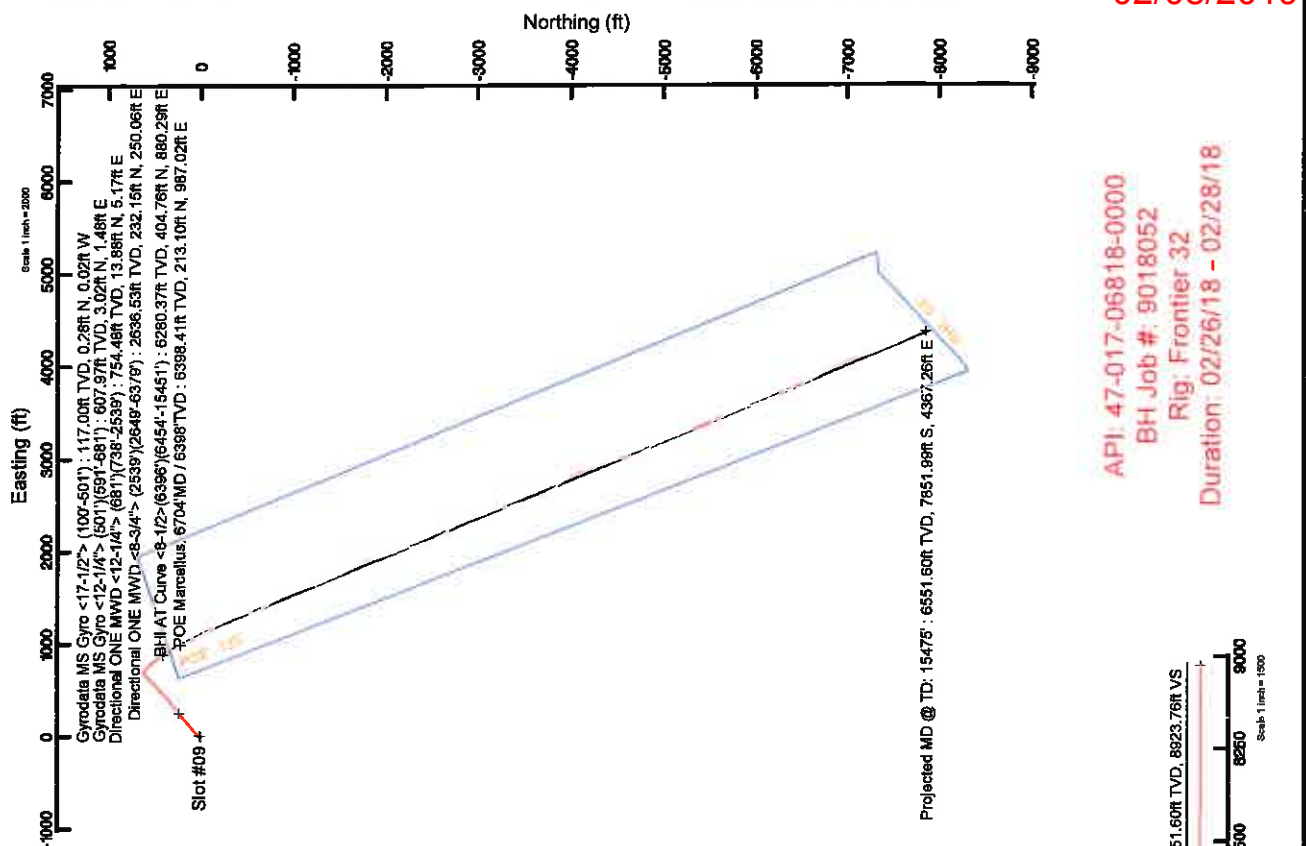




# ANTERO RESOURCES CORPORATION

Location: Doddridge Co., WV  
 Field: Doddridge  
 Facility: Middle Pad

Slot: Slot #09  
 Well: Chalk Unit 1H  
 Wellbore: Chalk Unit 1H PWB



Grid System: NAD27 / UTM Zone 17 North, US feet  
 North Reference: Grid north  
 Scale: True distance  
 Depths are in feet  
 Created by: mcorneb on 2018-05-21  
 Database: WA\_MPL\_EASTERNUS\_Deht

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Middle Pad	1695090.990	14279417.689	39°19'21.010"N	80°48'24.020"W
Slot	Local E (ft)	Local N (ft)	Latitude	Longitude
Slot #09	-29.18	74.72	39°19'20.720"N	80°48'23.070"W

Frontier 32 (RKB) to Ground level (At Slot: Slot #09) -843R  
 Mean Sea Level to Ground level (At Slot: Slot #09) -843R  
 Frontier 32 (RKB) to Mean Sea Level 875R

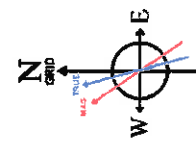
Gyrodatta MS Gyro <17-1/2> (100-501) : 0.38° Inc, 117.00R MD, 117.00R TVD, -0.27R VS

Gyrodatta MS Gyro <12-1/4> (501)(591-681) : 1.99° Inc, 608.00R MD, 607.97R TVD, -2.23R VS  
 Directional ONE MWD <12-1/4> (681)(738-2539) : 6.92° Inc, 755.00R MD, 754.48R TVD, -10.86R VS

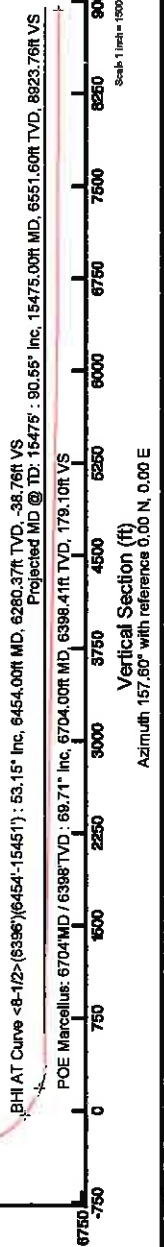
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tile On	6396.00	46.960	146.300	6243.15	442.11	856.22	9.55	-92.48
Proj. to Bottom	6478.00	54.690	147.990	6294.91	388.74	890.65	8.54	-20.01
POE	6701.43	67.924	151.995	6402.00	219.26	988.08	6.13	173.81
Landing Pt.	6911.87	90.000	151.995	6442.00	38.20	1084.37	10.50	377.90
On Azimuth	7191.71	90.000	157.596	6442.00	-215.07	1203.68	2.00	657.49
BHIL	15476.78	90.000	157.596	6442.00	-7874.78	4361.34	0.00	8942.58

Directional ONE MWD <8-3/4> (2539)(2649-6379) : 11.83° Inc, 2686.00R MD, 2636.53R TVD, -119.38R VS

Well	Wellbore	Wellpath
Slot #09	Chalk Unit 1H PWB	Chalk Unit 1H PWB
Slot #09	Chalk Unit 1H PWB	Chalk Unit 1H PWB Rev-A-D



User specified Dip: 66.55° Field 52034 rT  
 Magnetic North is 7.84 degrees West of True North (at 23201ft)  
 Grid North is 0.12 degrees East of True North  
 To correct azimuth from Magnetic to Grid subtract 7.76 degrees  
 To correct azimuth from Grid to True add 7.84 degrees



BHI AT Curve <8-1/2> (6396)(6454-15451) : 53.15° Inc, 6454.00R MD, 6260.37R TVD, -38.76R VS  
 Projected MD @ TD: 15475 : 90.56° Inc, 15475.00R MD, 6551.60R TVD, 8823.76R VS

POE Marcellus: 6704MD / 6398TVD : 69.71° Inc, 6704.00R MD, 6398.41R TVD, 179.10R VS

Vertical Section (ft)  
 Azimuth: 157.60° with reference 0.00 N, 0.00 E

API: 47-017-06818-0000  
 BH Job #: 9018052  
 Rig: Frontier 32  
 Duration: 02/26/18 - 02/28/18



# Actual Wellpath Report

Chalk Unit 1H AWP Proj: 15475

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REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Area	Doddridge Co., WV
Field	Doddridge
Facility	Middle Pad
Slot	Slot #09
Well	Chalk Unit 1H
Wellbore	Chalk Unit 1H AWB

REPORT SETUP INFORMATION	
Projection System	NAD27 / UTM Zone 17 North, US feet
North Reference	Grid
Scale	0.999603
Convergence at slot	0.12° East
Software System	WellArchitect® 5.1
User	Mccrerrib
Report Generated	5/21/2018 at 12:31:10 PM
Database/Source file	WA_MPL_EASTERNUS_Defn/Chalk Unit 1H AWP Proj_15475_.xml

WELLPATH LOCATION				
	Local coordinates		Grid coordinates	
	North[ft]	East[ft]	Northing[US ft]	Latitude
Slot Location	-29.18	74.72	14279388.52	39°19'20.720"N
Facility Reference Pt		1695165.68	14279417.69	39°19'21.010"N
Field Reference Pt		0.00	0.00	0°00'00.000"
				Longitude
				80°48'23.070"W
				80°48'24.020"W
				85°29'19.301"W

WELLPATH DATUM	
Calculation method	Minimum curvature
Horizontal Reference Pt	Slot
Vertical Reference Pt	Frontier 32 (RKB)
MID Reference Pt	Frontier 32 (RKB)
Field Vertical Reference	Mean Sea Level
Frontier 32 (RKB) to Facility Vertical Datum	875.00ft
Frontier 32 (RKB) to Mean Sea Level	875.00ft
Frontier 32 (RKB) to Ground Level at Slot (Slot #09)	32.00ft
Section Origin	N 0.00, E 0.00 ft
Section Azimuth	157.60°

02/08/2019



# Actual Wellpath Report

Chalk Unit 1H AWP Proj: 15475'

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**REFERENCE WELLPATH IDENTIFICATION**

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Doddridge Co., WY	Well	Chalk Unit 1H
Field	Doddridge	Wellbore	Chalk Unit 1H AWB
Facility	Middle Pad		

**WELLPATH DATA (191 stations) † = interpolated/extrapolated station**

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid North (US ft)	Grid East (US ft)	Latitude (°)	Longitude (°)	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
0.00†	0.000	355.900	0.00	0.00	0.00	0.00	1695165.68	14279388.52	39°19'20.720"N	80°48'23.070"W	0.00	0.000	0.00	0.00	0.00	
32.00	0.000	355.900	32.00	0.00	0.00	0.00	1695165.68	14279388.52	39°19'20.720"N	80°48'23.070"W	0.00	0.000	0.00	0.00	0.00	
117.00	0.360	355.900	117.00	-0.27	0.28	-0.02	1695165.66	14279388.80	39°19'20.723"N	80°48'23.070"W	0.28	355.900	0.45	0.45	-4.82	Gyrodata MS Gyro <17-1/2"> (100'-50')
217.00	0.540	4.510	217.00	-1.00	1.08	-0.01	1695165.68	14279389.00	39°19'20.731"N	80°48'23.070"W	1.08	359.639	0.17	0.16	8.61	
317.00	0.170	80.730	316.99	-1.39	1.58	0.18	1695165.86	14279390.08	39°19'20.736"N	80°48'23.068"W	1.59	6.399	0.53	-0.37	76.22	
417.00	0.130	80.750	416.99	-1.31	1.60	0.44	1695166.12	14279390.12	39°19'20.736"N	80°48'23.064"W	1.66	15.280	0.05	-0.04	10.02	
517.00	0.500	98.440	516.99	-1.04	1.52	0.98	1695166.66	14279390.04	39°19'20.735"N	80°48'23.057"W	1.81	32.740	0.37	0.37	8.68	
608.00	1.980	3.740	607.97	-2.23	3.02	1.48	1695167.16	14279391.54	39°19'20.750"N	80°48'23.051"W	3.36	26.099	2.17	1.64	-104.84	Gyrodata MS Gyro <12-1/4"> (501')(591'-681')
698.00	5.110	19.690	697.79	-6.60	8.35	2.93	1695168.61	14279396.86	39°19'20.802"N	80°48'23.032"W	8.85	19.353	3.61	3.48	17.72	
785.00	6.920	23.770	784.48	-10.86	13.88	5.17	1695170.85	14279402.39	39°19'20.857"N	80°48'23.004"W	14.81	20.434	3.26	3.18	7.16	Directional ONE MWD <12-1/4"> (681')(738'-2539')
845.00	9.100	33.980	843.60	-18.56	24.74	11.34	1695177.01	14279413.25	39°19'20.964"N	80°48'22.925"W	27.22	24.612	2.83	2.42	11.34	
935.00	10.400	40.930	932.30	-26.15	36.78	20.64	1695186.31	14279425.29	39°19'21.083"N	80°48'22.806"W	42.18	29.292	1.95	1.44	7.72	
1023.00	9.300	47.890	1019.00	-32.11	47.55	31.11	1695196.78	14279436.05	39°19'21.189"N	80°48'22.673"W	56.83	33.197	1.84	-1.25	7.91	
1199.00	8.540	46.120	1105.94	-36.90	56.85	41.10	1695206.77	14279445.35	39°19'21.281"N	80°48'22.545"W	70.15	35.864	0.92	-0.86	-2.01	
1288.00	9.440	51.470	1280.77	-47.36	76.24	60.69	1695226.35	14279464.73	39°19'21.472"N	80°48'22.296"W	83.43	37.138	0.92	0.49	-5.05	
1376.00	8.740	58.780	1367.67	-50.39	94.20	72.05	1695237.71	14279472.69	39°19'21.376"N	80°48'22.427"W	97.45	38.520	1.84	0.53	11.04	
1464.00	8.390	57.240	1454.69	-52.57	91.14	83.17	1695248.82	14279479.62	39°19'21.619"N	80°48'22.009"W	110.82	40.554	1.53	-0.80	8.31	
1552.00	9.020	50.930	1541.68	-55.70	98.96	93.92	1695259.57	14279487.44	39°19'21.696"N	80°48'21.872"W	123.38	42.381	0.48	-0.40	-1.75	
1640.00	10.130	50.170	1628.45	-60.00	108.27	105.22	1695270.86	14279496.74	39°19'21.788"N	80°48'21.728"W	136.44	43.503	1.30	0.72	-7.17	
1728.00	10.590	47.660	1715.01	-65.08	118.67	117.14	1695282.78	14279507.14	39°19'21.890"N	80°48'21.576"W	150.98	44.183	1.27	1.26	-0.86	
1817.00	11.530	47.090	1802.36	-70.98	130.24	129.70	1695295.33	14279518.70	39°19'22.004"N	80°48'21.416"W	166.75	44.629	0.73	0.52	-2.85	
1905.00	11.740	48.770	1888.55	-76.95	142.12	142.88	1695308.50	14279530.59	39°19'22.122"N	80°48'21.248"W	183.80	44.883	1.06	1.06	-0.64	
1993.00	10.210	50.870	1874.85	-82.22	153.24	156.02	1695321.64	14279541.70	39°19'22.231"N	80°48'21.081"W	201.53	45.151	0.45	0.24	1.91	
2081.00	10.820	50.830	2061.37	-86.85	163.38	168.47	1695334.09	14279551.83	39°19'22.331"N	80°48'20.922"W	218.69	45.515	1.14	-1.05	2.39	
2169.00	10.490	50.990	2147.94	-81.39	173.35	180.74	1695346.35	14279561.80	39°19'22.429"N	80°48'20.765"W	234.68	45.880	0.69	-0.69	-0.05	
2257.00	9.770	50.680	2234.57	-85.85	183.12	192.74	1695358.35	14279571.57	39°19'22.526"N	80°48'20.612"W	250.43	46.197	0.32	0.32	0.18	
2345.00	10.290	46.210	2321.23	-100.88	193.26	204.16	1695369.76	14279581.70	39°19'22.626"N	80°48'20.467"W	265.86	46.467	0.82	-0.82	-0.35	
2433.00	10.790	47.500	2407.76	-106.56	204.23	215.88	1695381.47	14279592.67	39°19'22.734"N	80°48'20.319"W	281.12	46.572	1.02	0.52	-5.08	
											297.17	46.588	0.69	0.64	1.47	



# Actual Wellpath Report

Chalk Unit 1H AWP Proj: 15475'

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REFERENCE WELLPATH IDENTIFICATION		Slot
Operator	ANTERO RESOURCES CORPORATION	Slot #09
Area	Doddridge Co., WV	Chalk Unit 1H
Field	Doddridge	Chalk Unit 1H AWB
Facility	Middle Pad	

WELLPATH DATA (191 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)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments	
2521.00	10.750	50.080	2494.21	-111.86	215.06	228.24	1695393.83	14279603.50	39°19'22.84"N	80°48'20.16"W	313.60	46.703	0.55	-0.05	2.93	
2556.00	10.480	49.760	2528.61	-113.82	219.22	233.18	1695398.77	14279607.65	39°19'22.88"N	80°48'20.09"W	320.04	46.768	0.76	-0.74	-0.94	
2666.00	11.830	55.000	2636.53	-119.35	232.15	250.06	1695415.64	14279620.58	39°19'23.00"N	80°48'19.88"W	341.21	47.126	1.53	1.22	4.77	Directional ONE MWD -8-3/4" > (2539') (2649'-6379')
2754.00	11.040	50.270	2722.78	-123.82	242.71	263.93	1695429.51	14279631.14	39°19'23.11"N	80°48'19.705"W	358.56	47.398	1.39	-0.90	-5.37	
2842.00	10.470	45.770	2808.24	-129.31	253.68	276.14	1695441.71	14279642.09	39°19'23.22"N	80°48'19.549"W	374.97	47.428	1.15	-0.65	-5.11	
2931.00	12.320	52.710	2896.48	-134.76	265.07	289.49	1695455.06	14279653.49	39°19'23.33"N	80°48'19.379"W	392.51	47.521	2.58	2.08	7.80	
3019.00	11.230	49.650	2982.59	-140.34	276.82	303.32	1695468.88	14279665.22	39°19'23.450"N	80°48'19.203"W	410.84	47.615	1.74	-0.92	-7.18	
3107.00	12.450	52.220	3194.99	-151.32	299.78	330.23	1695495.78	14279688.18	39°19'23.676"N	80°48'18.860"W	446.01	47.767	1.51	1.39	2.92	
3283.00	11.750	46.490	3241.04	-157.06	311.76	344.23	1695508.77	14279700.16	39°19'23.794"N	80°48'18.681"W	464.42	47.833	1.58	-0.80	-6.51	
3372.00	11.170	50.470	3328.27	-162.87	323.49	357.45	1695522.99	14279711.88	39°19'23.910"N	80°48'18.513"W	482.09	47.855	1.10	-0.65	4.47	
3460.00	11.120	54.100	3414.61	-167.36	333.89	370.90	1695536.43	14279722.27	39°19'24.012"N	80°48'18.341"W	499.05	48.006	0.80	-0.06	4.13	
3548.00	10.540	47.180	3501.04	-172.15	344.34	383.68	1695549.21	14279732.72	39°19'24.115"N	80°48'18.179"W	515.53	48.093	1.62	-0.66	-7.88	
3636.00	10.150	52.900	3587.62	-176.92	354.48	395.76	1695561.29	14279742.66	39°19'24.215"N	80°48'18.024"W	531.31	48.149	1.25	-0.44	6.50	
3724.00	11.170	53.800	3674.10	-180.91	364.18	408.84	1695574.36	14279752.58	39°19'24.311"N	80°48'17.858"W	547.52	48.308	1.18	1.16	1.14	
3812.00	10.050	49.970	3760.59	-185.25	374.14	421.60	1695587.12	14279762.51	39°19'24.409"N	80°48'17.695"W	563.68	48.413	1.51	-1.27	-4.47	
3901.00	9.400	47.100	3848.31	-190.15	384.09	432.87	1695598.38	14279772.45	39°19'24.507"N	80°48'17.551"W	578.71	48.418	0.91	-0.73	-3.22	
3989.00	8.830	41.390	3935.20	-195.65	394.05	442.60	1695608.11	14279782.41	39°19'24.605"N	80°48'17.427"W	592.90	48.322	1.21	-0.65	-8.49	
4077.00	9.390	42.200	4022.09	-201.71	404.43	451.89	1695617.39	14279792.79	39°19'24.708"N	80°48'17.309"W	608.44	48.172	0.65	0.84	0.92	
4165.00	10.160	42.220	4108.81	-208.12	415.50	461.93	1695627.43	14279803.85	39°19'24.817"N	80°48'17.181"W	621.30	48.029	0.88	0.87	0.02	
4254.00	10.130	45.230	4196.42	-214.46	426.82	472.76	1695638.25	14279815.17	39°19'24.929"N	80°48'17.043"W	636.93	47.923	0.60	-0.03	3.38	
4342.00	11.010	53.500	4282.93	-219.45	437.27	485.01	1695650.50	14279825.62	39°19'25.032"N	80°48'16.887"W	653.03	47.963	1.99	1.00	9.40	
4430.00	10.270	50.150	4369.42	-223.85	447.30	497.79	1695663.27	14279835.64	39°19'25.130"N	80°48'16.724"W	669.23	48.058	1.10	-0.84	-3.81	
4518.00	9.280	49.420	4456.14	-228.42	456.94	509.20	1695674.68	14279845.28	39°19'25.225"N	80°48'16.578"W	684.16	48.086	1.13	-1.13	-0.83	
4607.00	10.630	52.510	4543.80	-232.80	466.60	521.16	1695686.84	14279854.94	39°19'25.321"N	80°48'16.426"W	699.52	48.162	1.63	1.52	3.47	
4695.00	10.490	48.410	4630.31	-237.54	476.86	533.60	1695698.07	14279865.19	39°19'25.422"N	80°48'16.287"W	715.63	48.214	0.87	-0.16	-4.66	
4783.00	9.910	46.710	4716.92	-242.88	487.37	545.10	1695710.56	14279875.70	39°19'25.525"N	80°48'16.121"W	731.21	48.200	0.74	-0.66	-1.93	
4872.00	10.390	46.010	4804.53	-248.56	498.20	556.45	1695721.91	14279886.52	39°19'25.632"N	80°48'15.976"W	746.88	48.161	0.56	0.54	-0.79	
4960.00	10.240	42.100	4891.11	-254.85	509.51	567.40	1695732.86	14279897.83	39°19'25.744"N	80°48'15.836"W	762.59	48.077	0.81	-0.17	-4.44	
5048.00	9.870	46.770	4977.76	-260.90	520.48	578.14	1695743.58	14279908.78	39°19'25.852"N	80°48'15.699"W	777.91	48.004	1.02	-0.42	5.31	



# Actual Wellpath Report

Chalk Unit 1H AWP Proj: 15475'

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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #09
Operator	ANTERO RESOURCES CORPORATION	Well	Chalk Unit 1H
Area	Doddridge Co., WV	Wellbore	Chalk Unit 1H AWB
Field	Doddridge		
F-acility	Middle Pad		

WELLPATH DATA (191 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)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
5136.00	10.440	48.870	5084.38	-266.14	530.89	589.84	1695755.09	14279919.20	39°19'25.955"N	80°48'15.553"W	793.43	0.771	0.65	2.39	
5224.00	10.170	44.840	5150.96	-271.71	541.65	601.13	1695766.57	14279929.95	39°19'26.061"N	80°48'15.406"W	809.16	0.87	-0.31	-4.58	
5313.00	10.150	44.750	5238.56	-277.79	552.79	612.19	1695777.63	14279941.09	39°19'26.171"N	80°48'15.265"W	824.83	0.03	-0.02	-0.10	
5401.00	10.370	43.070	5325.16	-284.09	564.08	623.06	1695788.49	14279952.37	39°19'26.282"N	80°48'15.126"W	840.47	0.42	0.25	-1.91	
5489.00	10.790	45.580	5411.66	-290.47	575.63	634.35	1695799.78	14279963.92	39°19'26.396"N	80°48'14.982"W	856.59	0.71	0.48	2.85	
5577.00	11.440	48.400	5498.01	-296.43	587.19	646.76	1695812.18	14279975.48	39°19'26.510"N	80°48'14.824"W	873.55	0.96	0.74	3.20	
5665.00	11.390	45.540	5584.27	-302.56	599.07	659.48	1695824.90	14279987.35	39°19'26.627"N	80°48'14.662"W	890.96	0.65	-0.06	-3.25	
5754.00	10.270	43.290	5678.47	-305.88	605.10	665.41	1695830.82	14279993.38	39°19'26.686"N	80°48'14.586"W	899.40	0.717	2.86	-2.49	-5.00
5842.00	10.530	71.370	5714.08	-309.32	614.02	678.02	1695843.44	14280002.29	39°19'26.774"N	80°48'14.512"W	914.73	0.77	0.33	20.32	
5930.00	12.190	89.140	5798.19	-307.30	615.41	686.87	1695852.08	14280003.68	39°19'26.788"N	80°48'14.426"W	922.09	8.05	0.33	44.51	
5986.00	13.910	99.050	5801.05	-302.83	614.64	686.54	1695861.95	14280002.92	39°19'26.780"N	80°48'14.190"W	928.96	8.56	3.69	39.49	
5974.00	15.120	108.470	5843.65	-286.47	612.18	707.27	1695872.67	14280000.46	39°19'26.756"N	80°48'14.054"W	935.42	6.40	3.91	22.52	
6062.00	23.400	132.910	5988.32	-281.97	589.83	743.57	1695908.96	14279978.11	39°19'26.534"N	80°48'13.908"W	941.14	8.30	5.43	16.86	
6106.00	26.510	137.910	6008.22	-244.78	576.59	756.56	1695921.94	14279964.88	39°19'26.403"N	80°48'13.592"W	949.10	9.26	6.75	22.43	
6150.00	29.060	141.120	6047.14	-225.28	560.98	769.85	1695935.22	14279949.27	39°19'26.248"N	80°48'13.427"W	951.22	8.54	7.07	17.05	
6194.00	31.410	142.210	6085.15	-203.98	543.59	783.58	1695948.95	14279931.90	39°19'26.076"N	80°48'13.259"W	952.56	6.72	5.80	7.30	
6238.00	33.650	143.720	6122.25	-181.09	524.70	797.93	1695963.19	14279913.01	39°19'25.889"N	80°48'12.904"W	953.88	5.48	5.34	2.48	
6282.00	36.780	143.510	6158.19	-156.47	504.28	812.88	1695978.23	14279892.60	39°19'25.687"N	80°48'12.713"W	954.90	7.12	7.11	-0.48	
6327.00	40.570	144.830	6193.32	-129.12	481.48	829.32	1695994.67	14279869.81	39°19'25.461"N	80°48'12.504"W	956.59	8.62	8.42	2.93	
6396.00	46.960	146.300	6243.15	-82.48	442.11	856.22	1696021.56	14279830.46	39°19'25.071"N	80°48'12.163"W	961.74	9.28	9.14	2.43	
6454.00	53.150	148.030	6307.37	-38.76	404.76	880.29	1696045.62	14279793.11	39°19'24.702"N	80°48'11.858"W	963.63	62.690	9.55	1.60	
6501.00	57.000	149.140	6367.27	-0.71	371.87	900.37	1696065.69	14279760.24	39°19'24.376"N	80°48'11.603"W	968.89	65.307	10.87	2.36	2.985 HI AT Curve <8-1/2> (6396) (6454-15451')
6548.00	59.492	150.690	6328.32	32.99	342.45	917.42	1696082.74	14279730.83	39°19'24.065"N	80°48'11.387"W	974.14	67.558	8.19	2.36	
6595.00	62.250	152.170	6354.57	78.90	301.01	939.98	1696105.29	14279689.41	39°19'23.876"N	80°48'11.101"W	979.25	69.531	6.23	3.74	Burket 6541TMD / 6328TVD
6601.00	62.695	152.097	6357.35	86.20	296.31	942.47	1696107.71	14279684.71	39°19'23.628"N	80°48'11.069"W	980.19	69.890	6.28	3.63	
											987.95	72.547	7.50	7.42	-1.22 July 6601TMD / 6357TVD



# Actual Wellpath Report

Chalk Unit 1H AWP Proj: 15475'

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**REFERENCE WELLPATH IDENTIFICATION**

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Doddridge Co., WV	Well	Chalk Unit 1H
Field	Doddridge	Wellbore	Chalk Unit 1H AWB
F-facility	Middle Pad		

**WELLPATH DATA (191 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)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
6642.00	65.740	151.610	6375.18	121.93	263.76	959.88	1696125.18	14279652.17	39°19'23.306"N	80°48'10.849"W	995.46	74.635	7.50	7.43	-1.19	
6681.00†	68.653	151.906	6390.29	157.69	232.09	976.89	1696142.19	14279620.52	39°19'22.993"N	80°48'10.633"W	1004.08	76.635	7.50	7.47	0.76	Hamilton: 6681MD / 6390TVD
6691.00	69.400	151.980	6393.87	166.98	223.85	981.28	1696146.58	14279612.28	39°19'22.911"N	80°48'10.576"W	1006.49	77.150	7.50	7.47	0.74	
6704.00†	69.710	151.888	6398.41	179.10	213.10	987.02	1696152.30	14279601.54	39°19'22.805"N	80°48'10.505"W	1009.76	77.817	2.47	2.38	-0.71	POE Marcellus: 6704MD / 6398TVD
6738.00	70.520	151.650	6409.98	210.91	184.93	1002.14	1696167.42	14279573.38	39°19'22.526"N	80°48'10.313"W	1013.06	79.544	2.47	2.38	-0.70	
6786.00	74.620	151.860	6424.35	256.46	144.60	1023.81	1696189.08	14279593.06	39°19'22.127"N	80°48'10.039"W	1033.97	81.961	8.55	8.54	0.44	
6833.00	80.270	151.530	6434.32	302.12	104.18	1045.58	1696210.84	14279492.66	39°19'21.727"N	80°48'09.763"W	1050.75	84.310	13.34	13.32	-0.70	
6881.00	86.880	153.110	6439.69	349.60	61.95	1087.72	1696232.98	14279450.45	39°19'21.310"N	80°48'09.482"W	1069.52	86.679	11.70	11.23	3.29	
6928.00	89.950	153.350	6441.65	396.42	20.03	1098.87	1696254.12	14279408.54	39°19'20.895"N	80°48'09.214"W	1089.05	88.946	5.72	5.70	0.51	
6976.00	89.110	153.000	6442.46	444.27	-22.80	1110.53	1696275.77	14279365.73	39°19'20.471"N	80°48'08.940"W	1110.76	91.176	0.80	0.33	-0.73	
7071.00	89.950	150.300	6444.07	538.73	-106.38	1156.63	1696320.86	14279282.18	39°19'19.644"N	80°48'08.368"W	1160.51	96.260	2.85	-0.17	-2.64	
7168.00	89.920	152.450	6445.84	633.15	-189.75	1201.13	1696366.33	14279198.84	39°19'18.819"N	80°48'07.922"W	1216.03	98.977	2.26	-0.03	2.26	
7262.00	89.860	156.060	6447.70	728.95	-276.19	1242.81	1696408.00	14279112.44	39°19'17.964"N	80°48'07.264"W	1273.13	102.529	3.76	-0.06	3.76	
7356.00	89.950	158.320	6449.49	822.93	-362.82	1279.25	1696444.42	14279025.84	39°19'17.107"N	80°48'06.802"W	1329.70	105.834	2.41	0.10	2.40	
7452.00	89.350	161.790	6450.92	918.81	-453.04	1311.99	1696477.14	14278935.66	39°19'16.214"N	80°48'06.388"W	1388.00	109.060	3.64	0.42	3.61	
7546.00	90.920	163.530	6452.70	1012.44	-542.76	1340.00	1696505.15	14278845.98	39°19'15.327"N	80°48'06.034"W	1445.75	112.050	2.49	1.67	1.85	
7641.00	90.830	158.120	6449.24	1107.24	-632.44	1371.19	1696536.32	14278756.33	39°19'14.440"N	80°48'05.640"W	1510.01	114.761	5.69	-0.09	-5.69	
7736.00	89.890	146.700	6449.48	1201.88	-717.30	1413.66	1696576.78	14278671.51	39°19'13.600"N	80°48'05.102"W	1585.23	116.903	10.12	-2.04	-8.92	
7831.00	88.120	151.170	6451.96	1295.99	-799.48	1461.23	1696626.33	14278589.36	39°19'12.787"N	80°48'04.499"W	1665.64	118.684	2.72	-0.81	2.60	
7926.00	89.860	157.270	6454.46	1390.74	-884.95	1502.52	1696667.60	14278503.92	39°19'11.941"N	80°48'03.976"W	1743.76	120.497	6.47	0.78	6.42	
8021.00	88.950	156.950	6456.28	1485.72	-972.46	1539.46	1696704.53	14278416.45	39°19'11.076"N	80°48'03.509"W	1820.88	122.280	0.35	0.08	-0.34	
8116.00	88.830	159.120	6458.12	1580.70	-1060.54	1574.98	1696740.04	14278328.40	39°19'10.204"N	80°48'03.059"W	1898.77	123.955	2.29	-0.13	2.28	
8211.00	88.980	163.100	6459.33	1675.48	-1150.39	1605.73	1696770.77	14278238.59	39°19'09.315"N	80°48'02.670"W	1975.28	125.619	4.19	0.16	4.18	
8306.00	89.170	160.920	6461.47	1770.18	-1240.73	1635.06	1696800.09	14278148.29	39°19'08.422"N	80°48'02.300"W	2052.52	127.192	2.30	0.20	-2.29	
8401.00	89.020	156.800	6462.97	1865.13	-1329.30	1669.31	1696834.33	14278059.75	38°19'07.546"N	80°48'01.866"W	2133.93	128.531	4.34	-0.16	-4.34	
8496.00	89.170	156.960	6464.47	1960.11	-1418.66	1708.62	1696871.62	14277972.42	39°19'06.682"N	80°48'01.394"W	2217.99	129.696	0.22	0.16	0.16	
8591.00	88.980	154.630	6466.00	2055.04	-1503.29	1745.57	1696910.56	14277885.83	39°19'05.825"N	80°48'00.301"W	2303.67	130.735	2.45	-0.20	-2.44	
8687.00	88.890	154.920	6467.79	2150.91	-1590.12	1786.48	1696951.45	14277799.04	39°19'04.965"N	80°48'00.383"W	2391.65	131.672	0.32	-0.09	0.30	
8782.00	88.800	154.170	6469.70	2245.75	-1675.88	1827.30	1696992.25	14277713.31	39°19'04.117"N	80°47'59.866"W	2479.43	132.525	0.79	-0.09	-0.78	
8877.00	89.920	154.810	6471.59	2340.89	-1761.60	1868.20	1697033.14	14277627.62	39°19'03.269"N	80°47'59.348"W	2567.76	133.318	0.69	0.13	0.67	



# Actual Wellpath Report

Chalk Unit 1H AWP Proj: 15475'  
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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #09
Operator	ANTERO RESOURCES CORPORATION		Chalk Unit 1H
Area	Doddridge Co., WV		Chalk Unit 1H AWB
Field	Doddridge		
Facility	Middle 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 (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
8972.00	88.920	162.080	6473.38	2435.50	-1849.88	1903.08	1697068.00	14277539.38	39°19'02.395"N	80°47'58.907"W	2654.01	134.188	7.85	0.00	7.85	
9067.00	88.950	163.200	6475.15	2630.12	-1940.53	1931.42	1697096.33	14277448.76	39°19'01.499"N	80°47'58.549"W	2737.89	135.135	1.18	0.03	1.18	
9162.00	89.170	158.770	6476.71	2624.92	-2030.32	1962.36	1697127.26	14277359.01	39°19'00.811"N	80°47'58.157"W	2823.65	135.975	4.67	0.23	4.66	
9257.00	88.580	158.200	6478.58	2719.89	-2118.68	1997.19	1697162.08	14277270.69	39°18'59.737"N	80°47'57.717"W	2911.63	136.691	0.86	-0.62	-0.60	
9352.00	89.110	161.080	6480.49	2814.80	-2207.72	2030.23	1697195.11	14277181.68	39°18'58.856"N	80°47'57.295"W	2999.31	137.398	3.08	0.86	3.03	
9447.00	89.080	162.800	6481.99	2909.51	-2298.02	2059.68	1697224.54	14277091.41	39°18'57.963"N	80°47'56.927"W	3086.96	138.131	1.81	-0.03	1.81	
9542.00	89.110	162.670	6483.49	3004.12	-2388.73	2087.87	1697252.72	14277000.74	39°18'57.068"N	80°47'56.571"W	3172.57	138.845	0.14	0.03	-0.14	
9637.00	88.800	158.210	6485.48	3098.95	-2478.20	2119.66	1697284.50	14276911.30	39°18'56.181"N	80°47'56.169"W	3261.05	139.459	4.74	-0.66	-0.66	
9732.00	88.800	154.460	6487.73	3193.89	-2566.18	2157.78	1697322.60	14276824.37	39°18'55.320"N	80°47'55.888"W	3352.03	139.930	3.96	0.33	-3.95	
9827.00	88.240	147.030	6490.19	3288.11	-2647.97	2204.15	1697368.96	14276741.60	39°18'54.501"N	80°47'55.099"W	3445.29	140.226	7.84	-0.59	-7.82	
9922.00	89.020	150.210	6492.48	3381.91	-2729.04	2253.60	1697418.38	14276660.56	39°18'53.698"N	80°47'54.472"W	3539.26	140.451	3.45	0.82	3.35	
10016.00	89.170	156.640	6493.94	3475.60	-2813.06	2295.82	1697460.39	14276576.58	39°18'52.867"N	80°47'53.939"W	3630.86	140.783	6.84	0.18	6.84	
10111.00	88.860	150.410	6495.58	3570.55	-2901.43	2330.39	1697495.14	14276488.24	39°18'51.993"N	80°47'53.500"W	3721.43	141.229	3.98	-0.33	3.97	
10206.00	89.140	161.130	6497.24	3665.39	-2991.12	2361.68	1697526.42	14276398.59	39°18'51.106"N	80°47'53.104"W	3811.08	141.707	0.81	0.29	0.78	
10301.00	89.200	156.370	6498.61	3760.33	-3079.62	2395.09	1697560.82	14276310.12	39°18'50.230"N	80°47'52.669"W	3901.97	142.115	5.01	0.06	-5.01	
10397.00	89.080	159.650	6500.05	3856.31	-3168.62	2432.03	1697596.74	14276221.16	39°18'49.350"N	80°47'52.214"W	3994.36	142.492	3.42	-0.12	3.42	
10492.00	89.110	161.610	6501.56	3951.16	-3258.22	2463.53	1697628.23	14276131.59	39°18'48.464"N	80°47'51.816"W	4084.73	142.907	2.06	0.03	2.06	
10586.00	88.400	163.710	6503.60	4044.78	-3347.93	2491.54	1697656.23	14276041.93	39°18'47.576"N	80°47'51.462"W	4173.30	143.343	2.36	-0.78	2.23	
10681.00	88.980	163.080	6505.77	4139.25	-3438.94	2518.68	1697683.36	14275950.95	39°18'46.876"N	80°47'51.119"W	4262.64	143.781	0.90	0.61	-0.66	
10776.00	88.980	159.990	6507.46	4234.00	-3529.02	2548.78	1697713.43	14275860.90	39°18'46.785"N	80°47'50.739"W	4353.18	144.162	3.25	0.00	-3.25	
10872.00	88.890	159.260	6509.25	4329.93	-3619.00	2582.18	1697746.83	14275770.96	39°18'44.895"N	80°47'50.317"W	4445.77	144.492	0.77	-0.09	-0.78	
10967.00	88.920	154.920	6511.06	4424.88	-3706.47	2619.15	1697783.79	14275683.53	39°18'44.030"N	80°47'49.849"W	4538.49	144.753	4.57	0.03	-4.57	
11062.00	89.020	149.270	6512.77	4519.39	-3790.38	2663.58	1697828.20	14275599.65	39°18'43.200"N	80°47'49.268"W	4632.67	144.903	5.95	0.11	-5.95	
11157.00	88.890	145.950	6514.55	4612.92	-3870.57	2714.46	1697879.06	14275519.49	39°18'42.406"N	80°47'48.641"W	4727.54	144.958	3.50	-0.20	-3.48	
11252.00	88.890	147.310	6516.49	4706.16	-3949.89	2766.70	1697931.28	14275440.20	39°18'41.621"N	80°47'47.978"W	4822.47	144.991	1.43	0.00	1.43	
11347.00	88.860	157.820	6518.41	4800.64	-4034.04	2810.40	1697979.96	14275356.06	39°18'40.788"N	80°47'47.425"W	4916.51	145.136	11.06	0.03	11.06	
11441.00	88.950	156.420	6520.21	4894.62	-4121.28	2845.42	1698009.97	14275268.88	39°18'39.925"N	80°47'46.982"W	5008.13	145.378	0.65	0.10	0.64	
11536.00	89.050	160.710	6521.87	4989.55	-4210.29	2878.58	1698043.12	14275179.91	39°18'39.045"N	80°47'46.562"W	5100.27	145.639	2.41	0.11	2.41	
11631.00	88.290	161.300	6523.24	5084.37	-4300.10	2909.50	1698074.02	14275090.13	39°18'38.156"N	80°47'46.172"W	5191.93	145.917	0.67	0.28	0.62	
11727.00	88.890	160.260	6524.82	5180.21	-4390.74	2941.10	1698105.61	14274998.53	39°18'37.260"N	80°47'45.772"W	5284.76	146.184	1.18	-0.48	-1.08	



# Actual Wellpath Report

Chalk Unit 1H AWP Proj: 15475'

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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #09
Operator	ANTERO RESOURCES CORPORATION		
Area	Doddridge Co., WV		
Field	Doddridge		
F-acility	Middle Pad		
	Well	Chalk Unit 1H	
	Wellbore	Chalk Unit 1H AWB	

WELLPATH DATA (191 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)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
11822.00	88.920	161.410	6526.68	5275.03	-4480.45	2972.28	1698136.78	14274909.85	39°18'36.372"N	80°47'45.318"W	5376.70	146.440	1.21	0.09	1.21	
11917.00	88.830	162.320	6528.55	5369.76	-4570.72	3001.84	1698166.33	14274819.62	39°18'35.479"N	80°47'45.005"W	5468.32	146.705	0.96	-0.08	0.96	
12011.00	88.980	161.110	6530.35	5463.49	-4659.95	3031.33	1698195.80	14274730.42	39°18'34.597"N	80°47'44.632"W	5559.15	146.966	1.30	0.16	-1.28	
12107.00	88.950	156.390	6532.08	5559.43	-4749.39	3066.11	1698230.57	14274641.03	39°18'33.712"N	80°47'44.192"W	5653.11	147.155	4.92	-0.03	-4.92	
12201.00	88.830	152.690	6533.90	5653.28	-4839.23	3106.50	1698270.95	14274556.22	39°18'32.873"N	80°47'43.681"W	5746.31	147.275	3.94	-0.13	-3.94	
12296.00	88.920	154.390	6535.77	5748.00	-4919.25	3148.82	1698313.25	14274471.23	39°18'32.031"N	80°47'43.145"W	5840.73	147.377	1.79	0.09	1.79	
12391.00	88.950	157.650	6537.55	5843.93	-5006.94	3187.83	1698352.24	14274383.57	39°18'31.164"N	80°47'42.651"W	5935.63	147.516	3.40	0.03	3.40	
12486.00	88.860	159.140	6539.35	5937.91	-5094.32	3222.43	1698388.83	14274298.23	39°18'30.299"N	80°47'42.213"W	6027.95	147.684	1.59	-0.10	1.59	
12581.00	88.740	156.890	6541.34	6032.88	-5182.39	3257.99	1698422.37	14274210.08	39°18'29.428"N	80°47'41.764"W	6121.40	147.844	2.37	-0.13	-2.37	
12676.00	89.020	159.430	6543.20	6127.85	-5270.54	3293.32	1698457.69	14274120.08	39°18'28.568"N	80°47'41.317"W	6214.87	148.001	2.89	0.29	2.87	
12771.00	88.980	160.270	6544.85	6222.76	-5359.71	3328.04	1698490.39	14274030.94	39°18'27.674"N	80°47'40.903"W	6307.86	148.178	0.99	-0.04	0.88	
12866.00	89.290	159.200	6546.29	6317.68	-5448.82	3358.94	1698523.28	14273941.87	39°18'26.792"N	80°47'40.487"W	6400.95	148.348	1.17	0.33	-1.13	
12962.00	89.480	154.770	6547.32	6413.64	-5537.15	3396.46	1698560.79	14273853.57	39°18'25.919"N	80°47'40.012"W	6495.85	148.475	4.62	0.20	-4.61	
13057.00	89.600	155.020	6548.08	6508.53	-5623.18	3438.76	1698601.08	14273767.58	39°18'25.067"N	80°47'39.502"W	6590.26	148.589	0.29	0.13	0.28	
13152.00	90.150	156.800	6548.29	6603.48	-5709.83	3475.69	1698639.99	14273680.96	39°18'24.210"N	80°47'39.009"W	6684.50	148.670	1.76	0.58	1.66	
13247.00	90.030	158.620	6548.14	6698.48	-5797.67	3511.88	1698676.16	14273593.16	39°18'23.341"N	80°47'38.552"W	6778.36	148.795	2.13	-0.13	2.13	
13342.00	90.030	161.650	6548.09	6793.38	-5887.00	3544.15	1698708.42	14273503.86	39°18'22.458"N	80°47'38.143"W	6871.52	148.951	3.19	0.00	3.18	
13437.00	90.180	160.730	6547.92	6888.19	-5976.93	3574.78	1698739.04	14273413.97	39°18'21.568"N	80°47'37.756"W	6964.39	149.116	0.98	0.16	-0.97	
13532.00	89.720	157.230	6548.00	6983.15	-6065.59	3608.85	1698773.10	14273325.35	39°18'20.691"N	80°47'37.326"W	7057.99	149.249	3.72	-0.48	-3.68	
13627.00	89.750	156.190	6548.44	7078.13	-6152.85	3646.41	1698810.64	14273238.12	39°18'19.828"N	80°47'36.850"W	7152.19	149.347	1.10	0.03	-1.08	
13722.00	89.680	156.390	6548.90	7173.11	-6239.83	3684.61	1698848.63	14273151.18	39°18'18.967"N	80°47'36.367"W	7246.51	149.438	0.22	-0.06	0.21	
13817.00	89.750	156.270	6549.37	7268.08	-6326.83	3722.75	1698886.95	14273064.21	39°18'18.106"N	80°47'35.884"W	7340.83	149.527	0.14	0.06	-0.13	
13912.00	89.850	157.480	6549.70	7363.07	-6414.20	3760.06	1698924.25	14272976.88	39°18'17.242"N	80°47'35.412"W	7435.05	149.621	1.28	0.11	1.27	
14007.00	89.880	157.890	6549.92	7458.07	-6502.08	3796.13	1698960.30	14272889.03	39°18'16.373"N	80°47'34.956"W	7529.13	149.722	0.43	0.03	0.43	
14102.00	89.720	154.060	6550.25	7553.01	-6588.84	3834.80	1698998.96	14272802.31	39°18'15.514"N	80°47'34.486"W	7623.55	149.800	4.04	-0.17	-4.03	
14197.00	89.970	150.820	6550.51	7647.82	-6673.05	3878.75	1699042.89	14272718.13	39°18'14.681"N	80°47'33.910"W	7718.44	149.832	3.42	0.26	-3.41	
14292.00	89.720	153.320	6550.77	7742.17	-6756.97	3923.25	1699087.36	14272634.24	39°18'13.850"N	80°47'33.346"W	7813.36	149.860	2.64	-0.26	2.63	
14387.00	89.850	156.110	6551.13	7837.04	-6842.86	3963.82	1699127.92	14272548.38	39°18'13.001"N	80°47'32.833"W	7908.01	149.918	2.94	0.14	2.94	
14482.00	89.690	155.940	6551.51	7932.00	-6929.67	4002.42	1699166.51	14272461.62	39°18'12.142"N	80°47'32.344"W	8002.48	149.990	0.25	-0.17	-0.18	
14578.00	89.660	156.570	6552.05	8027.97	-7017.54	4041.08	1699205.15	14272373.78	39°18'11.272"N	80°47'31.855"W	8097.91	150.064	0.66	-0.03	0.66	





# Actual Wellpath Report

Chalk Unit 1H AWP Proj: 15475

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**REFERENCE WELLPATH IDENTIFICATION**

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Doddridge Co., WV	Well	Chalk Unit 1H
Field	Doddridge	Wellbore	Chalk Unit 1H AWB
Facility	Middle Pad		

**WELLPATH DATA (191 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]	Build Rate [ft/100ft]	Turn Rate [ft/100ft]	Comments
14673.00	89.780	162.110	6552.52	8122.89	-7106.39	4074.58	1699238.64	14272284.96	39°18'03.393"N	80°47'31.431"W	8191.64	150.171	5.83	0.13	5.83	
14768.00	89.850	165.010	6552.82	8217.36	-7197.50	4101.46	1699285.51	14272193.89	39°18'08.492"N	80°47'31.092"W	8284.08	150.324	3.05	0.07	3.05	
14864.00	89.780	158.780	6553.13	8313.05	-7288.70	4131.28	1699295.32	14272102.72	39°18'08.590"N	80°47'30.715"W	8378.10	150.455	6.49	-0.07	-6.49	
14959.00	89.880	158.100	6553.41	8408.04	-7377.05	4166.19	1699330.21	14272014.41	39°18'07.716"N	80°47'30.274"W	8472.19	150.544	0.72	0.11	-0.72	
15053.00	89.820	157.830	6553.66	8502.03	-7464.19	4201.46	1699365.46	14271927.31	39°18'06.854"N	80°47'29.828"W	8565.41	150.626	0.29	-0.06	-0.29	
15148.00	89.850	158.850	6553.93	8597.03	-7551.85	4238.06	1699402.05	14271839.68	39°18'06.987"N	80°47'29.365"W	8659.77	150.699	1.03	0.03	-1.03	
15243.00	90.460	155.410	6553.68	8692.00	-7638.72	4276.50	1699440.48	14271752.84	39°18'05.127"N	80°47'28.878"W	8754.34	150.758	1.65	0.64	-1.52	
15338.00	90.430	154.320	6552.94	8786.88	-7724.72	4316.85	1699480.81	14271666.88	39°18'04.277"N	80°47'28.368"W	8849.10	150.802	1.15	-0.03	-1.15	
15433.00	90.680	160.090	6552.02	8881.84	-7812.26	4353.64	1699517.58	14271579.37	39°18'03.411"N	80°47'27.902"W	8943.47	150.870	6.08	0.26	6.07	
15451.00	90.550	161.330	6551.83	8899.81	-7829.25	4359.58	1699523.53	14271562.39	39°18'03.242"N	80°47'27.827"W	8981.20	150.890	6.93	-0.72	6.89	
15475.00	90.550	161.330	6551.60	8923.76	-7851.99	4357.28	1699531.21	14271539.66	39°18'03.018"N	80°47'27.730"W	8984.80	150.917	0.00	0.00	0.00	Projected MD @ TD: 15475

**HOLE & CASING SECTIONS - Ref Wellbore: Chalk Unit 1H AWB Ref Wellpath: Chalk Unit 1H AWP Proj: 15475**

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]
20in Conductor	32.00	112.00	80.00	32.00	112.00	0.00	0.00	0.25	-0.02
17.5in Open Hole	112.00	548.40	436.40	112.00	548.39	0.25	-0.02	1.67	1.22
13.375in Casing Surface	32.00	548.40	516.40	32.00	548.39	0.00	0.00	1.67	1.22
12.25in Open Hole	548.40	2627.00	2078.60	548.39	2598.32	1.67	1.22	227.57	243.71
9.625in Casing Intermediate	32.00	2627.00	2595.00	32.00	2598.32	0.00	0.00	227.57	243.71
8.75in Open Hole	2627.00	6478.00	3851.00	2598.32	6294.43	227.57	243.71	388.21	890.50
8.5in Open Hole	6478.00	15475.00	8997.00	6294.43	6551.60	388.21	890.50	-7851.99	4357.26
5.5in Casing Production	32.00	15475.00	15443.00	32.00	6551.60	0.00	0.00	-7851.99	4357.26



# Actual Wellpath Report

Chalk Unit 1H AWP Proj: 15475'

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**REFERENCE WELLPATH IDENTIFICATION**

Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #09
Area	Doddridge Co., WV		Well	Chalk Unit 1H
Field	Doddridge		Wellbore	Chalk Unit 1H AWB
Facility	Middle Pad			

**TARGETS**

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Chalk Unit 1H POE Rev-2	6402.00	219.26	988.08	1696153.37	14279607.70	39°19'22.866"N	80°48'10.491"W	point
Chalk Unit 1H BHL Rev-2	6442.00	-7874.78	4361.34	1699525.29	14271516.87	39°18'02.792"N	80°47'27.806"W	point
Chalk Unit 1H LP Rev-1	6442.00	38.20	1084.37	1696249.62	14279426.71	39°19'21.074"N	80°48'09.271"W	point

**WELLPATH COMPOSITION - Ref Wellbores: Chalk Unit 1H AWB Ref Wellpath: Chalk Unit 1H AWP Proj: 15475'**

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
32.00	518.00	Gyrodata standard - Drop gyro or Multi-shot	01 Gyrodata MS Gyro <17-1/2"> (100'-601')	Chalk Unit 1H AWB
518.00	698.00	Gyrodata standard - Drop gyro or Multi-shot	02 Gyrodata MS Gyro <12-1/4"> (501')(591'-681')	Chalk Unit 1H AWB
698.00	2556.00	ISCWSA MWD, Rev. 4 (Standard)	03 Directional ONE MWD <12-1/4"> (681')(738'-2539')	Chalk Unit 1H AWB
2556.00	6396.00	ISCWSA MWD, Rev. 4 (Standard)	04 Directional ONE MWD <8-3/4"> (2539')(2649'-6379')	Chalk Unit 1H AWB
6396.00	15451.00	BHL AutoTrak Curve (Short)	05 BHL AT Curve <8-1/2">(6396')(6454'-15451')	Chalk Unit 1H AWB
15451.00	15475.00	Blind Drilling (std)	Projection to bit	Chalk Unit 1H AWB

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# Actual Wellpath Report

Chalk Unit 1H AWP Proj: 15475'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Doddridge Co., WV	Well	Chalk Unit 1H
Field	Doddridge	Wellbore	Chalk Unit 1H AWB
Facility	Middle Pad		

COMMENTS
<p>Wellpath general comments</p> <p>API: 47-017-06818-0000</p> <p>BH Job #: 9018052</p> <p>Rig: Frontier 32</p> <p>Duration: 02/26/18 - 02/28/18</p> <p>Gyrodata MS Gyro &lt;17-1/2"&gt; (100'-501')</p> <p>Gyrodata MS Gyro &lt;12-1/4"&gt; (501')(591'-681')</p> <p>Directional ONE MWD &lt;12-1/4"&gt; (681')(738'-2539')</p> <p>Directional ONE MWD &lt;8-3/4"&gt; (2539')(2649'-6379')</p> <p>BH AT Curve &lt;8-1/2"&gt;(6396')(6454'-15451')</p> <p>Burket: 6541'MD / 6328'TVD</p> <p>Tully: 6601'MD / 6357'TVD</p> <p>Hamilton: 6681'MD / 6390'TVD</p> <p>POE Marcellus: 6704'MD / 6398'TVD</p> <p>Projected MD @ TD: 15475'</p>

02/08/2019