



# ANTERO RESOURCES CORPORATION

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

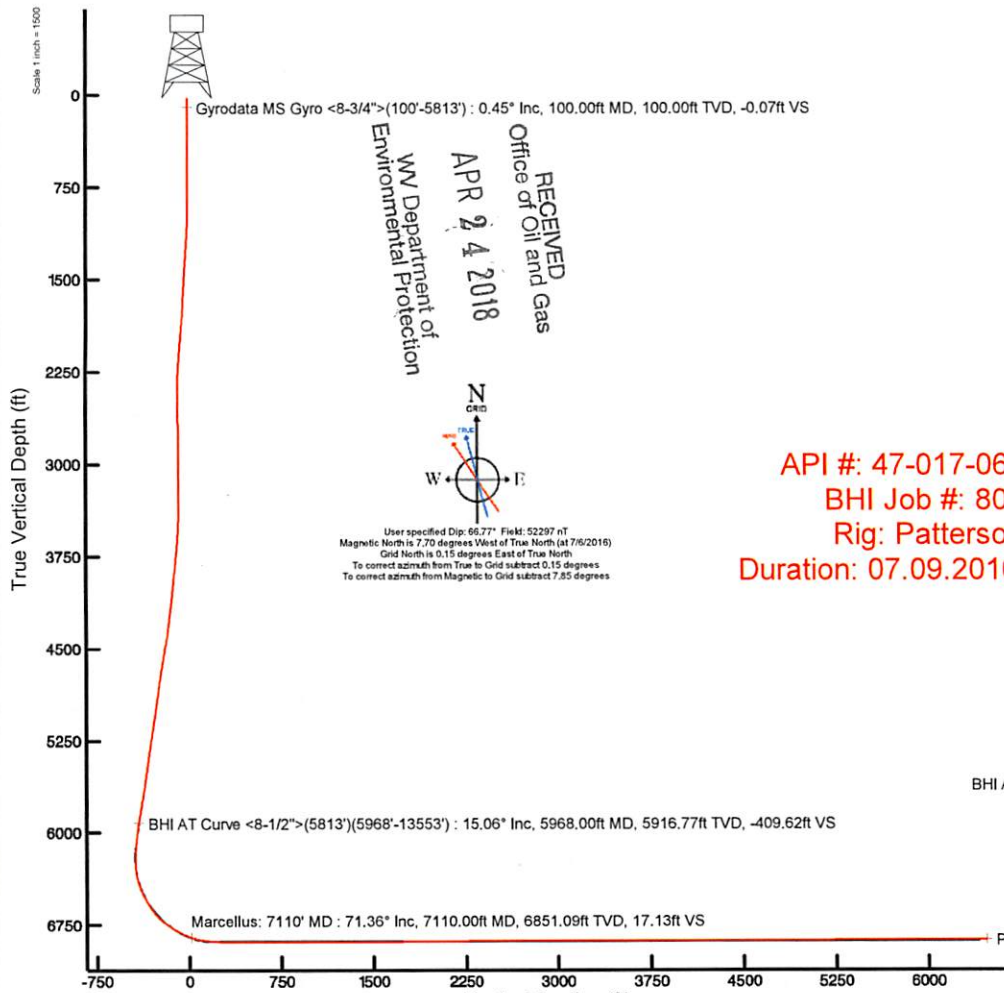
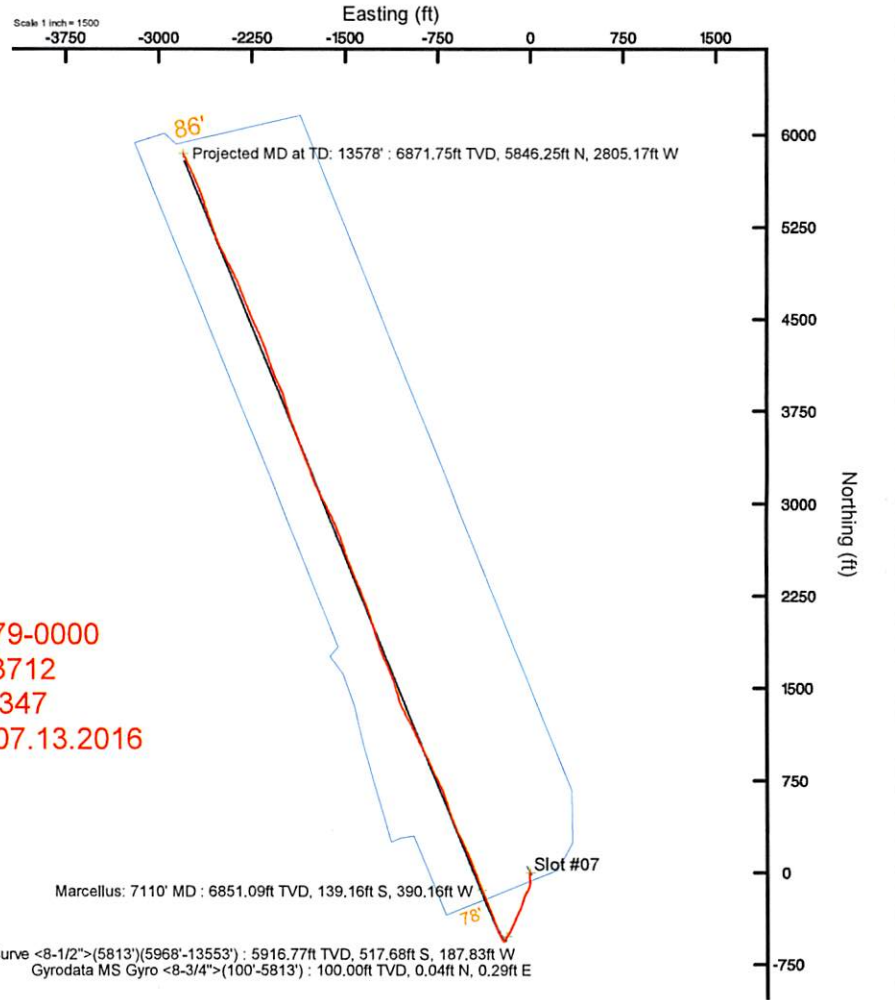
Slot: Slot #07  
 Well: Kreitler Unit 1H  
 Wellbore: Kreitler Unit 1H PWB



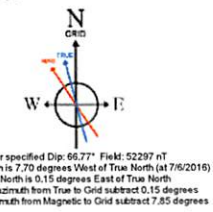
Plot reference wellpath is Kreitler Unit 1H PWB Rev-A.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to Patterson 347 (RKB)	* = Wellpath was transformed from a different geoidic datum
Measured depths are referenced to Patterson 347 (RKB)	North Reference: Grid north
Patterson 347 (RKB) to Mean Sea Level: 1160 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot #07): -1135 feet	Depth: are in feet
Coordinates are in feet referenced to Slot	Created by: hanak on 2016-07-29
	Database: WA_MPL_EASTERI&D_Defn

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #07	Kreitler Unit 1H	Kreitler Unit 1H AWB	Kreitler Unit 1H AWP Proj: 13578'
Slot #07	Kreitler Unit 1H	Kreitler Unit 1H PWB	Kreitler Unit 1H PWB Rev-A.0

Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Melody Pad	1708455,400	14292537,540	39°21'30.416"N	80°45'33.453"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Longitude
Slot #07	-25.84	15.27	1708470,660	14292511,710	80°45'33.260"W
Comment: Kreitler Unit 1H					
Patterson 347 (RKB) to Mud line (At Slot: Slot #07)			25ft		
Mean Sea Level to Mud line (At Slot: Slot #07)			-1135ft		
Patterson 347 (RKB) to Mean Sea Level			1160ft		



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API #: 47-017-06479-0000  
 BHI Job #: 8043712  
 Rig: Patterson 347  
 Duration: 07.09.2016-07.13.2016

Azimuth 338.00° with reference 0.00 N, 0.00 E



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## Actual Wellpath Report

Kreidler Unit 1H AWP Proj: 13578'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Doddridge Co., WV	Well	Kreitler Unit 1H
Field	Doddridge	Wellbore	Kreitler Unit 1H AWB
Facility	Melody Pad		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Hareluk
Scale	0.999605	Report Generated	7/29/2016 at 2:52:34 PM
Convergence at slot	0.16° East	Database/Source file	WA_MPL_EASTERNUS_Defn/Kreitler_Unit_1H_AWP_Proj_13578_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-25.84	15.27	1708470.66	14292511.71	39°21'30.160"N	80°45'33.260"W
Facility Reference Pt			1708455.40	14292537.54	39°21'30.416"N	80°45'33.453"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Patterson 347 (RKB) to Facility Vertical Datum	25.00ft
Horizontal Reference Pt	Slot	Patterson 347 (RKB) to Mean Sea Level	1160.00ft
Vertical Reference Pt	Patterson 347 (RKB)	Patterson 347 (RKB) to Mud Line at Slot (Slot #07)	25.00ft
MD Reference Pt	Patterson 347 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	338.00°

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## Actual Wellpath Report

Kreitler Unit 1H AWP Proj: 13578'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Doddridge Co., WV	Well	Kreitler Unit 1H
Field	Doddridge	Wellbore	Kreitler Unit 1H AWB
Facility	Melody Pad		

WELLPATH DATA (162 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	82.130	0.00	0.00	0.00	0.00	1708470.66	14292511.71	39°21'30.160"N	80°45'33.260"W	0.00	0.000	0.00	0.00	0.00	
25.00	0.000	82.130	25.00	0.00	0.00	0.00	1708470.66	14292511.71	39°21'30.160"N	80°45'33.260"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.450	82.130	100.00	-0.07	0.04	0.29	1708470.95	14292511.75	39°21'30.160"N	80°45'33.256"W	0.29	82.130	0.60	0.60	109.51	Gyrodata MS Gyro <8-3/4">(100'-5813')
200.00	0.290	117.490	200.00	-0.36	-0.02	0.91	1708471.56	14292511.69	39°21'30.160"N	80°45'33.248"W	0.91	91.438	0.27	-0.16	35.36	
300.00	0.280	113.060	300.00	-0.73	-0.24	1.35	1708472.01	14292511.47	39°21'30.158"N	80°45'33.243"W	1.37	99.852	0.02	-0.01	-4.43	
400.00	0.230	120.880	400.00	-1.06	-0.43	1.75	1708472.41	14292511.28	39°21'30.156"N	80°45'33.238"W	1.80	103.915	0.06	-0.05	7.82	
500.00	0.240	144.440	499.99	-1.42	-0.71	2.05	1708472.70	14292511.00	39°21'30.153"N	80°45'33.234"W	2.16	109.074	0.10	0.01	23.56	
600.00	0.340	183.190	599.99	-1.89	-1.17	2.15	1708472.81	14292510.54	39°21'30.148"N	80°45'33.233"W	2.45	118.625	0.21	0.10	38.75	
700.00	0.780	279.150	699.99	-1.81	-1.36	1.46	1708472.12	14292510.35	39°21'30.146"N	80°45'33.241"W	2.00	132.963	0.88	0.44	95.96	
800.00	1.330	292.110	799.97	-0.65	-0.82	0.28	1708470.38	14292510.89	39°21'30.152"N	80°45'33.264"W	0.87	199.215	0.60	0.55	12.96	
900.00	1.390	289.960	899.94	0.97	0.03	-2.50	1708468.16	14292511.74	39°21'30.160"N	80°45'33.292"W	2.50	270.777	0.08	0.06	-2.15	
1000.00	1.850	198.730	999.92	0.56	-1.08	4.16	1708466.50	14292510.63	39°21'30.149"N	80°45'33.313"W	4.30	255.430	2.34	0.46	-91.23	
1100.00	3.650	186.000	1099.80	-3.48	-5.78	-5.01	1708465.65	14292505.94	39°21'30.103"N	80°45'33.324"W	7.65	220.938	1.89	1.80	-12.73	
1200.00	3.860	184.200	1199.58	-9.31	-12.30	-5.59	1708465.07	14292499.42	39°21'30.039"N	80°45'33.332"W	13.51	204.439	0.24	0.21	-1.80	
1300.00	3.990	177.440	1299.35	-15.61	-19.13	-5.68	1708464.98	14292492.59	39°21'29.971"N	80°45'33.333"W	19.96	196.536	0.48	0.13	-6.76	
1400.00	4.060	174.200	1399.10	-22.29	-26.13	-5.17	1708465.50	14292485.59	39°21'29.902"N	80°45'33.327"W	26.63	191.186	0.24	0.07	-3.24	
1500.00	4.040	177.510	1498.85	-29.01	-33.17	-4.66	1708466.01	14292478.55	39°21'29.832"N	80°45'33.320"W	33.49	187.991	0.23	-0.02	3.31	
1600.00	3.550	188.520	1598.64	-35.00	-39.75	-4.96	1708465.70	14292471.97	39°21'29.767"N	80°45'33.324"W	40.06	187.115	0.88	-0.49	11.01	
1700.00	3.480	187.070	1698.45	-40.32	-45.82	-5.79	1708464.87	14292465.90	39°21'29.707"N	80°45'33.335"W	46.19	187.206	0.11	-0.07	-1.45	
1800.00	4.260	163.770	1798.22	-46.67	-52.40	-5.13	1708465.53	14292459.33	39°21'29.642"N	80°45'33.327"W	52.65	185.590	1.74	0.78	-23.30	
1900.00	4.840	157.350	1897.91	-54.58	-59.86	-2.47	1708468.19	14292451.87	39°21'29.568"N	80°45'33.293"W	59.91	182.360	0.77	0.58	-6.42	
2000.00	3.660	171.410	1997.64	-61.90	-66.91	0.37	1708470.29	14292444.82	39°21'29.499"N	80°45'33.267"W	66.91	180.313	1.57	-1.18	14.06	
2100.00	3.300	178.700	2097.45	-67.70	-72.95	0.18	1708470.84	14292438.79	39°21'29.439"N	80°45'33.260"W	72.95	179.861	0.57	-0.36	7.29	
2200.00	3.430	179.370	2197.28	-73.18	-78.81	0.28	1708470.93	14292432.93	39°21'29.381"N	80°45'33.259"W	78.82	179.800	0.14	0.13	0.67	
2300.00	2.460	182.310	2297.15	-77.92	-83.95	0.22	1708470.88	14292427.79	39°21'29.330"N	80°45'33.260"W	83.95	179.849	0.98	-0.97	2.94	
2400.00	0.640	255.770	2397.11	-79.80	-86.23	-0.41	1708470.25	14292425.51	39°21'29.308"N	80°45'33.268"W	86.23	180.270	2.36	-1.82	73.46	
2500.00	0.780	296.970	2497.10	-79.21	-86.06	-1.55	1708469.11	14292425.68	39°21'29.309"N	80°45'33.283"W	86.07	181.035	0.52	0.14	41.20	
2600.00	0.890	293.360	2597.09	-78.15	-85.44	-2.87	1708467.79	14292426.30	39°21'29.316"N	80°45'33.299"W	85.49	181.927	0.12	0.11	-3.61	
2700.00	0.940	291.910	2697.08	-77.02	-84.83	-4.35	1708466.31	14292426.91	39°21'29.322"N	80°45'33.318"W	84.94	182.934	0.06	0.05	-1.45	
2800.00	0.950	291.050	2797.07	-75.89	-84.23	-5.88	1708464.78	14292427.52	39°21'29.328"N	80°45'33.338"W	84.43	183.995	0.02	0.01	-0.86	



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Kreitler Unit 1H AWP Proj: 13578'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Doddridge Co., WV	Well	Kreitler Unit 1H
Field	Doddridge	Wellbore	Kreitler Unit 1H AWP
Facility	Melody Pad		

### WELLPATH DATA (162 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
2900.00	0.270	124.020	2897.06	-75.52	-84.06	-6.46	1708464.20	14292427.68	39°21'29.329"N	80°45'33.345"W	84.31	184.395	1.21	-0.68	-167.03	
3000.00	0.200	138.640	2997.06	-75.88	-84.32	-6.15	1708464.51	14292427.42	39°21'29.327"N	80°45'33.341"W	84.55	184.172	0.09	-0.07	14.62	
3100.00	0.050	5.260	3097.06	-76.01	-84.41	-6.03	1708464.63	14292427.33	39°21'29.326"N	80°45'33.340"W	84.63	184.087	0.24	-0.15	-133.38	
3200.00	0.350	340.400	3197.06	-75.66	-84.08	-6.13	1708464.53	14292427.66	39°21'29.329"N	80°45'33.341"W	84.30	184.170	0.31	0.30	-24.86	
3300.00	0.550	327.820	3297.06	-74.88	-83.39	-6.49	1708464.17	14292428.36	39°21'29.336"N	80°45'33.345"W	83.64	184.449	0.22	0.20	-12.58	
3400.00	1.040	133.990	3397.05	-75.24	-83.61	-6.09	1708464.57	14292428.13	39°21'29.334"N	80°45'33.340"W	83.83	184.166	1.58	0.49	166.17	
3500.00	2.460	142.790	3497.01	-78.14	-85.95	-4.14	1708466.52	14292425.79	39°21'29.311"N	80°45'33.316"W	86.05	182.757	1.44	1.42	8.80	
3600.00	3.690	177.550	3596.87	-83.24	-90.87	-2.70	1708467.96	14292420.87	39°21'29.262"N	80°45'33.297"W	90.91	181.704	2.18	1.23	34.76	
3700.00	6.970	200.320	3696.43	-90.77	-99.78	-4.67	1708465.99	14292411.97	39°21'29.174"N	80°45'33.323"W	99.89	182.682	3.84	3.28	22.77	
3800.00	8.870	193.320	3795.48	-101.54	-112.98	-8.56	1708462.11	14292398.78	39°21'29.044"N	80°45'33.373"W	113.30	184.332	2.13	1.90	-7.00	
3900.00	9.020	206.130	3894.27	-113.07	-127.52	-13.79	1708456.88	14292384.24	39°21'28.900"N	80°45'33.440"W	128.26	186.171	1.99	0.15	12.81	
4000.00	10.160	212.710	3992.87	-123.40	-141.98	-22.01	1708448.66	14292369.79	39°21'28.757"N	80°45'33.545"W	143.67	188.811	1.58	1.14	6.58	
4100.00	9.200	211.130	4091.45	-133.29	-156.24	-30.91	1708439.77	14292355.53	39°21'28.617"N	80°45'33.659"W	159.27	191.189	1.00	-0.96	-1.58	
4200.00	10.490	205.400	4189.98	-144.25	-171.31	-38.94	1708431.73	14292340.47	39°21'28.468"N	80°45'33.762"W	175.68	192.807	1.62	1.29	-5.73	
4300.00	9.770	200.200	4288.42	-156.69	-187.50	-45.78	1708424.90	14292324.29	39°21'28.308"N	80°45'33.849"W	193.00	193.721	1.16	-0.72	-5.20	
4400.00	12.420	199.310	4386.54	-171.06	-205.61	-52.26	1708418.42	14292306.18	39°21'28.129"N	80°45'33.932"W	212.15	194.262	2.66	2.65	-0.89	
4500.00	12.500	194.190	4484.19	-187.87	-226.25	-58.47	1708412.21	14292285.55	39°21'27.925"N	80°45'34.012"W	233.69	194.491	1.11	0.08	-5.12	
4600.00	13.060	197.950	4581.71	-205.27	-247.49	-64.61	1708406.08	14292264.32	39°21'27.716"N	80°45'34.091"W	255.79	194.631	1.00	0.56	3.76	
4700.00	12.500	201.010	4679.24	-221.84	-268.34	-71.97	1708398.72	14292243.47	39°21'27.510"N	80°45'34.185"W	277.83	195.014	0.88	-0.56	3.06	
4800.00	12.050	202.930	4776.95	-237.15	-288.06	-79.92	1708390.77	14292223.76	39°21'27.315"N	80°45'34.287"W	298.94	195.506	0.61	-0.45	1.92	
4900.00	12.040	208.970	4874.75	-251.11	-306.80	-89.04	1708381.66	14292205.03	39°21'27.130"N	80°45'34.404"W	319.46	196.183	1.26	-0.01	6.04	
5000.00	11.820	206.290	4972.59	-264.49	-325.11	-98.63	1708372.07	14292186.73	39°21'26.949"N	80°45'34.527"W	339.74	196.876	0.60	-0.22	-2.68	
5100.00	11.670	201.980	5070.50	-278.58	-343.67	-106.95	1708363.76	14292168.18	39°21'26.766"N	80°45'34.633"W	359.92	197.286	0.89	-0.15	-4.31	
5200.00	12.120	200.730	5168.35	-293.57	-362.87	-114.45	1708356.26	14292148.99	39°21'26.577"N	80°45'34.729"W	380.49	197.505	0.52	0.45	-1.25	
5300.00	11.900	197.290	5266.17	-309.26	-382.53	-121.23	1708349.48	14292129.33	39°21'26.382"N	80°45'34.816"W	401.28	197.584	0.75	-0.22	-3.44	
5400.00	11.790	207.010	5364.05	-323.94	-401.48	-128.93	1708341.78	14292110.39	39°21'26.195"N	80°45'34.915"W	421.67	197.804	2.00	-0.11	9.72	
5500.00	12.480	207.280	5461.81	-337.69	-420.18	-138.53	1708332.19	14292091.70	39°21'26.011"N	80°45'35.038"W	442.43	198.246	0.69	0.69	0.27	
5600.00	12.190	206.930	5559.50	-351.68	-439.20	-148.26	1708322.46	14292072.69	39°21'25.823"N	80°45'35.162"W	463.55	198.653	0.30	-0.29	-0.35	
5700.00	12.560	204.460	5657.18	-366.10	-458.51	-157.54	1708313.18	14292053.38	39°21'25.632"N	80°45'35.281"W	484.82	198.963	0.65	0.37	-2.47	
5800.00	14.500	204.870	5754.40	-382.15	-479.77	-167.31	1708303.42	14292032.13	39°21'25.423"N	80°45'35.406"W	508.10	199.225	1.94	1.94	0.41	



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Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Doddridge Co., WV	Well	Kreitler Unit 1H
Field	Doddridge	Wellbore	Kreitler Unit 1H AWB
Facility	Melody Pad		

WELLPATH DATA (162 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
5813.00	14.770	205.520	5766.98	-384.39	-482.74	-168.71	1708302.02	14292029.16	39°21'25.393"N	80°45'35.424"W	511.37	199.264	2.43	2.08	5.00	
5968.00	15.060	211.800	5916.77	-409.62	-517.68	-187.83	1708282.90	14291994.23	39°21'25.048"N	80°45'35.669"W	550.71	199.943	1.06	0.19	4.05	BHI AT Curve <8-1/2">(5813')(5968'-13553')
6046.00	12.180	210.210	5992.57	-420.65	-533.41	-197.32	1708273.42	14291978.51	39°21'24.893"N	80°45'35.790"W	568.74	200.300	3.72	-3.69	-2.04	
6140.00	8.670	208.880	6085.00	-431.20	-548.19	-205.73	1708265.01	14291963.74	39°21'24.747"N	80°45'35.898"W	585.52	200.571	3.74	-3.73	-1.41	
6234.00	5.770	208.960	6178.24	-438.65	-558.53	-211.44	1708259.30	14291953.40	39°21'24.645"N	80°45'35.971"W	597.21	200.735	3.09	-3.09	0.09	
6281.00	4.110	224.890	6225.07	-440.80	-561.79	-213.77	1708256.97	14291950.14	39°21'24.613"N	80°45'36.001"W	601.09	200.833	4.55	-3.53	33.89	
6328.00	5.090	298.330	6271.95	-439.86	-561.99	-216.80	1708253.95	14291949.94	39°21'24.611"N	80°45'36.039"W	602.36	201.095	11.81	2.09	156.26	
6375.00	9.150	324.200	6318.59	-434.62	-557.97	-220.82	1708249.92	14291953.96	39°21'24.651"N	80°45'36.090"W	600.08	201.592	10.80	8.64	55.04	
6422.00	13.640	332.130	6364.66	-425.47	-550.04	-225.60	1708245.15	14291961.89	39°21'24.730"N	80°45'36.151"W	594.51	202.302	10.10	9.55	16.87	
6469.00	17.580	331.900	6409.91	-412.90	-538.87	-231.54	1708239.21	14291973.05	39°21'24.840"N	80°45'36.226"W	586.51	203.252	8.38	8.38	-0.49	
6516.00	21.170	333.240	6454.25	-397.38	-525.03	-238.71	1708232.05	14291986.89	39°21'24.977"N	80°45'36.317"W	576.75	204.449	7.70	7.64	2.85	
6525.00†	21.799	333.605	6462.62	-394.09	-522.08	-240.18	1708230.57	14291989.84	39°21'25.006"N	80°45'36.335"W	574.68	204.705	7.14	6.98	4.06	Sycamore: 6525' MD
6563.00	24.460	334.950	6497.56	-379.20	-508.63	-246.65	1708224.11	14292003.28	39°21'25.139"N	80°45'36.417"W	565.28	205.870	7.14	7.00	3.54	
6610.00	28.460	337.750	6539.63	-358.27	-489.44	-255.01	1708215.75	14292022.46	39°21'25.329"N	80°45'36.523"W	551.89	207.521	8.91	8.51	5.96	
6656.00	31.770	339.300	6579.42	-335.20	-467.96	-263.45	1708207.32	14292043.93	39°21'25.542"N	80°45'36.630"W	537.02	209.378	7.39	7.20	3.37	
6704.00	35.900	339.840	6619.28	-308.49	-442.92	-272.77	1708198.00	14292068.96	39°21'25.789"N	80°45'36.748"W	520.17	211.626	8.63	8.60	1.12	
6729.00†	38.437	340.091	6639.20	-293.39	-428.73	-277.94	1708192.83	14292083.15	39°21'25.930"N	80°45'36.813"W	510.94	212.955	10.17	10.15	1.00	Middlesex: 6729' MD
6751.00	40.670	340.290	6656.16	-279.40	-415.55	-282.69	1708188.08	14292096.32	39°21'26.060"N	80°45'36.873"W	502.59	214.226	10.17	10.15	0.90	
6798.00	45.450	340.540	6690.49	-247.34	-385.33	-293.44	1708177.34	14292126.54	39°21'26.359"N	80°45'37.009"W	484.34	217.290	10.18	10.17	0.53	
6847.00	50.220	339.830	6723.38	-211.06	-351.17	-305.75	1708165.03	14292160.68	39°21'26.697"N	80°45'37.164"W	465.62	221.045	9.79	9.73	-1.45	
6893.00	53.930	338.990	6751.64	-174.79	-317.21	-318.52	1708152.27	14292194.62	39°21'27.033"N	80°45'37.326"W	449.53	225.118	8.19	8.07	-1.83	
6925.00†	56.436	338.638	6769.91	-148.53	-292.72	-328.01	1708142.78	14292219.11	39°21'27.275"N	80°45'37.446"W	439.63	228.254	7.88	7.83	-1.10	Burkett: 6925' MD
6941.00	57.690	338.470	6778.61	-135.10	-280.22	-332.92	1708137.87	14292231.60	39°21'27.399"N	80°45'37.508"W	435.16	229.913	7.88	7.83	-1.05	
6983.00†	61.187	338.259	6799.96	-98.94	-246.61	-346.26	1708124.54	14292265.20	39°21'27.732"N	80°45'37.676"W	425.10	234.541	8.34	8.33	-0.50	Tully: 6983' MD
6987.00	61.520	338.240	6801.88	-95.43	-243.35	-347.56	1708123.24	14292268.46	39°21'27.764"N	80°45'37.693"W	424.28	235.002	8.34	8.33	-0.48	
7035.00	65.300	337.780	6823.36	-52.52	-203.56	-363.63	1708107.17	14292308.24	39°21'28.158"N	80°45'37.896"W	416.73	240.760	7.92	7.87	-0.96	
7081.00	68.940	337.440	6841.24	-10.14	-164.38	-379.77	1708091.04	14292347.40	39°21'28.545"N	80°45'38.100"W	413.82	246.596	7.94	7.91	-0.74	
7082.00†	69.024	337.452	6841.60	-9.21	-163.51	-380.13	1708090.68	14292348.26	39°21'28.554"N	80°45'38.105"W	413.81	246.725	8.43	8.36	1.19	Hamilton: 7082' MD
7110.00†	71.364	337.780	6851.09	17.13	-139.16	-390.16	1708080.65	14292372.61	39°21'28.795"N	80°45'38.232"W	414.23	250.370	8.43	8.36	1.17	Marcellus: 7110' MD
7131.00	73.120	338.020	6857.50	37.13	-120.63	-397.68	1708073.13	14292391.13	39°21'28.978"N	80°45'38.327"W	415.58	253.126	8.43	8.36	1.14	

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## Actual Wellpath Report

Kreitler Unit 1H AWP Proj: 13578'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Doddridge Co., WV	Well	Kreitler Unit 1H
Field	Doddridge	Wellbore	Kreitler Unit 1H AWB
Facility	Melody Pad		

WELLPATH DATA (162 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
7175.00	76.880	339.230	6868.88	79.62	-81.06	-413.17	1708057.66	14292430.68	39°21'29.370"N	80°45'38.523"W	421.04	258.900	8.95	8.55	2.75	
7224.00	82.410	340.040	6877.69	127.78	-35.89	-429.93	1708040.90	14292475.84	39°21'29.817"N	80°45'38.735"W	431.43	265.229	11.40	11.29	1.65	
7269.00	86.610	340.350	6881.99	172.53	6.25	-445.11	1708025.73	14292517.96	39°21'30.233"N	80°45'38.926"W	445.15	270.804	9.36	9.33	0.69	
7318.00	86.670	340.190	6884.86	221.41	52.29	-461.62	1708009.22	14292563.98	39°21'30.689"N	80°45'39.135"W	464.57	276.463	0.35	0.12	-0.33	
7363.00	87.570	338.080	6887.12	266.34	94.29	-477.63	1707993.22	14292605.96	39°21'31.104"N	80°45'39.337"W	486.84	281.167	5.09	2.00	-4.69	
7457.00	90.090	336.060	6889.04	360.30	180.83	-514.24	1707956.63	14292692.47	39°21'31.961"N	80°45'39.801"W	545.10	289.374	3.44	2.68	-2.15	
7552.00	90.180	333.200	6888.82	455.12	266.66	-554.94	1707915.94	14292778.26	39°21'32.810"N	80°45'40.316"W	615.68	295.665	3.01	0.09	-3.01	
7646.00	89.970	335.020	6888.70	548.90	351.22	-595.98	1707874.92	14292862.79	39°21'33.647"N	80°45'40.836"W	691.77	300.512	1.95	-0.22	1.94	
7740.00	90.120	340.410	6888.62	642.87	438.17	-631.61	1707839.30	14292949.70	39°21'34.507"N	80°45'41.286"W	768.72	304.750	5.74	0.16	5.73	
7834.00	90.120	342.490	6888.42	736.69	527.28	-661.51	1707809.41	14293038.78	39°21'35.389"N	80°45'41.664"W	845.95	308.558	2.21	0.00	2.21	
7927.00	90.090	344.840	6888.25	829.23	616.52	-687.67	1707783.26	14293127.98	39°21'36.271"N	80°45'41.994"W	923.57	311.877	2.53	-0.03	2.53	
8021.00	89.970	332.820	6888.21	923.05	704.01	-721.55	1707749.39	14293215.44	39°21'37.137"N	80°45'42.422"W	1008.10	314.295	12.79	-0.13	-12.79	
8115.00	89.720	333.430	6888.46	1016.71	787.86	-764.05	1707706.92	14293299.26	39°21'37.967"N	80°45'42.961"W	1097.49	315.879	0.70	-0.27	0.65	
8210.00	91.200	338.040	6887.70	1111.60	874.44	-803.07	1707667.90	14293385.80	39°21'38.824"N	80°45'43.455"W	1187.25	317.436	5.10	1.56	4.85	
8304.00	89.940	332.850	6886.76	1205.47	959.90	-842.12	1707628.87	14293471.23	39°21'39.669"N	80°45'43.949"W	1276.94	318.740	5.68	-1.34	-5.52	
8398.00	89.910	333.030	6886.88	1299.10	1043.61	-884.88	1707586.13	14293554.91	39°21'40.498"N	80°45'44.490"W	1368.26	319.705	0.19	-0.03	0.19	
8492.00	90.000	336.890	6886.96	1392.95	1128.76	-924.66	1707546.36	14293640.02	39°21'41.340"N	80°45'44.994"W	1459.14	320.676	4.11	0.10	4.11	
8586.00	90.430	332.430	6886.60	1486.77	1213.69	-964.88	1707506.16	14293724.92	39°21'42.181"N	80°45'45.503"W	1550.50	321.515	4.77	0.46	-4.74	
8681.00	89.910	331.970	6886.32	1581.28	1297.73	-1009.19	1707461.87	14293808.92	39°21'43.013"N	80°45'46.064"W	1643.95	322.129	0.73	-0.55	-0.48	
8775.00	90.430	339.560	6886.04	1675.14	1383.38	-1047.75	1707423.33	14293894.54	39°21'43.860"N	80°45'46.553"W	1735.37	322.860	8.09	0.55	8.07	
8869.00	90.950	344.250	6884.91	1768.89	1472.70	-1076.93	1707394.16	14293983.83	39°21'44.744"N	80°45'46.921"W	1824.45	323.823	5.02	0.55	4.99	
8963.00	91.720	341.140	6882.72	1862.54	1562.41	-1104.88	1707366.22	14294073.50	39°21'45.631"N	80°45'47.274"W	1913.61	324.733	3.41	0.82	-3.31	
9057.00	90.150	336.290	6881.19	1956.49	1649.96	-1138.99	1707332.12	14294161.01	39°21'46.497"N	80°45'47.705"W	2004.91	325.382	5.42	-1.67	-5.16	
9151.00	90.180	336.500	6880.91	2050.45	1736.09	-1176.63	1707294.50	14294247.11	39°21'47.349"N	80°45'48.182"W	2097.25	325.873	0.23	0.03	0.22	
9245.00	90.120	340.110	6880.67	2144.43	1823.42	-1211.37	1707259.77	14294334.40	39°21'48.213"N	80°45'48.621"W	2189.13	326.402	3.84	-0.06	3.84	
9339.00	90.090	344.210	6880.50	2238.16	1912.88	-1240.16	1707230.99	14294423.83	39°21'49.098"N	80°45'48.985"W	2279.72	327.044	4.36	-0.03	4.36	
9433.00	90.090	343.410	6880.35	2331.68	2003.15	-1266.37	1707204.79	14294514.06	39°21'49.991"N	80°45'49.315"W	2369.88	327.699	0.85	0.00	-0.85	
9527.00	90.220	340.780	6880.09	2425.43	2092.59	-1295.27	1707175.90	14294603.47	39°21'50.876"N	80°45'49.680"W	2461.03	328.243	2.80	0.14	-2.80	
9622.00	90.120	338.850	6879.81	2520.38	2181.75	-1328.05	1707143.14	14294692.59	39°21'51.758"N	80°45'50.095"W	2554.16	328.671	2.03	-0.11	-2.03	
9715.00	90.120	338.660	6879.62	2613.37	2268.43	-1361.75	1707109.45	14294779.24	39°21'52.616"N	80°45'50.521"W	2645.77	329.023	0.20	0.00	-0.20	



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## Actual Wellpath Report

Kreitler Unit 1H AWP Proj: 13578'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Doddridge Co., WV	Well	Kreitler Unit 1H
Field	Doddridge	Wellbore	Kreitler Unit 1H AWB
Facility	Melody Pad		

WELLPATH DATA (162 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
9810.00	90.180	336.780	6879.37	2708.36	2356.33	-1397.76	1707073.45	14294867.11	39°21'53.485"N	80°45'50.976"W	2739.72	329.324	1.98	0.06	-1.98	
9904.00	90.220	337.810	6879.04	2802.36	2443.05	-1434.04	1707037.18	14294953.79	39°21'54.343"N	80°45'51.436"W	2832.84	329.587	1.10	0.04	1.10	
9998.00	90.120	339.470	6878.76	2896.35	2530.59	-1468.28	1707002.96	14295041.29	39°21'55.209"N	80°45'51.868"W	2925.70	329.877	1.77	-0.11	1.77	
10092.00	90.150	341.680	6878.54	2990.24	2619.23	-1499.54	1706971.71	14295129.90	39°21'56.086"N	80°45'52.264"W	3018.11	330.208	2.35	0.03	2.35	
10186.00	90.310	342.530	6878.16	3084.00	2708.68	-1528.42	1706942.84	14295219.32	39°21'56.971"N	80°45'52.628"W	3110.15	330.565	0.92	0.17	0.90	
10280.00	90.030	336.750	6877.88	3177.92	2796.77	-1561.11	1706910.17	14295307.37	39°21'57.843"N	80°45'53.042"W	3202.97	330.830	6.16	-0.30	-6.15	
10374.00	90.030	334.440	6877.83	3271.83	2882.36	-1599.95	1706871.34	14295392.93	39°21'58.690"N	80°45'53.533"W	3296.64	330.966	2.46	0.00	-2.46	
10468.00	90.090	332.410	6877.74	3365.53	2966.43	-1642.00	1706829.31	14295476.96	39°21'59.522"N	80°45'54.066"W	3390.56	331.034	2.16	0.06	-2.16	
10562.00	90.000	331.700	6877.66	3459.02	3049.47	-1686.05	1706785.28	14295559.97	39°22'00.343"N	80°45'54.624"W	3484.54	331.062	0.76	-0.10	-0.76	
10656.00	90.060	334.060	6877.61	3552.64	3133.13	-1728.90	1706742.45	14295643.59	39°22'01.171"N	80°45'55.167"W	3578.49	331.110	2.51	0.06	2.51	
10750.00	89.850	340.100	6877.69	3646.59	3219.67	-1765.49	1706705.87	14295730.10	39°22'02.028"N	80°45'55.630"W	3671.95	331.262	6.43	-0.22	6.43	
10845.00	89.820	338.640	6877.96	3741.56	3308.57	-1798.96	1706672.41	14295818.97	39°22'02.907"N	80°45'56.053"W	3766.02	331.466	1.54	-0.03	-1.54	
10939.00	89.850	337.640	6878.23	3835.55	3395.81	-1833.96	1706637.43	14295906.17	39°22'03.770"N	80°45'56.496"W	3859.40	331.628	1.06	0.03	-1.06	
11033.00	89.750	340.680	6878.56	3929.52	3483.65	-1867.40	1706604.00	14295993.98	39°22'04.639"N	80°45'56.919"W	3952.59	331.807	3.24	-0.11	3.23	
11126.00	89.780	339.690	6878.94	4022.45	3571.14	-1898.92	1706572.49	14296081.44	39°22'05.505"N	80°45'57.317"W	4044.62	331.999	1.06	0.03	-1.06	
11221.00	89.820	339.680	6879.27	4117.41	3660.23	-1931.90	1706539.52	14296170.49	39°22'06.386"N	80°45'57.734"W	4138.79	332.175	0.04	0.04	-0.01	
11315.00	90.180	343.910	6879.27	4211.18	3749.51	-1961.26	1706510.17	14296259.73	39°22'07.269"N	80°45'58.105"W	4231.47	332.387	4.52	0.38	4.50	
11409.00	90.370	344.330	6878.82	4304.65	3839.92	-1986.98	1706484.46	14296350.10	39°22'08.164"N	80°45'58.430"W	4323.55	332.640	0.49	0.20	0.45	
11503.00	90.710	335.920	6877.93	4398.49	3928.24	-2018.91	1706452.55	14296438.39	39°22'09.037"N	80°45'58.833"W	4416.68	332.799	8.95	0.36	-8.95	
11597.00	90.150	335.730	6877.23	4492.42	4013.99	-2057.41	1706414.07	14296524.11	39°22'09.886"N	80°45'59.321"W	4510.55	332.862	0.63	-0.60	-0.20	
11691.00	90.150	340.710	6876.98	4586.39	4101.25	-2092.27	1706379.22	14296611.33	39°22'10.749"N	80°45'59.762"W	4604.11	332.971	5.30	0.00	5.30	
11785.00	90.150	341.480	6876.74	4680.25	4190.18	-2122.73	1706348.77	14296700.23	39°22'11.629"N	80°46'00.146"W	4697.19	333.133	0.82	0.00	0.82	
11879.00	89.720	339.420	6876.84	4774.16	4278.76	-2154.18	1706317.33	14296788.77	39°22'12.505"N	80°46'00.544"W	4790.43	333.277	2.24	-0.46	-2.19	
11973.00	90.000	336.790	6877.07	4868.15	4365.97	-2189.23	1706282.30	14296875.94	39°22'13.368"N	80°46'00.987"W	4884.10	333.369	2.81	0.30	-2.80	
12067.00	90.150	335.440	6876.95	4962.10	4451.91	-2227.29	1706244.25	14296961.86	39°22'14.218"N	80°46'01.469"W	4977.99	333.421	1.45	0.16	-1.44	
12161.00	90.550	337.290	6876.38	5056.06	4538.02	-2264.97	1706206.58	14297047.93	39°22'15.070"N	80°46'01.946"W	5071.86	333.476	2.01	0.43	1.97	
12255.00	90.220	339.120	6875.74	5150.05	4625.30	-2299.87	1706171.70	14297135.17	39°22'15.934"N	80°46'02.388"W	5165.54	333.562	1.98	-0.35	1.95	
12349.00	90.180	338.890	6875.42	5244.03	4713.06	-2333.55	1706138.03	14297222.90	39°22'16.802"N	80°46'02.814"W	5259.12	333.659	0.25	-0.04	-0.24	
12443.00	90.120	338.000	6875.17	5338.03	4800.48	-2368.09	1706103.51	14297310.29	39°22'17.667"N	80°46'03.251"W	5352.80	333.743	0.95	-0.06	-0.95	
12537.00	90.090	332.980	6875.00	5431.91	4885.98	-2407.07	1706064.55	14297395.76	39°22'18.513"N	80°46'03.744"W	5446.73	333.773	5.34	-0.03	-5.34	



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## Actual Wellpath Report

Kreitler Unit 1H AWP Proj: 13578'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Doddridge Co., WV	Well	Kreitler Unit 1H
Field	Doddridge	Wellbore	Kreitler Unit 1H AWB
Facility	Melody Pad		

WELLPATH DATA (162 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
12631.00	90.150	333.590	6874.80	5525.59	4969.95	-2449.33	1706022.30	14297479.69	39°22'19.344"N	80°46'04.280"W	5540.72	333.765	0.65	0.06	0.65	
12725.00	90.150	333.840	6874.55	5619.33	5054.23	-2490.95	1705980.69	14297563.94	39°22'20.178"N	80°46'04.807"W	5634.72	333.764	0.27	0.00	0.27	
12819.00	90.180	338.000	6874.28	5713.25	5140.03	-2529.30	1705942.36	14297649.70	39°22'21.027"N	80°46'05.292"W	5728.64	333.799	4.43	0.03	4.43	
12913.00	90.150	341.230	6874.01	5807.20	5228.13	-2562.04	1705909.64	14297737.77	39°22'21.899"N	80°46'05.706"W	5822.15	333.893	3.44	-0.03	3.44	
13007.00	90.220	340.340	6873.71	5901.08	5316.89	-2592.97	1705878.72	14297826.49	39°22'22.777"N	80°46'06.097"W	5915.48	334.002	0.95	0.07	-0.95	
13101.00	90.280	342.120	6873.30	5994.93	5405.89	-2623.22	1705848.48	14297915.46	39°22'23.657"N	80°46'06.480"W	6008.74	334.115	1.89	0.06	1.89	
13195.00	90.180	340.850	6872.92	6088.75	5495.02	-2653.07	1705818.65	14298004.55	39°22'24.539"N	80°46'06.857"W	6101.97	334.228	1.36	-0.11	-1.35	
13289.00	90.150	338.040	6872.65	6182.71	5583.03	-2686.07	1705785.66	14298092.52	39°22'25.410"N	80°46'07.274"W	6195.58	334.307	2.99	-0.03	-2.99	
13383.00	90.220	336.600	6872.35	6276.70	5669.76	-2722.31	1705749.43	14298179.22	39°22'26.268"N	80°46'07.733"W	6289.45	334.352	1.53	0.07	-1.53	
13477.00	90.150	333.550	6872.04	6370.57	5754.99	-2761.92	1705709.83	14298264.42	39°22'27.111"N	80°46'08.234"W	6383.43	334.363	3.25	-0.07	-3.24	
13553.00	90.180	335.300	6871.82	6446.42	5823.54	-2794.73	1705677.04	14298332.94	39°22'27.789"N	80°46'08.650"W	6459.42	334.364	2.30	0.04	2.30	
13578.00	90.180	335.300	6871.75	6471.39	5846.25	-2805.17	1705666.60	14298355.65	39°22'28.014"N	80°46'08.782"W	6484.42	334.367	0.00	0.00	0.00	Projected MD at TD: 13578'

HOLE & CASING SECTIONS - Ref Wellbore: Kreitler Unit 1H AWB Ref Wellpath: Kreitler Unit 1H AWP Proj: 13578'									
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	25.00	65.00	40.00	25.00	65.00	0.00	0.00	0.01	0.08
13.375in Casing Surface	25.00	581.00	556.00	25.00	580.99	0.00	0.00	-1.07	2.15
9.625in Casing Intermediate	25.00	2572.40	2547.40	25.00	2569.50	0.00	0.00	-85.61	-2.49





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Kreitler Unit 1H AWP Proj: 13578'

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Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Doddridge Co., WV	Well	Kreitler Unit 1H
Field	Doddridge	Wellbore	Kreitler Unit 1H AWB
Facility	Melody Pad		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Kreitler Unit 1H POE Rev-1	6845.00	-167.68	-391.60	1708079.22	14292344.10	39°21'28.513"N	80°45'38.251"W	point
Kreitler Unit 1H BHL Rev-1	6885.00	5783.13	-2795.42	1705676.35	14298292.55	39°22'27.390"N	80°46'08.660"W	point
Kreitler Unit 1H LP Rev-1	6885.00	22.47	-468.41	1708002.44	14292534.17	39°21'30.394"N	80°45'39.222"W	point

WELLPATH COMPOSITION - Ref Wellbore: Kreitler Unit 1H AWB Ref Wellpath: Kreitler Unit 1H AWP Proj: 13578'				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	5813.00	Gyrodata standard - Drop gyro or Multi-shot	01 Gyrodata MS Gyro <8-3/4">(100'-5813')	Kreitler Unit 1H AWB
5813.00	13553.00	BHI AutoTrak Curve (Short)	02 BHI AT Curve <8-1/2">(5813')(5968'-13553')	Kreitler Unit 1H AWB
13553.00	13578.00	Blind Drilling (std)	Projection to bit	Kreitler Unit 1H AWB



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Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #07
Area	Doddridge Co., WV	Well	Kreitler Unit 1H
Field	Doddridge	Wellbore	Kreitler Unit 1H AWB
Facility	Melody Pad		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
100.00	0.450	82.130	100.00	Gyrodata MS Gyro <8-3/4">(100'-5813')	
5968.00	15.060	211.800	5916.77	BHI AT Curve <8-1/2">(5813')(5968'-13553')	
6525.00	21.799	333.605	6462.62	Sycamore: 6525' MD	
6729.00	38.437	340.091	6639.20	Middlesex: 6729' MD	
6925.00	56.436	338.638	6769.91	Burkett: 6925' MD	
6983.00	61.187	338.259	6799.96	Tully: 6983' MD	
7082.00	69.024	337.452	6841.60	Hamilton: 7082' MD	
7110.00	71.364	337.780	6851.09	Marcellus: 7110' MD	
13578.00	90.180	335.300	6871.75	Projected MD at TD: 13578'	

COMMENTS
<p><b>Wellpath general comments</b>                      API #: 47-017-06479-0000                      BHI Job #: 8043712                      Rig: Patterson 347                      Duration: 07.09.2016-07.13.2016                      Gyrodata MS Gyro &lt;8-3/4"&gt;(100'-5813')                      BHI AT Curve &lt;8-1/2"&gt;(5813')(5968'-13553')                      Sycamore: 6525' MD                      Middlesex: 6729' MD                      Burkett: 6925' MD                      Tully: 6983' MD                      Hamilton: 7082' MD                      Marcellus: 7110' MD                      Projected MD at TD: 13578'</p>