

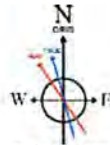


# ANTERO RESOURCES CORPORATION

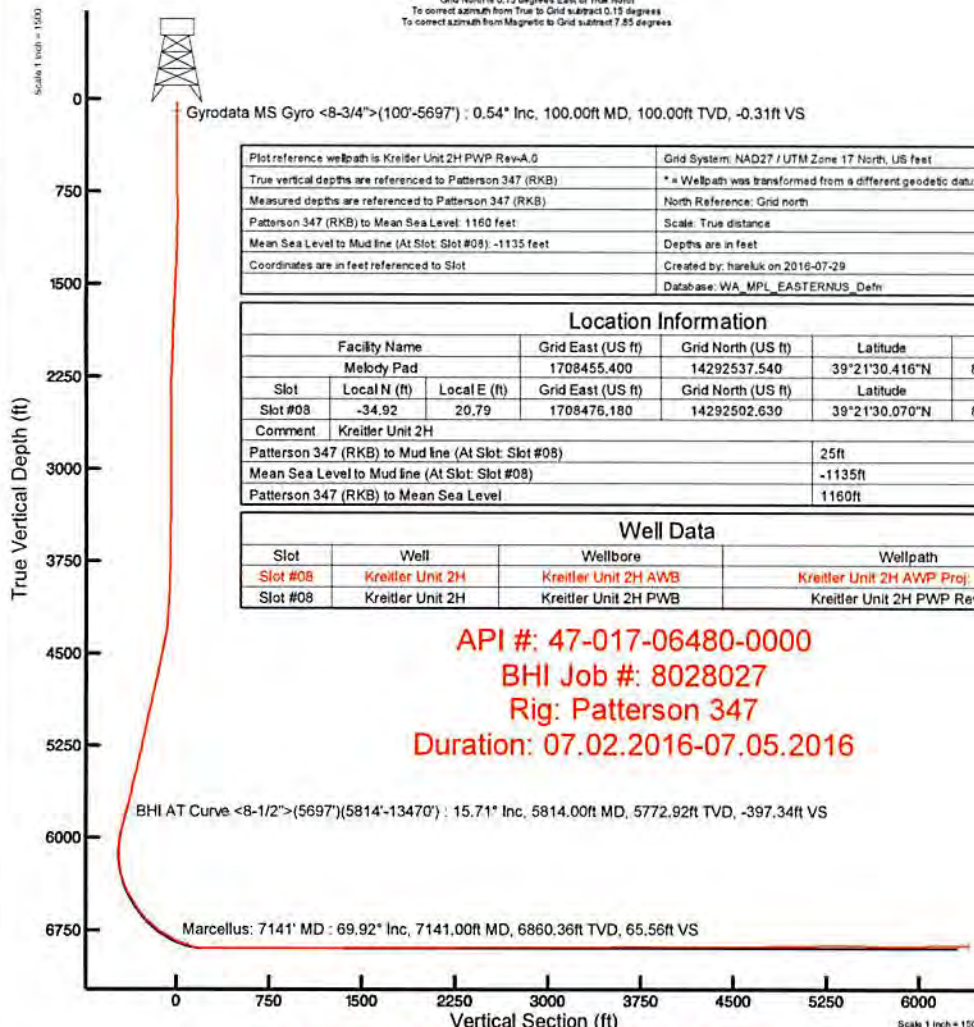
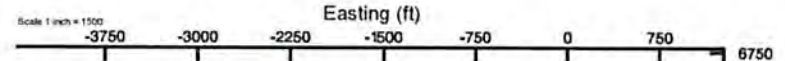


Location: Doddridge Co., WV  
 Field: Doddridge  
 Facility: Melody Pad

Slot: Slot #08  
 Well: Kreidler Unit 2H  
 Wellbore: Kreidler Unit 2H PWB



User specified Dip: 66.77° Field: 52299 nT  
 Magnetic North is 7.73 degrees West of True North (at 6/20/2016)  
 Grid North is 0.15 degrees East of True North  
 To correct azimuth from True to Grid subtract 0.15 degrees  
 To correct azimuth from Magnetic to Grid subtract 7.88 degrees



Gyrodatta MS Gyro <8-3/4">(100'-5697') : 0.54° Inc, 100.00ft MD, 100.00ft TVD, -0.31ft VS

Plot reference wellbath is Kreidler Unit 2H PWP Rev-A.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to Patterson 347 (RKB)	* = Wellbath was transformed from a different geodetic 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 Slot #08) -1135 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: hareluk on 2016-07-29
	Database: WA_MPL_EASTERNUS_Defn

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 #08	-34.92	20.79	1708476.180	14292502.630	39°21'30.070"N
Comment	Kreidler Unit 2H				
Patterson 347 (RKB) to Mud line (At Slot Slot #08)	25ft				
Mean Sea Level to Mud line (At Slot Slot #08)	-1135ft				
Patterson 347 (RKB) to Mean Sea Level	1160ft				

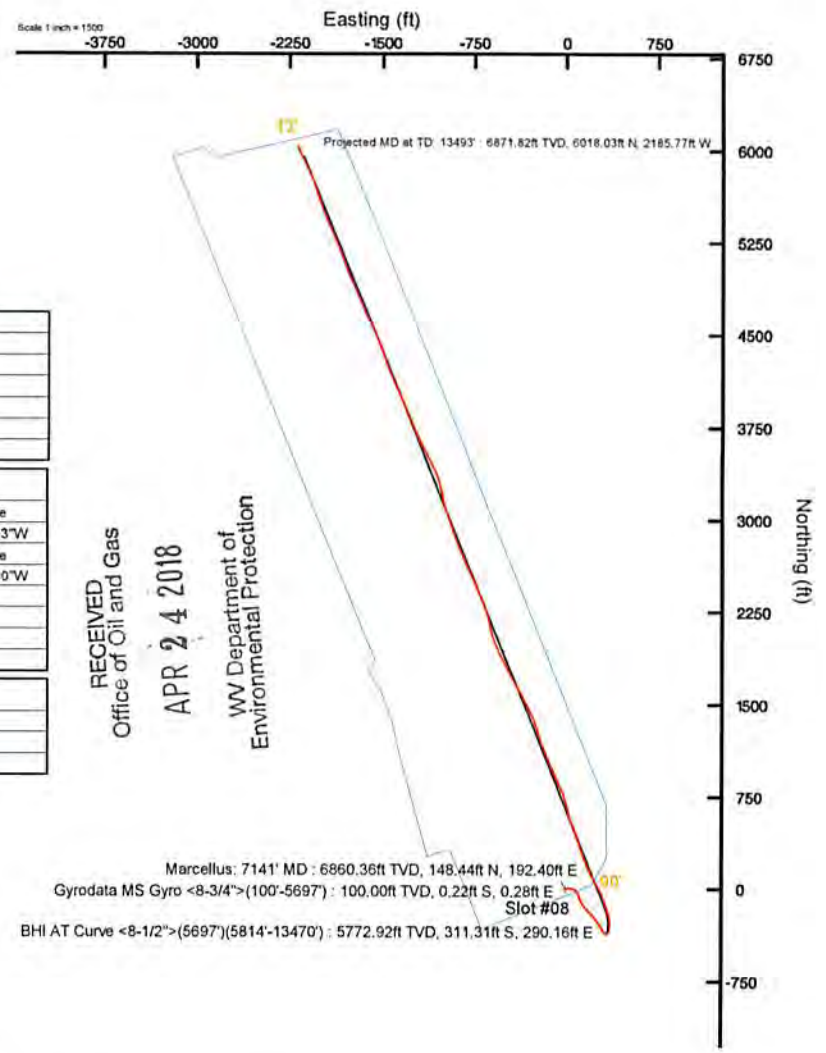
Well Data			
Slot	Well	Wellbore	Wellpath
Slot #08	Kreidler Unit 2H	Kreidler Unit 2H AWB	Kreidler Unit 2H AWP Proj: 13493'
Slot #08	Kreidler Unit 2H	Kreidler Unit 2H PWB	Kreidler Unit 2H PWP Rev-A.0

API #: 47-017-06480-0000  
 BHI Job #: 8028027  
 Rig: Patterson 347  
 Duration: 07.02.2016-07.05.2016

BHI AT Curve <8-1/2">(5697')(5814'-13470') : 15.71° Inc, 5814.00ft MD, 5772.92ft TVD, -397.34ft VS

Marcellus: 7141' MD : 69.92° Inc, 7141.00ft MD, 6860.36ft TVD, 65.56ft VS

Projected MD at TD: 13493' : 89.91° Inc, 13493.00ft MD, 6871.82ft TVD, 6398.62ft VS



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Azimuth 338.00° with reference 0.00 N, 0.00 E

Scale: 1 inch = 1500



## Actual Wellpath Report

Kreitler Unit 2H AWP Proj: 13493'

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### REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Doddridge Co., WV	Well	Kreitler Unit 2H
Field	Doddridge	Wellbore	Kreitler Unit 2H 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 10:40:16 AM
Convergence at slot	0.16° East	Database/Source file	WA_MPL_EASTERNUS_Defn/Kreitler_Unit_2H_AWP_Proj_13493_.xml

### WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-34.92	20.79	1708476.18	14292502.63	39°21'30.070"N	80°45'33.190"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 #08)	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

Kreidler Unit 2H AWP Proj: 13493

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Doddridge Co., WV	Well	Kreidler Unit 2H
Field	Doddridge	Wellbore	Kreidler Unit 2H AWP
Facility	Melody Pad		

WELLPATH DATA (164 stations) † = interpolated/extrapolated station

MD	Inclination	Azimuth	TVD	North	East	Grid East	Grid North	Latitude	Longitude	Closure	Dir	Closure	DLS	Build	Turn	Comments
[m]	[°]	[°]	[m]	[m]	[m]	[m]	[m]			[m]	[°]	[m]	[m]	[°/100ft]	[°/100ft]	
0.00	127.770	0.00	0.00	0.00	0.00	1708476.18	14292502.63	39°21'30.070"N	80°45'33.190"W	0.00		0.00	0.00	0.00	0.00	
25.00	127.770	25.00	0.00	0.00	0.00	1708476.18	14292502.63	39°21'30.070"N	80°45'33.190"W	0.00		0.00	0.00	0.00	0.00	
100.00	127.770	100.00	0.00	-0.31	-0.22	1708476.46	14292502.41	39°21'30.068"N	80°45'33.186"W	0.35		0.35	127.770	0.72	170.36	Gyrodata MS Gyro <-8-3/4"> (100-5697)
200.00	174.050	200.00	-0.86	-0.66	-0.67	1708476.85	14292501.97	39°21'30.063"N	80°45'33.181"W	0.94		0.94	134.706	0.44	-0.36	46.28
300.00	183.640	300.00	-1.14	-0.97	-0.65	1708476.83	14292501.66	39°21'30.060"N	80°45'33.182"W	1.17		1.17	146.286	0.06	0.00	19.59
400.00	203.100	400.00	-1.37	-1.26	-0.55	1708476.73	14292501.37	39°21'30.058"N	80°45'33.183"W	1.38		1.38	156.325	0.03	-0.01	9.46
500.00	202.920	500.00	-1.58	-1.53	-0.44	1708476.62	14292501.10	39°21'30.055"N	80°45'33.184"W	1.59		1.59	164.112	0.00	0.00	-0.18
600.00	354.420	599.99	-0.87	-0.82	-0.30	1708476.48	14292501.81	39°21'30.062"N	80°45'33.186"W	0.87		0.87	160.152	1.13	0.81	151.50
700.00	354.080	699.97	1.12	1.24	0.09	1708476.27	14292503.87	39°21'30.082"N	80°45'33.189"W	1.24		1.24	4.014	0.41	-0.34	
800.00	19.900	799.94	3.16	3.55	0.36	1708476.54	14292506.18	39°21'30.105"N	80°45'33.185"W	3.57		3.57	5.830	0.61	-0.04	25.82
900.00	71.620	899.89	3.90	5.35	2.84	1708479.02	14292507.98	39°21'30.123"N	80°45'33.154"W	6.06		6.06	27.970	1.98	1.16	51.72
1000.00	77.750	999.76	3.27	6.66	7.77	1708483.94	14292509.29	39°21'30.136"N	80°45'33.091"W	10.23		10.23	49.385	0.89	0.83	6.13
1100.00	87.490	1099.57	1.66	7.42	13.93	1708490.11	14292510.05	39°21'30.143"N	80°45'33.012"W	15.79		15.79	61.949	0.77	9.74	
1200.00	101.230	1199.34	-1.35	6.89	20.66	1708496.84	14292509.52	39°21'30.138"N	80°45'32.927"W	21.78		21.78	71.556	0.95	0.18	13.74
1300.00	105.250	1299.11	-5.17	5.38	27.13	1708503.30	14292508.01	39°21'30.123"N	80°45'32.844"W	27.66		27.66	78.780	0.45	-0.36	4.02
1400.00	103.600	1398.90	-9.05	3.76	33.47	1708509.63	14292506.38	39°21'30.106"N	80°45'32.764"W	33.68		33.68	83.597	0.26	0.24	-1.65
1500.00	103.490	1498.67	-13.00	2.16	40.07	1708516.23	14292504.79	39°21'30.090"N	80°45'32.680"W	40.13		40.13	86.908	0.05	-0.11	
1600.00	98.100	1598.45	-16.61	0.91	46.60	1708522.76	14292503.54	39°21'30.078"N	80°45'32.597"W	46.61		46.61	88.879	0.42	-0.21	-5.39
1700.00	95.680	1698.22	-19.86	0.11	53.28	1708529.44	14292502.74	39°21'30.070"N	80°45'32.512"W	53.28		53.28	89.882	0.34	0.30	-2.42
1800.00	103.020	1797.97	-23.53	-1.04	50.24	1708536.40	14292501.59	39°21'30.058"N	80°45'32.423"W	60.25		60.25	90.981	0.53	0.09	7.34
1900.00	103.460	1897.74	-27.48	-2.61	66.90	1708543.05	14292500.02	39°21'30.043"N	80°45'32.338"W	66.95		66.95	92.231	0.36	-0.36	0.44
2000.00	100.020	1997.55	-30.87	-3.86	72.86	1708549.01	14292498.77	39°21'30.030"N	80°45'32.263"W	72.96		72.96	93.032	0.53	-0.49	-3.44
2100.00	124.670	2097.40	-34.69	-5.93	77.93	1708554.08	14292496.70	39°21'30.009"N	80°45'32.198"W	78.16		78.16	94.351	1.37	-0.07	24.65
2200.00	132.680	2197.24	-39.63	-9.48	82.35	1708558.50	14292493.16	39°21'29.974"N	80°45'32.142"W	82.89		82.89	96.565	0.48	0.16	8.01
2300.00	119.360	2297.09	-44.26	-12.70	86.71	1708562.86	14292489.94	39°21'29.942"N	80°45'32.086"W	87.64		87.64	98.332	0.83	-0.40	-13.32
2400.00	549.040	2397.05	-46.06	-13.76	88.90	1708565.05	14292488.87	39°21'29.932"N	80°45'32.059"W	89.96		89.96	98.800	3.08	-2.71	-130.32
2500.00	293.670	2497.05	-45.44	-13.33	88.31	1708564.45	14292489.31	39°21'29.936"N	80°45'32.066"W	89.31		89.31	98.584	0.60	0.48	-55.37
2600.00	287.310	2597.03	-44.46	-12.83	86.92	1708563.07	14292489.81	39°21'29.941"N	80°45'32.084"W	87.66		87.66	98.395	0.30	-6.36	
2700.00	227.580	2697.02	-44.12	-12.99	85.64	1708561.79	14292489.65	39°21'29.939"N	80°45'32.100"W	86.62		86.62	98.624	0.88	-0.28	-59.73
2800.00	230.740	2797.02	-44.51	-13.77	84.74	1708560.88	14292488.86	39°21'29.932"N	80°45'32.112"W	85.85		85.85	98.231	0.06	-0.05	3.16

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# Actual Wellpath Report

Kreitler Unit 2H AWP Proj: 13493'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #08
Area	Doddridge Co., WV		Well	Kreitler Unit 2H
Field	Doddridge		Wellbore	Kreitler Unit 2H AWB
Facility	Melody Pad			

WELLPATH DATA (164 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	0.500	53.290	2897.02	-44.57	-13.87	84.64	1708560.79	14292488.76	39°21'29.931"N	80°45'32.113"W	85.77	99.309	1.16	-0.16	-177.45	
3000.00	0.560	25.030	2997.01	-44.13	-13.17	85.20	1708561.34	14292489.46	39°21'29.938"N	80°45'32.106"W	86.21	98.788	0.27	0.06	-28.26	
3100.00	0.160	129.060	3097.01	-43.92	-12.82	85.51	1708561.66	14292489.82	39°21'29.941"N	80°45'32.102"W	86.47	98.524	0.62	-0.40	104.03	
3200.00	0.640	190.260	3197.01	-44.51	-13.45	85.52	1708561.67	14292489.18	39°21'29.935"N	80°45'32.102"W	86.57	98.940	0.58	0.48	61.20	
3300.00	0.590	192.870	3297.00	-45.41	-14.51	85.31	1708561.45	14292488.13	39°21'29.924"N	80°45'32.104"W	86.53	99.650	0.06	-0.05	2.61	
3400.00	0.900	117.420	3397.00	-46.42	-15.37	85.89	1708562.04	14292487.27	39°21'29.916"N	80°45'32.097"W	87.25	100.145	0.94	0.31	-75.45	
3500.00	1.130	102.580	3496.98	-47.58	-15.95	87.55	1708563.69	14292486.69	39°21'29.910"N	80°45'32.076"W	88.99	100.322	0.35	0.23	-14.84	
3600.00	0.710	92.430	3596.97	-48.40	-16.19	89.13	1708565.28	14292486.45	39°21'29.908"N	80°45'32.056"W	90.59	100.293	0.45	-0.42	-10.15	
3700.00	0.620	89.260	3696.96	-48.85	-16.21	90.29	1708566.44	14292486.43	39°21'29.907"N	80°45'32.041"W	91.73	100.175	0.10	-0.09	-3.17	
3800.00	1.780	149.980	3796.94	-50.58	-17.54	91.61	1708567.75	14292485.09	39°21'29.894"N	80°45'32.024"W	93.27	100.841	1.57	1.16	60.72	
3900.00	1.770	147.750	3896.89	-53.64	-20.19	93.21	1708569.35	14292482.44	39°21'29.868"N	80°45'32.004"W	95.37	102.224	0.07	-0.01	-2.23	
4000.00	1.700	136.910	3996.85	-56.54	-22.58	95.05	1708571.19	14292480.06	39°21'29.844"N	80°45'31.981"W	97.69	103.366	0.34	-0.07	-10.84	
4100.00	3.410	164.300	4096.75	-60.88	-26.53	96.87	1708573.01	14292476.11	39°21'29.805"N	80°45'31.958"W	100.43	105.317	2.06	1.71	27.39	
4200.00	3.760	150.710	4196.55	-67.09	-32.25	99.27	1708575.42	14292470.39	39°21'29.749"N	80°45'31.927"W	104.38	107.998	0.92	0.35	-13.59	
4300.00	7.220	158.960	4296.08	-76.63	-40.98	103.14	1708579.28	14292461.67	39°21'29.662"N	80°45'31.878"W	110.98	111.670	3.54	3.46	8.25	
4400.00	11.480	159.320	4394.73	-92.87	-56.16	108.91	1708585.05	14292446.49	39°21'29.512"N	80°45'31.805"W	122.54	117.279	4.26	4.26	0.36	
4500.00	11.570	158.140	4492.71	-112.85	-74.78	116.16	1708592.29	14292427.88	39°21'29.328"N	80°45'31.714"W	138.15	122.773	0.25	0.09	-1.18	
4600.00	11.450	155.850	4590.70	-132.80	-93.14	123.95	1708600.08	14292409.52	39°21'29.146"N	80°45'31.615"W	155.05	126.923	0.47	-0.12	-2.29	
4700.00	12.060	152.040	4688.61	-153.10	-111.43	132.91	1708609.04	14292391.25	39°21'28.965"N	80°45'31.502"W	173.44	129.975	0.99	0.61	-3.81	
4800.00	13.040	144.660	4786.22	-174.47	-129.86	144.34	1708620.46	14292372.82	39°21'28.783"N	80°45'31.357"W	194.16	131.978	1.88	0.98	-7.38	
4900.00	13.100	138.390	4883.64	-196.13	-147.54	158.39	1708634.50	14292355.15	39°21'28.608"N	80°45'31.179"W	216.46	132.969	1.42	0.06	-6.27	
5000.00	13.330	134.390	4980.99	-217.37	-164.08	174.15	1708650.26	14292338.62	39°21'28.444"N	80°45'30.978"W	239.27	133.294	0.94	0.23	-4.00	
5100.00	12.210	137.040	5078.52	-237.81	-179.88	189.60	1708665.70	14292322.82	39°21'28.287"N	80°45'30.782"W	261.35	133.493	1.26	-1.12	2.65	
5200.00	13.090	134.900	5178.09	-258.10	-195.61	204.82	1708680.92	14292307.10	39°21'28.131"N	80°45'30.589"W	283.23	133.682	1.00	0.88	-2.14	
5300.00	12.540	144.130	5273.61	-279.05	-212.40	219.21	1708695.30	14292290.31	39°21'27.965"N	80°45'30.406"W	305.23	134.097	2.12	-0.55	9.23	
5400.00	13.570	142.160	5371.02	-300.88	-230.47	232.77	1708708.85	14292272.25	39°21'27.786"N	80°45'30.234"W	327.56	134.715	1.12	1.03	-1.97	
5500.00	14.450	141.560	5468.05	-324.13	-249.50	247.72	1708723.80	14292253.22	39°21'27.598"N	80°45'30.045"W	351.59	135.206	0.89	0.88	-0.60	
5600.00	12.960	144.410	5565.20	-347.00	-268.40	262.00	1708738.08	14292234.34	39°21'27.410"N	80°45'29.864"W	375.08	135.691	1.64	-1.49	2.85	
5697.00	13.300	147.040	5659.66	-368.53	-286.60	274.41	1708750.48	14292216.14	39°21'27.230"N	80°45'29.706"W	396.79	136.246	0.71	0.35	2.71	
5814.00	15.710	147.850	5772.92	-397.34	-311.31	290.16	1708766.22	14292191.44	39°21'26.986"N	80°45'29.507"W	425.57	137.014	2.07	2.06	0.69	BHI AT Curve <8-1/2">(5697)-(5814)-13470'

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**Actual Wellpath Report**  
 Kreitler Unit 2H AWP Proj: 13493  
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**REFERENCE WELLPATH IDENTIFICATION**

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Doddridge Co., WV	Well	Kreitler Unit 2H
Field	Doddridge	Wellbore	Kreitler Unit 2H AWP
Facility	Melody Pad		

MD	Inclination	Azimuth	TVD	Vert Sect	East	North	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
5864.00	14.250	5821.22	-410.06	-322.26	297.02	1708773.08	14292180.50	39°21'26.87"N	80°45'29.42"W	438.26	137.334	2.92	-0.32	-2.92	0.32	
5958.00	13.860	147.560	6912.41	-432.53	309.19	1708785.25	14292161.19	39°21'26.86"N	80°45'29.26"W	460.73	137.849	0.43	-0.41	-0.41	-0.48	
6004.00	13.650	140.920	5957.09	-443.14	315.57	1708791.62	14292152.33	39°21'26.59"N	80°45'29.184"W	471.58	137.997	3.46	-0.46	-14.43	-0.46	
6052.00	12.540	118.080	6003.88	-452.55	323.74	1708799.79	14292145.48	39°21'26.530"N	80°45'29.081"W	482.15	137.821	10.85	-2.31	-47.58	-2.31	
6098.00	11.630	91.490	6048.89	-458.24	359.77	1708808.84	14292143.01	39°21'26.505"N	80°45'28.966"W	490.08	137.231	12.15	-1.98	-57.80	-1.98	
6146.00	10.420	68.970	6096.03	-460.24	358.34	1708817.73	14292144.44	39°21'26.519"N	80°45'28.852"W	495.13	136.363	9.25	-2.52	-46.92	-2.52	
6192.00	8.220	57.180	6141.42	-459.69	348.33	1708824.37	14292147.71	39°21'26.552"N	80°45'28.768"W	497.39	135.548	6.31	-4.78	-25.63	-4.78	
6240.00	8.540	37.800	6188.92	-457.25	350.38	1708829.44	14292152.39	39°21'26.598"N	80°45'28.703"W	497.65	134.754	5.88	0.67	-40.37	0.67	
6284.00	10.620	17.520	6232.31	-452.48	343.93	1708832.66	14292158.83	39°21'26.661"N	80°45'28.662"W	495.45	133.962	8.94	4.73	-46.06	4.73	
6333.00	13.550	4.780	6280.23	-443.87	333.90	1708834.50	14292168.86	39°21'26.760"N	80°45'28.638"W	489.88	132.968	8.05	5.98	-26.00	5.98	
6379.00	17.670	6.440	6324.52	-432.92	321.59	1708835.73	14292181.17	39°21'26.882"N	80°45'28.622"W	482.49	131.799	9.01	8.96	3.61	8.96	
6427.00	21.840	4.560	6369.69	-418.52	305.44	1708837.26	14292197.31	39°21'27.042"N	80°45'28.602"W	473.05	130.217	8.79	8.65	-3.92	8.65	
6482.00	25.830	0.110	6419.99	-398.26	283.25	1708838.09	14292219.49	39°21'27.261"N	80°45'28.590"W	459.69	128.037	7.95	7.25	-8.09	7.25	
6521.00	28.510	357.820	6471.35	-372.93	256.34	1708837.10	14292246.39	39°21'27.527"N	80°45'28.525"W	442.81	125.373	10.10	2.61	-20.28	2.61	
6565.00	29.820	349.100	6493.13	-361.00	244.21	1708835.29	14292258.52	39°21'27.647"N	80°45'28.625"W	434.39	124.206	10.10	3.26	-19.47	3.26	
6616.00	32.100	340.770	6536.88	-335.01	218.94	1708828.43	14292283.77	39°21'27.897"N	80°45'28.711"W	414.86	121.853	9.51	4.47	-16.33	4.47	
6658.00	35.310	341.81	6571.81	-311.75	196.85	1708821.04	14292305.86	39°21'28.115"N	80°45'28.805"W	397.20	119.708	7.87	7.64	3.36	7.64	
6710.00	38.820	343.900	6613.30	-280.54	166.87	1708811.92	14292335.83	39°21'28.412"N	80°45'28.920"W	375.04	116.419	7.04	6.75	3.31	6.75	
6752.00	42.440	342.840	6645.17	-253.31	140.67	1708804.09	14292362.01	39°21'28.671"N	80°45'29.019"W	356.93	113.211	8.77	8.62	-2.52	8.62	
6753.00†	42.518	342.803	6645.91	-252.64	140.03	1708803.89	14292362.66	39°21'28.677"N	80°45'29.021"W	356.49	113.128	8.22	7.84	-3.66	7.84	Middlesex: 6753 MD
6804.00	46.530	341.070	6682.26	-216.97	106.04	1708792.79	14292396.63	39°21'29.014"N	80°45'29.161"W	334.01	108.510	8.22	7.87	-3.40	7.87	
6854.00	49.860	338.340	6715.59	-179.73	71.10	1708779.85	14292431.55	39°21'29.359"N	80°45'29.325"W	312.00	103.173	7.80	6.66	-5.46	6.66	
6898.00	52.800	334.860	6743.09	-145.40	39.60	1708766.20	14292463.05	39°21'29.671"N	80°45'29.498"W	292.82	97.772	9.10	6.68	-7.91	6.68	
6945.00	56.600	333.170	6770.24	-107.14	5.13	1708749.39	14292497.50	39°21'30.012"N	80°45'29.711"W	273.37	91.075	8.60	8.08	-3.60	8.08	
6964.00†	57.731	332.718	6780.54	-91.24	9.09	1708742.13	14292511.71	39°21'30.153"N	80°45'29.803"W	266.21	88.044	6.28	5.95	-2.38	5.95	Burkett: 6964 MD
6993.00	59.460	332.050	6795.66	-66.61	31.02	1708730.66	14292533.63	39°21'30.370"N	80°45'29.948"W	256.46	83.054	6.28	5.96	-2.30	5.96	
7023.00†	61.062	331.734	6810.54	-40.71	53.99	1708718.39	14292556.60	39°21'30.597"N	80°45'30.103"W	248.25	77.438	5.42	5.34	-1.05	5.34	Tully: 7023 MD
7040.00	61.970	331.560	6818.64	-25.86	67.14	1708711.30	14292569.75	39°21'30.727"N	80°45'30.193"W	244.61	74.068	5.42	5.34	-1.03	5.34	
7087.00	64.870	331.890	6839.67	15.92	104.16	1708691.40	14292606.74	39°21'31.094"N	80°45'30.445"W	239.18	64.184	6.20	6.17	0.70	6.17	

† = interpolated/extrapolated station

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**Actual Wellpath Report**  
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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #08
Operator	ANTERO RESOURCES CORPORATION	Well	Kreitler Unit 2H
Area	Doddridge Co., WV	Wellbore	Kreitler Unit 2H AWB
Field	Doddridge		
Facility	Melody Pad		

WELLPATH DATA (164 stations) † = interpolated/extrapolated station																
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	US ft	US ft			ft	°	ft/100ft	°/100ft	°/100ft	
7114.00†	67.466	332.647	6850.58	40.49	126.02	203.82	1708679.91	14292628.60	39°21'31.310"N	80°45'30.591"W	239.63	58.272	9.95	9.61	2.80	Hamilton: 7114' MD
7137.00	69.680	333.270	6858.98	61.82	145.08	194.06	1708670.19	14292647.66	39°21'31.469"N	80°45'30.714"W	242.32	53.220	9.95	9.63	2.71	
7141.00†	69.920	333.518	6860.36	65.56	148.44	192.40	1708668.51	14292651.01	39°21'31.532"N	80°45'30.735"W	243.01	52.349	8.36	6.00	6.20	Marcellus: 7141' MID
7181.00	72.340	335.960	6873.30	103.34	182.67	176.26	1708662.37	14292685.23	39°21'31.871"N	80°45'30.940"W	253.84	43.977	8.36	6.05	6.10	
7228.00	77.260	339.390	6885.62	148.67	224.61	159.05	1708655.17	14292727.15	39°21'32.266"N	80°45'31.157"W	275.22	35.303	12.62	10.47	7.30	
7275.00	82.530	340.520	6893.87	194.90	268.06	143.20	1708619.32	14292770.59	39°21'32.716"N	80°45'31.356"W	303.92	28.111	11.46	11.21	2.40	
7322.00	88.400	341.370	6897.58	241.67	312.33	127.91	1708604.04	14292814.84	39°21'33.154"N	80°45'31.551"W	337.51	22.271	12.62	12.49	1.81	
7369.00	90.090	343.040	6898.20	288.54	357.07	113.55	1708589.69	14292859.56	39°21'33.580"N	80°45'31.732"W	374.69	17.641	5.05	3.60	3.55	
7463.00	90.180	340.650	6897.98	382.32	446.39	84.26	1708560.41	14292928.94	39°21'34.466"N	80°45'32.102"W	454.27	10.690	2.54	0.10	-2.54	
7557.00	90.150	336.620	6897.71	476.29	538.91	50.03	1708526.19	14293036.33	39°21'35.346"N	80°45'32.535"W	536.25	5.353	4.29	-0.03	-4.29	
7651.00	90.280	346.350	6897.36	570.01	622.94	20.21	1708496.38	14293125.32	39°21'36.226"N	80°45'32.912"W	623.26	1.858	10.35	0.14	10.35	
7745.00	90.490	344.850	6896.72	663.17	713.98	-3.16	1708473.02	14293216.33	39°21'37.127"N	80°45'33.208"W	713.99	359.746	1.61	0.22	-1.60	
7839.00	90.830	334.810	6895.64	757.00	802.10	-35.53	1708440.66	14293304.41	39°21'37.999"N	80°45'33.615"W	802.88	357.464	10.69	0.36	-10.68	
7933.00	90.060	335.700	6894.91	850.89	887.46	-74.88	1708401.33	14293389.74	39°21'38.843"N	80°45'34.113"W	890.61	355.177	1.25	-0.82	0.95	
8027.00	90.000	336.180	6894.86	944.83	973.29	-113.20	1708363.03	14293475.48	39°21'40.543"N	80°45'35.078"W	979.85	353.366	0.51	-0.06	0.51	
8121.00	90.030	336.130	6894.83	1038.78	1059.27	-151.20	1708325.04	14293561.48	39°21'42.280"N	80°45'35.538"W	1070.01	351.877	0.06	0.03	-0.05	
8215.00	89.940	338.410	6894.86	1132.76	1145.96	-187.52	1708288.74	14293648.14	39°21'41.401"N	80°45'35.538"W	1161.20	350.707	2.43	-0.10	2.43	
8309.00	90.090	343.430	6894.83	1226.61	1234.77	-218.24	1708258.03	14293736.91	39°21'42.280"N	80°45'35.927"W	1253.91	348.977	5.34	0.16	5.34	
8403.00	90.890	340.720	6894.03	1320.36	1324.20	-247.16	1708229.12	14293826.30	39°21'43.164"N	80°45'36.292"W	1347.06	348.427	3.01	0.85	-2.88	
8498.00	91.050	335.200	6892.42	1415.31	1412.21	-282.79	1708193.50	14293914.28	39°21'44.035"N	80°45'36.742"W	1440.24	348.676	5.81	0.17	-5.81	
8592.00	90.490	333.820	6891.16	1509.13	1497.05	-323.24	1708153.07	14293989.08	39°21'44.875"N	80°45'37.255"W	1531.55	347.816	1.58	-0.60	-1.47	
8686.00	89.690	330.430	6891.01	1602.62	1580.13	-367.18	1708109.14	14294071.32	39°21'45.697"N	80°45'37.811"W	1622.23	346.918	3.71	-0.85	-3.61	
8780.00	90.310	331.750	6891.01	1695.93	1662.41	-412.62	1708065.72	14294164.38	39°21'46.511"N	80°45'38.387"W	1712.85	346.060	1.55	0.66	1.40	
8874.00	89.970	331.380	6890.78	1789.34	1745.07	-457.38	1708018.98	14294247.01	39°21'47.330"N	80°45'38.954"W	1804.01	345.313	0.53	-0.36	-0.39	
8968.00	89.630	332.450	6891.11	1882.84	1828.00	-501.64	1707974.74	14294329.80	39°21'48.150"N	80°45'39.515"W	1895.58	344.655	1.19	-0.36	1.14	
9062.00	90.180	335.120	6891.26	1976.54	1912.32	-543.16	1707933.23	14294414.19	39°21'48.955"N	80°45'40.040"W	1987.96	344.144	2.90	0.59	2.84	
9156.00	90.060	337.160	6891.07	2070.49	1998.28	-581.18	1707895.23	14294504.12	39°21'49.822"N	80°45'40.522"W	2081.08	343.784	2.17	-0.13	2.17	
9250.00	90.280	346.170	6890.79	2164.20	2097.42	-610.72	1707865.71	14294589.22	39°21'50.717"N	80°45'40.895"W	2174.92	343.692	9.59	0.23	9.59	
9345.00	92.400	348.210	6888.57	2257.95	2180.02	-631.77	1707844.66	14294681.79	39°21'51.633"N	80°45'41.160"W	2269.72	343.838	3.90	2.23	2.15	
9439.00	90.860	339.630	6885.89	2351.32	2210.22	-657.77	1707818.67	14294771.95	39°21'52.525"N	80°45'41.488"W	2363.59	343.842	9.59	-1.64	-9.13	

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**Actual Wellpath Report**  
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Operator	ANTERO RESOURCES CORPORATION	Slot #08
Area	Doddridge Co., WV	Kreitler Unit 2H
Field	Doddridge	Kreitler Unit 2H AWB
Facility	Melody Pad	

**REFERENCE WELLPATH IDENTIFICATION**

MD	Inclination	Azimuth	TVD	Vert Sect	East	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
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9533.00	88.610	337.650	6886.32	2445.30	2357.75	-692.01	1707.784	45	14294859.44	39°21'53.391"N	80°45'41.921"W	2457.21	343.643	3.19	-2.39	-2.11	
9627.00	90.060	337.010	6887.41	2539.28	2444.48	-728.23	1707.748	24	14294946.14	39°21'54.249"N	80°45'42.379"W	2550.65	343.411	1.69	1.54	-0.66	
9721.00	90.030	335.700	6887.34	2633.24	2530.59	-765.93	1707.710	55	14295032.21	39°21'55.101"N	80°45'42.856"W	2643.96	343.160	1.39	-0.03	-1.36	
9815.00	90.030	335.730	6887.29	2727.17	2616.27	-804.59	1707.671	91	14295117.86	39°21'55.949"N	80°45'43.345"W	2737.19	342.906	0.03	0.00	0.03	
9909.00	90.060	336.460	6887.22	2821.11	2702.20	-842.68	1707.633	83	14295203.76	39°21'56.799"N	80°45'43.828"W	2830.55	342.680	0.78	0.03	0.76	
10003.00	90.090	337.290	6887.09	2915.10	2788.65	-879.60	1707.596	93	14295290.17	39°21'57.655"N	80°45'44.295"W	2924.08	342.494	0.88	0.03	0.88	
10097.00	90.000	341.520	6887.02	3009.05	2876.62	-912.66	1707.563	88	14295378.11	39°21'58.525"N	80°45'44.713"W	3017.93	342.397	4.50	-0.10	4.50	
10191.00	90.060	340.810	6886.97	3102.90	2965.59	-943.01	1707.533	55	14295467.04	39°21'59.405"N	80°45'45.096"W	3111.91	342.360	0.76	0.06	-0.76	
10285.00	90.090	340.020	6886.85	3196.82	3054.15	-974.51	1707.502	05	14295555.57	39°22'00.281"N	80°45'45.494"W	3205.85	342.303	0.84	0.03	-0.84	
10380.00	90.250	347.040	6886.56	3291.32	3145.19	-1001.43	1707.475	15	14295646.58	39°22'01.182"N	80°45'45.834"W	3300.77	342.338	7.39	0.17	7.39	
10474.00	90.830	349.900	6885.68	3383.74	3237.28	-1020.22	1707.456	37	14295738.63	39°22'02.093"N	80°45'46.070"W	3394.24	342.508	3.10	0.62	3.04	
10569.00	91.320	340.370	6883.89	3477.88	3328.98	-1044.56	1707.432	04	14295830.29	39°22'03.000"N	80°45'46.377"W	3489.01	342.579	10.04	0.52	-10.03	
10662.00	90.550	332.700	6882.37	3570.76	3414.21	-1081.56	1707.395	05	14295915.49	39°22'03.843"N	80°45'46.845"W	3581.43	342.423	8.29	-0.82	-8.25	
10756.00	89.940	333.090	6881.97	3664.39	3497.89	-1124.38	1707.352	24	14295999.13	39°22'04.671"N	80°45'47.388"W	3674.16	342.180	0.77	-0.65	0.41	
10850.00	90.000	331.600	6882.02	3757.93	3581.15	-1168.01	1707.308	63	14296082.36	39°22'05.495"N	80°45'47.940"W	3766.81	341.936	1.59	0.06	-1.58	
10944.00	90.030	334.570	6881.99	3851.57	3664.96	-1210.56	1707.266	10	14296166.13	39°22'06.324"N	80°45'48.479"W	3859.71	341.721	3.16	0.03	3.16	
11038.00	90.000	338.230	6881.97	3945.52	3751.08	-1248.18	1707.228	49	14296252.22	39°22'07.177"N	80°45'48.956"W	3953.30	341.595	3.89	-0.03	3.89	
11132.00	90.000	336.400	6881.97	4039.51	3837.80	-1284.44	1707.192	25	14296338.91	39°22'08.035"N	80°45'49.414"W	4047.04	341.496	1.95	0.00	-1.95	
11226.00	90.000	336.250	6881.97	4133.47	3923.89	-1322.18	1707.154	52	14296424.97	39°22'08.887"N	80°45'49.892"W	4140.66	341.378	0.16	0.00	-0.16	
11320.00	90.060	336.000	6881.92	4227.42	4009.85	-1360.23	1707.116	49	14296510.89	39°22'09.737"N	80°45'50.374"W	4234.28	341.262	0.06	-0.27	-0.27	
11414.00	89.850	335.540	6881.99	4321.35	4095.57	-1398.80	1707.077	93	14296596.57	39°22'10.585"N	80°45'50.862"W	4327.86	341.143	0.54	-0.22	-0.49	
11508.00	90.120	337.510	6882.02	4415.31	4181.78	-1436.25	1707.040	50	14296682.76	39°22'11.438"N	80°45'51.336"W	4421.55	341.045	2.12	2.10	2.10	
11603.00	89.940	339.610	6881.97	4510.30	4270.21	-1470.97	1707.005	79	14296771.14	39°22'12.313"N	80°45'51.775"W	4516.46	340.993	-0.19	2.21	1.17	
11697.00	90.310	340.710	6881.76	4604.23	4358.62	-1502.87	1706973.90		14296859.53	39°22'13.188"N	80°45'52.178"W	4610.45	340.976	1.23	0.39	1.17	
11791.00	91.420	339.250	6880.35	4698.16	4446.93	-1535.05	1706941.74		14296947.80	39°22'14.062"N	80°45'52.585"W	4704.42	340.956	1.95	-1.18	-1.55	
11885.00	91.540	335.200	6877.92	4792.10	4533.55	-1571.42	1706905.39		14297034.39	39°22'14.919"N	80°45'53.045"W	4798.17	340.883	4.31	-2.60	-4.31	
11979.00	90.430	332.760	6876.30	4885.85	4618.01	-1612.64	1706864.18		14297118.80	39°22'15.754"N	80°45'53.567"W	4891.48	340.750	2.85	-1.18	-2.60	
12073.00	90.550	336.880	6875.50	4979.68	4703.05	-1652.63	1706824.21		14297203.82	39°22'16.596"N	80°45'54.074"W	4984.97	340.639	4.38	0.13	4.38	
12167.00	90.650	338.470	6874.51	5073.67	4790.00	-1688.33	1706788.52		14297290.73	39°22'17.456"N	80°45'54.525"W	5078.83	340.584	1.69	0.11	1.69	
12261.00	90.430	337.390	6873.63	5167.66	4877.11	-1723.65	1706753.22		14297377.80	39°22'18.318"N	80°45'54.972"W	5172.73	340.536	-0.23	-1.15	-1.15	

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**Actual Wellpath Report**  
 Kreitler Unit 2H AWP Proj: 13493  
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**REFERENCE WELLPATH IDENTIFICATION**

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Doddridge Co., WV	Well	Kreitler Unit 2H
Field	Doddridge	Wellbore	Kreitler Unit 2H AWP
Facility	Melody Pad		

**WELLPATH DATA (164 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
12355.00	90.340	334.590	6872.99	5261.59	4962.96	-1761.89	1706714.99	14297463.62	39°22'19.168"N	80°45'55.456"W	5266.43	340.455	2.98	-0.10	-2.98	
12449.00	89.720	340.000	6872.94	5355.55	5049.64	-1798.16	1706678.73	14297550.27	39°22'20.025"N	80°45'55.915"W	5360.25	340.399	5.79	-0.66	5.76	
12542.00	90.000	341.450	6873.17	5448.44	5137.43	-1828.86	1706648.05	14297638.02	39°22'20.894"N	80°45'56.303"W	5453.25	340.405	1.59	0.30	1.56	
12637.00	89.780	338.290	6873.35	5543.38	5226.61	-1861.55	1706615.37	14297727.17	39°22'21.776"N	80°45'56.717"W	5548.23	340.396	3.33	-0.23	-3.33	
12731.00	89.850	335.660	6873.66	5637.36	5313.12	-1898.31	1706578.62	14297813.64	39°22'22.632"N	80°45'57.182"W	5642.06	340.339	2.80	0.07	-2.80	
12825.00	89.850	337.750	6873.90	5731.33	5399.45	-1935.48	1706541.46	14297899.94	39°22'23.486"N	80°45'57.652"W	5735.87	340.279	2.22	0.00	2.22	
12919.00	89.690	338.540	6874.28	5825.33	5486.69	-1970.48	1706506.49	14297987.15	39°22'24.349"N	80°45'58.095"W	5829.80	340.245	0.86	-0.17	0.84	
13013.00	89.720	340.050	6874.77	5919.30	5574.62	-2003.71	1706473.27	14298075.04	39°22'25.219"N	80°45'58.515"W	5923.78	340.230	1.61	0.03	1.61	
13107.00	91.020	343.320	6874.16	6013.09	5663.84	-2033.24	1706443.74	14298164.22	39°22'26.102"N	80°45'58.888"W	6017.74	340.253	3.74	1.38	3.48	
13201.00	90.520	337.870	6872.89	6106.95	5752.46	-2064.46	1706412.54	14298252.81	39°22'26.978"N	80°45'59.283"W	6111.69	340.258	5.82	-0.53	-5.80	
13294.00	90.460	334.850	6872.10	6199.89	5837.64	-2101.75	1706375.27	14298337.96	39°22'27.821"N	80°45'59.755"W	6204.47	340.199	3.25	-0.06	-3.25	
13389.00	90.000	334.550	6871.72	6294.74	5923.53	-2142.34	1706334.69	14298423.81	39°22'28.671"N	80°46'00.269"W	6299.03	340.117	0.58	-0.48	-0.32	
13470.00	89.910	335.810	6871.78	6375.64	5997.04	-2176.34	1706300.70	14298497.30	39°22'29.399"N	80°46'00.700"W	6379.74	340.054	1.56	-0.11	1.56	
13493.00	89.910	335.810	6871.82	6398.62	6018.03	-2185.77	1706291.28	14298518.27	39°22'29.606"N	80°46'00.819"W	6402.67	340.039	0.00	0.00	0.00	Projected MD at TD: 13493'

HOLE & CASING SECTIONS - Ref Wellbore: Kreitler Unit 2H AWP										Ref Wellpath: Kreitler Unit 2H AWP Proj: 13493'									
String/Diameter	Start MD	End MD	Interval	Start TVD	End TVD	Start N/S	End N/S	Start E/W	End E/W	Start MD	End MD	Interval	Start TVD	End TVD	Start N/S	End N/S	Start E/W	End E/W	20in Conductor
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# Actual Wellpath Report

Kreitler Unit 2H AWP Proj: 13493'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Doddridge Co., WV	Well	Kreitler Unit 2H
Field	Doddridge	Wellbore	Kreitler Unit 2H 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 2H POE Rev-1	6857.00	113.79	215.70	1708691.80	14292616.38	39°21'31.189"N	80°45'30.440"W	point
Kreitler Unit 2H BHL Rev-1	6897.00	5947.70	-2140.90	1706336.13	14298447.97	39°22'28.910"N	80°46'00.250"W	point
Kreitler Unit 2H LP Rev-1	6897.00	308.80	136.93	1708613.05	14292811.31	39°21'33.119"N	80°45'31.436"W	point

WELLPATH COMPOSITION - Ref Wellbore: Kreitler Unit 2H AWB Ref Wellpath: Kreitler Unit 2H AWP Proj: 13493'				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	5697.00	Gyrodata standard - Drop gyro or Multi-shot	01 Gyrodata MS Gyro <8-3/4">(100'-5697')	Kreitler Unit 2H AWB
5697.00	13470.00	BHI AutoTrak Curve (Short)	02 BHI AT Curve <8-1/2">(5697')(5814'-13470')	Kreitler Unit 2H AWB
13470.00	13493.00	Blind Drilling (std)	Projection to bit	Kreitler Unit 2H AWB

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Kreitler Unit 2H AWP Proj: 13493'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #08
Area	Doddridge Co., WV	Well	Kreitler Unit 2H
Field	Doddridge	Wellbore	Kreitler Unit 2H AWB
Facility	Melody Pad		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]		Comment
100.00	0.540	127.770	100.00		Gyrodata MS Gyro <8-3/4">(100'-5697')
5814.00	15.710	147.850	5772.92		BHI AT Curve <8-1/2">(5697')(5814'-13470')
6540.00	29.006	353.967	6471.35		Sycamore: 6540' MD
6753.00	42.518	342.803	6645.91		Middlesex: 6753' MD
6964.00	57.731	332.718	6780.54		Burkett: 6964' MD
7023.00	61.062	331.734	6810.54		Tully: 7023' MD
7114.00	67.466	332.647	6850.58		Hamilton: 7114' MD
7141.00	69.920	333.518	6860.36		Marcellus: 7141' MD
13493.00	89.910	335.810	6871.82		Projected MD at TD: 13493'

COMMENTS
<p><b>Wellpath general comments</b>                      API #: 47-017-06480-0000                      BHI Job #: 8028027                      Rig: Patterson 347                      Duration: 07.02.2016-07.05.2016                      Gyrodata MS Gyro &lt;8-3/4"&gt;(100'-5697')                      BHI AT Curve &lt;8-1/2"&gt;(5697')(5814'-13470')                      Sycamore: 6540' MD                      Middlesex: 6753' MD                      Burkett: 6964' MD                      Tully: 7023' MD                      Hamilton: 7114' MD                      Marcellus: 7141' MD                      Projected MD at TD: 13493'</p>

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