

# ANTERO RESOURCES CORPORATION

Location: Doddridge Co., WV  
 Facility: Doddridge Middle Pad  
 Slot: Slot #05  
 Well: Goldsmith Unit 1H  
 Wellbore: Goldsmith Unit 1H PWB

Plot reference wellpath is Goldsmith Unit 1H PWB Rev-A.0  
 True vertical depths are referenced to Frontier 32 (RKB)  
 Measured depths are referenced to Frontier 32 (RKB)  
 Frontier 32 (RKB) to Mean Sea Level: 875 feet  
 Mean Sea Level to Ground level (At Slot: Slot #05): -843 feet  
 Coordinates are in feet referenced to Slot

Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
Middle Pad	1665000.000	1427947.689	80°48'24.070"W
Slot	Local N (ft)	Grid East (US ft)	Grid North (US ft)
Slot #05	-14.08	1685128.727	1427940.351
Comment:	Goldsmith Unit 1H		
Frontier 32 (RKB) to Ground level (At Slot: Slot #05)	33ft		
Mean Sea Level to Ground level (At Slot: Slot #05)	-843ft		
Frontier 32 (RKB) to Mean Sea Level	875ft		

Slot	Well	Wellbore	Wellpath
Slot #05	Goldsmith Unit 1H	Goldsmith Unit 1H PWB	Goldsmith Unit 1H AWP Proj: 15789P
Slot #05	Goldsmith Unit 1H	Goldsmith Unit 1H PWB	Goldsmith Unit 1H PWB Rev-A.0

Gyrodatta MS Gyro <17-1/2"> (100-503) : 0.28° Inc. 117.00ft MD, 117.00ft TVD, -0.05ft VS  
 Gyrodatta MS Gyro <12-1/4"> (503)(593-774) : 0.72° Inc. 610.00ft MD, 609.99ft TVD, 0.47ft VS  
 Directional ONE MWD <12-1/4"> (774)(834-2536) : 2.42° Inc. 851.00ft MD, 850.95ft TVD, -2.02ft VS

Well Profile Data						
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)
Tile On	6321.00	46.220	332.770	6239.04	-160.16	-94.44
Proj to Bottom	6388.00	52.870	332.770	6282.48	-114.86	-117.75
POE	6581.41	69.760	329.700	6375.00	33.14	-199.41
Landing Pt.	6810.25	90.000	328.700	6415.00	226.63	-312.48
On Azimuth	7144.83	90.000	336.398	6415.00	524.71	-484.04
BHL	15720.05	90.000	336.398	6415.00	8382.60	-3897.40
						0.00
						9241.82

Directional ONE MWD <8-3/4"> (2536)(2651-6304) : 0.85° Inc. 2668.00ft MD, 2666.52ft TVD, -27.48ft VS

API: 47-017-06820-0000  
 BHI Job #: 9067098  
 Rig: Frontier 32  
 Duration: 03/19/2018-03/22/2018

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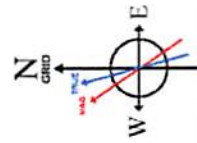
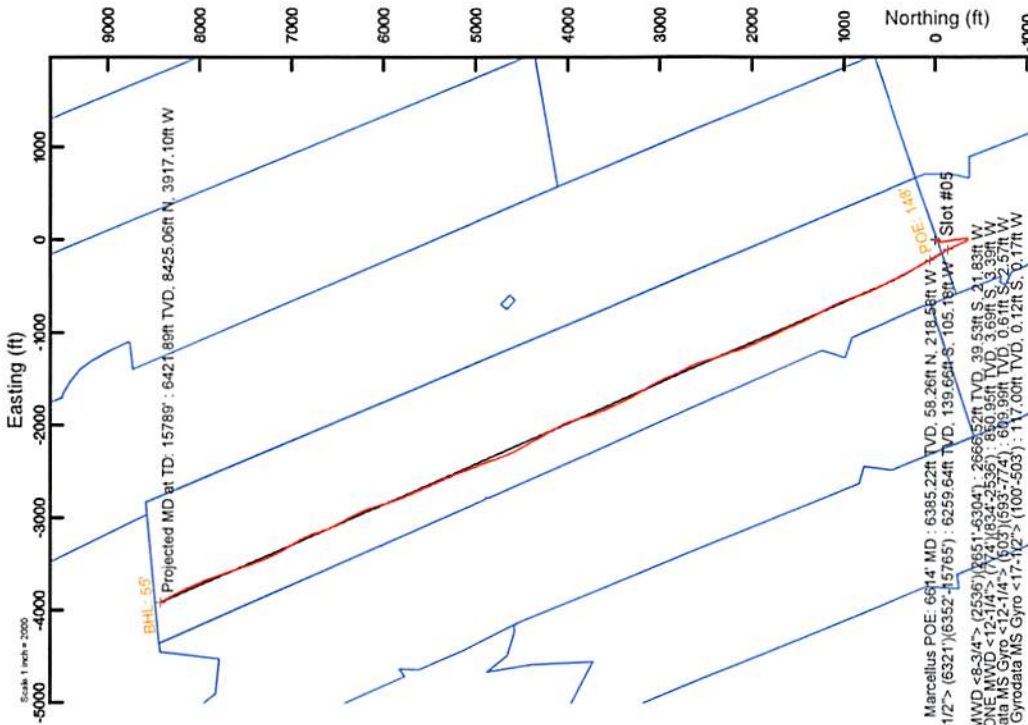
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BH AT Curve <8-1/2"> (6321)(6352-15765) : 50.44° Inc. 6352.00ft MD, 6259.64ft TVD, -85.87ft VS  
 Marcellus POE: 6614' MD : 72.75° Inc. 6614.00ft MD, 6385.22ft TVD, 140.90ft VS

Projected MD at TD: 15789.00ft MD, 6421.89ft TVD, 9288.61ft VS

Azimuth 336.40° with reference 0.00 N, 0.00 E



User specified Dip: 65.35° Field: 52027 n T  
 Magnetic North = 65.35° West of True North (at 15/Jan/2018)  
 Grid North = 0.12° East of True North (at 15/Jan/2018)  
 To correct azimuth from True to Grid subtract 0.12 degrees  
 To correct azimuth from Magnetic to Grid subtract 7.76 degrees

Scale: 1 inch = 2000

Scale: 1 inch = 1000





# Actual Wellpath Report

Goldsmith Unit 1H AWP Proj: 15789'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #05
Area	Doddridge Co., WV	Well	Goldsmith Unit 1H
Field	Doddridge	Wellbore	Goldsmith Unit 1H AWB
Facility	Middle Pad		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Delaset
Scale	0.999603	Report Generated	14/Sep/2018 at 11:35
Convergence at slot	0.12" East	Database/Source file	WA_MPL_EasternUS_Defn/Goldsmith_Unit_1H_AWP_Proj_15789_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-14.08	37.75	1695128.73	14279403.61	39°19'20.870"N	80°48'23.540"W
Facility Reference Pt			1695090.99	14279417.69	39°19'21.010"N	80°48'24.020"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Frontier 32 (RKB) to Facility Vertical Datum	875.00ft
Horizontal Reference Pt	Slot	Frontier 32 (RKB) to Mean Sea Level	875.00ft
Vertical Reference Pt	Frontier 32 (RKB)	Frontier 32 (RKB) to Ground Level at Slot (Slot #05)	32.00ft
MD Reference Pt	Frontier 32 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	336.40°

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# Actual Wellpath Report

Goldsmith Unit 1H AWP Proj: 15789'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #05
Area	Doddridge Co., WV	Well	Goldsmith Unit 1H
Field	Doddridge	Wellbore	Goldsmith Unit 1H AWB
Facility	Middle Pad		

WELLPATH DATA (197 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)	(ft)	(US ft)	(US ft)			(ft)	(°)	("/100ft)	("/100ft)	("/100ft)	
0.00†	0.000	233.810	0.00	0.00	0.00	0.00	1695128.73	14279403.61	39°19'20.870"N	80°48'23.540"W	0.00	0.000	0.00	0.00	0.00	
32.00	0.000	233.810	32.00	0.00	0.00	0.00	1695128.73	14279403.61	39°19'20.870"N	80°48'23.540"W	0.00	0.000	0.00	0.00	0.00	
117.00	0.280	233.810	117.00	-0.05	-0.12	-0.17	1695128.56	14279403.49	39°19'20.869"N	80°48'23.542"W	0.21	233.810	0.33	0.33	-148.46	Gyrodata MS Gyro <17-1/2"> (100'-503')
217.00	0.170	254.810	217.00	-0.08	-0.31	-0.51	1695128.22	14279403.30	39°19'20.867"N	80°48'23.546"W	0.59	238.954	0.14	-0.11	21.00	
317.00	0.290	220.740	317.00	-0.16	-0.54	-0.82	1695127.91	14279403.07	39°19'20.865"N	80°48'23.550"W	0.98	236.691	0.18	0.12	-34.07	
417.00	0.330	249.390	417.00	-0.26	-0.83	-1.25	1695127.48	14279402.78	39°19'20.862"N	80°48'23.556"W	1.50	236.453	0.16	0.04	28.65	
517.00	0.370	266.170	516.99	-0.14	-0.95	-1.84	1695126.89	14279402.66	39°19'20.861"N	80°48'23.563"W	2.07	242.667	0.11	0.04	16.78	
520.00	0.400	260.410	519.99	-0.13	-0.95	-1.86	1695126.87	14279402.66	39°19'20.861"N	80°48'23.564"W	2.09	242.860	1.63	1.00	-192.00	
610.00	0.720	315.330	609.99	0.47	-0.61	-2.57	1695126.16	14279403.01	39°19'20.864"N	80°48'23.573"W	2.64	256.753	0.65	0.36	61.02	Gyrodata MS Gyro <12-1/4"> (503')(593'-774')
699.00	0.330	205.390	698.99	0.83	-0.44	-3.07	1695125.68	14279403.17	39°19'20.866"N	80°48'23.579"W	3.10	261.872	1.00	-0.44	-123.53	
791.00	1.330	179.210	790.98	-0.33	-1.75	-3.17	1695125.56	14279401.87	39°19'20.853"N	80°48'23.580"W	3.62	241.171	1.13	1.09	-28.46	
851.00	2.420	190.540	850.95	-2.02	-3.69	-3.39	1695125.33	14279399.92	39°19'20.834"N	80°48'23.583"W	5.01	222.627	1.91	1.82	18.88	Directional ONE MWD <12-1/4"> (774')(834'-2536')
941.00	4.440	199.310	940.78	-6.14	-8.84	-4.89	1695123.84	14279394.77	39°19'20.783"N	80°48'23.603"W	10.11	208.958	2.31	2.24	9.74	
1029.00	4.750	198.810	1028.50	-11.33	-15.51	-7.19	1695121.54	14279388.11	39°19'20.717"N	80°48'23.632"W	17.10	204.890	0.36	0.35	-0.57	
1118.00	4.710	192.560	1117.19	-17.00	-22.56	-9.18	1695119.55	14279381.06	39°19'20.647"N	80°48'23.657"W	24.36	202.135	0.58	-0.04	-7.02	
1206.00	3.610	199.790	1204.96	-21.93	-28.70	-10.90	1695117.83	14279374.93	39°19'20.587"N	80°48'23.679"W	30.70	200.802	1.38	-1.25	8.22	
1294.00	2.760	212.390	1292.83	-25.13	-33.09	-12.97	1695115.76	14279370.53	39°19'20.543"N	80°48'23.706"W	35.54	201.409	1.25	-0.97	14.32	
1382.00	2.380	213.320	1380.74	-27.31	-36.41	-15.11	1695113.62	14279367.22	39°19'20.510"N	80°48'23.733"W	39.42	202.544	0.43	-0.43	1.06	
1470.00	2.090	202.740	1468.67	-29.42	-39.41	-16.74	1695112.00	14279364.21	39°19'20.481"N	80°48'23.754"W	42.82	203.008	0.57	-0.33	-12.02	
1558.00	1.010	166.890	1556.64	-31.29	-41.65	-17.18	1695111.55	14279361.98	39°19'20.459"N	80°48'23.760"W	45.05	202.417	1.59	-1.23	-40.74	
1647.00	0.980	151.240	1645.63	-32.82	-43.08	-16.64	1695112.10	14279360.55	39°19'20.445"N	80°48'23.753"W	46.18	201.116	0.31	-0.03	-17.58	
1735.00	0.460	194.730	1733.62	-33.84	-44.08	-16.37	1695112.37	14279359.55	39°19'20.435"N	80°48'23.749"W	47.02	200.367	0.82	-0.59	49.42	
1823.00	0.740	249.340	1821.61	-34.09	-44.62	-16.99	1695111.75	14279359.00	39°19'20.429"N	80°48'23.757"W	47.75	200.840	0.69	0.32	62.06	
1911.00	0.810	270.660	1909.61	-33.81	-44.82	-18.14	1695110.59	14279358.81	39°19'20.427"N	80°48'23.772"W	48.35	202.036	0.34	0.08	24.23	
2000.00	0.900	282.950	1998.60	-33.13	-44.65	-19.45	1695109.28	14279358.97	39°19'20.429"N	80°48'23.789"W	48.71	203.537	0.23	0.10	13.81	
2088.00	0.810	276.600	2086.59	-32.41	-44.43	-20.74	1695107.99	14279359.20	39°19'20.431"N	80°48'23.805"W	49.03	205.027	0.15	-0.10	-7.22	
2176.00	0.850	280.460	2174.58	-31.73	-44.24	-22.00	1695106.73	14279359.39	39°19'20.433"N	80°48'23.821"W	49.41	206.444	0.08	0.05	4.39	
2264.00	0.990	270.160	2262.57	-31.06	-44.12	-23.40	1695105.33	14279359.51	39°19'20.434"N	80°48'23.839"W	49.94	207.946	0.25	0.16	-11.70	
2352.00	0.430	352.940	2350.56	-30.43	-43.79	-24.20	1695104.53	14279359.84	39°19'20.438"N	80°48'23.849"W	50.03	208.933	1.17	-0.64	94.07	
2441.00	1.170	43.630	2439.55	-29.76	-42.80	-23.62	1695105.12	14279360.83	39°19'20.447"N	80°48'23.842"W	48.88	208.893	1.08	0.83	56.96	

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# Actual Wellpath Report

Goldsmith Unit 1H AWP Proj: 15789'  
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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #05
Operator	ANTERO RESOURCES CORPORATION	Well	Goldsmith Unit 1H
Area	Doddridge Co., WV	Wellbore	Goldsmith Unit 1H AWB
Field	Doddridge		
Facility	Middle Pad		

WELLPATH DATA (197 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
2529.00	1.040	32.760	2527.54	-28.97	-41.48	-22.57	1695106.17	14279362.15	39°19'20.461"N	80°48'23.828"W	47.22	208.550	0.28	-0.15	-12.35	
2553.00	0.890	32.150	2551.53	-28.75	-41.14	-22.35	1695106.39	14279362.49	39°19'20.464"N	80°48'23.826"W	46.81	208.516	0.63	-0.63	-2.54	
2668.00	0.850	2.770	2666.52	-27.48	-39.53	-21.83	1695106.90	14279364.10	39°19'20.480"N	80°48'23.819"W	45.16	208.915	0.39	-0.03	-25.55	Directional ONE MWD <8-3/4"> (2536') (2651'-6304')
2757.00	0.750	349.650	2755.51	-26.32	-38.29	-21.91	1695106.83	14279365.33	39°19'20.492"N	80°48'23.820"W	44.12	209.771	0.23	-0.11	-14.74	
2845.00	0.750	344.110	2843.50	-25.19	-37.17	-22.17	1695106.57	14279366.45	39°19'20.503"N	80°48'23.823"W	43.28	210.808	0.08	0.00	-6.30	
2933.00	0.590	345.420	2931.50	-24.17	-36.18	-22.44	1695106.30	14279367.44	39°19'20.513"N	80°48'23.827"W	42.57	211.806	0.18	-0.18	1.49	
3022.00	0.640	348.410	3020.49	-23.23	-35.25	-22.65	1695106.08	14279368.37	39°19'20.522"N	80°48'23.829"W	41.90	212.727	0.07	0.06	3.36	
3110.00	1.120	192.500	3108.49	-23.45	-35.61	-22.94	1695105.80	14279368.02	39°19'20.519"N	80°48'23.833"W	42.36	212.789	1.96	0.55	-177.17	
3198.00	3.310	188.200	3196.42	-26.30	-38.96	-23.49	1695105.25	14279364.66	39°19'20.485"N	80°48'23.840"W	45.50	211.082	2.49	2.49	-4.89	
3286.00	5.470	181.990	3284.15	-32.24	-45.67	-24.00	1695104.74	14279357.96	39°19'20.419"N	80°48'23.847"W	51.59	207.717	2.51	2.45	-7.06	
3375.00	5.500	179.900	3372.75	-39.98	-54.18	-24.14	1695104.60	14279349.46	39°19'20.335"N	80°48'23.849"W	59.31	204.013	0.23	0.03	-2.35	
3462.00	6.980	173.820	3459.23	-48.85	-63.60	-23.56	1695105.18	14279340.03	39°19'20.242"N	80°48'23.842"W	67.82	200.326	1.86	1.70	-6.99	
3551.00	5.970	170.130	3547.66	-58.51	-73.54	-22.18	1695106.55	14279330.10	39°19'20.144"N	80°48'23.824"W	76.81	196.787	1.23	-1.13	-4.15	
3639.00	8.410	171.410	3634.95	-69.17	-84.41	-20.44	1695108.30	14279319.23	39°19'20.036"N	80°48'23.802"W	86.85	193.611	2.78	2.77	1.45	
3727.00	9.380	176.560	3721.91	-82.12	-97.93	-19.05	1695109.69	14279305.72	39°19'19.902"N	80°48'23.785"W	99.77	191.006	1.43	1.10	5.85	
3816.00	7.990	169.790	3809.88	-94.94	-111.26	-17.51	1695111.22	14279292.39	39°19'19.771"N	80°48'23.766"W	112.63	188.946	1.94	-1.56	-7.61	
3904.00	8.200	177.040	3897.01	-106.77	-123.55	-16.11	1695112.63	14279280.11	39°19'19.649"N	80°48'23.748"W	124.59	187.427	1.18	0.24	8.24	
3992.00	8.240	174.700	3984.11	-118.63	-136.09	-15.20	1695113.53	14279267.57	39°19'19.525"N	80°48'23.737"W	136.94	186.373	0.38	0.05	-2.66	
4080.00	7.050	170.670	4071.32	-129.85	-147.70	-13.74	1695114.99	14279255.97	39°19'19.410"N	80°48'23.719"W	148.34	185.315	1.48	-1.35	-4.58	
4168.00	5.890	166.010	4158.76	-139.53	-157.41	-11.77	1695116.96	14279246.26	39°19'19.314"N	80°48'23.694"W	157.85	184.278	1.45	-1.32	-5.30	
4257.00	7.830	172.380	4247.12	-149.87	-167.85	-9.87	1695118.87	14279235.82	39°19'19.211"N	80°48'23.670"W	168.14	183.364	2.34	2.18	7.16	
4345.00	7.180	167.020	4334.37	-161.03	-179.16	-7.84	1695120.89	14279224.53	39°19'19.099"N	80°48'23.645"W	179.33	182.504	1.08	-0.74	-6.09	
4433.00	8.840	167.820	4421.51	-173.07	-191.12	-5.17	1695123.56	14279212.56	39°19'18.981"N	80°48'23.611"W	191.19	181.551	1.89	1.89	0.91	
4521.00	7.900	165.040	4508.57	-185.67	-203.58	-2.19	1695126.54	14279200.11	39°19'18.858"N	80°48'23.573"W	203.59	180.615	1.16	-1.07	-3.16	
4610.00	8.310	171.940	4596.68	-197.92	-215.85	0.29	1695129.02	14279187.84	39°19'18.737"N	80°48'23.542"W	215.85	179.922	1.19	0.46	7.75	
4698.00	8.420	172.880	4683.75	-210.22	-228.54	1.98	1695130.71	14279175.16	39°19'18.611"N	80°48'23.521"W	228.55	179.502	0.20	0.12	1.07	
4786.00	7.730	168.980	4770.67	-222.18	-240.75	3.91	1695132.64	14279162.96	39°19'18.490"N	80°48'23.497"W	240.78	179.068	1.00	-0.78	-4.43	
4875.00	7.280	179.460	4859.12	-233.21	-252.26	5.11	1695133.84	14279151.45	39°19'18.377"N	80°48'23.482"W	252.31	178.839	1.62	-0.51	11.78	
4963.00	6.950	177.300	4946.44	-243.31	-263.15	5.42	1695134.14	14279140.56	39°19'18.269"N	80°48'23.478"W	263.21	178.821	0.48	-0.37	-2.45	
5051.00	7.200	173.000	5033.77	-253.57	-273.95	6.84	1695135.06	14279129.77	39°19'18.162"N	80°48'23.467"W	274.02	178.675	0.67	0.28	-4.89	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #05
Area	Doddridge Co., WV	Well	Goldsmith Unit 1H
Field	Doddridge	Wellbore	Goldsmith Unit 1H AWB
Facility	Middle Pad		

WELLPATH DATA (197 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
5140.00	5.320	174.320	5122.23	-262.84	-283.59	7.43	1695136.15	14279120.14	39°19'18.067"N	80°48'23.453"W	283.69	178.500	2.12	-2.11	1.48	
5228.00	5.290	172.270	5209.86	-270.63	-291.67	8.38	1695137.10	14279112.06	39°19'17.987"N	80°48'23.441"W	291.79	178.355	0.22	-0.03	-2.33	
5316.00	5.420	170.100	5297.47	-278.57	-299.78	9.64	1695138.36	14279103.95	39°19'17.907"N	80°48'23.426"W	299.94	178.159	0.27	0.15	-2.47	
5404.00	7.560	171.110	5384.90	-288.20	-309.60	11.25	1695139.97	14279094.14	39°19'17.810"N	80°48'23.405"W	309.80	177.920	2.44	2.43	1.15	
5493.00	9.230	168.880	5472.95	-300.84	-322.39	13.53	1695142.25	14279081.35	39°19'17.683"N	80°48'23.377"W	322.67	177.597	1.91	1.88	-2.51	
5537.00	10.110	167.500	5516.32	-308.07	-329.62	15.04	1695143.76	14279074.12	39°19'17.612"N	80°48'23.358"W	329.96	177.387	2.07	2.00	-3.14	
5581.00	8.350	169.520	5559.75	-314.97	-336.53	16.46	1695145.18	14279067.21	39°19'17.544"N	80°48'23.340"W	336.93	177.200	4.07	-4.00	4.59	
5625.00	5.740	181.480	5603.42	-320.08	-341.87	16.98	1695145.71	14279061.87	39°19'17.491"N	80°48'23.333"W	342.29	177.156	6.77	-5.93	27.18	
5669.00	5.340	204.570	5647.22	-323.44	-345.94	16.08	1695144.80	14279057.81	39°19'17.451"N	80°48'23.345"W	346.31	177.339	5.11	-0.91	52.48	
5713.00	5.940	235.220	5691.01	-325.25	-349.10	13.35	1695142.08	14279054.65	39°19'17.419"N	80°48'23.380"W	349.35	177.809	6.89	1.36	69.66	
5757.00	7.430	263.610	5734.72	-324.85	-350.71	8.66	1695137.38	14279053.04	39°19'17.403"N	80°48'23.439"W	350.82	178.586	8.13	3.39	64.52	
5801.00	8.830	281.210	5778.29	-322.08	-350.37	2.51	1695131.24	14279053.38	39°19'17.407"N	80°48'23.518"W	350.38	179.589	6.45	3.18	40.00	
5845.00	9.170	302.710	5821.76	-317.23	-347.82	-3.75	1695124.98	14279055.93	39°19'17.432"N	80°48'23.597"W	347.84	180.618	7.64	0.77	48.86	
5889.00	10.520	322.990	5865.12	-310.40	-342.72	-9.12	1695119.61	14279061.03	39°19'17.483"N	80°48'23.665"W	342.84	181.524	8.40	3.07	46.09	
5933.00	13.500	331.940	5908.16	-301.37	-334.97	-13.95	1695114.78	14279068.77	39°19'17.560"N	80°48'23.727"W	335.27	182.386	7.97	6.77	20.34	
5977.00	17.390	336.610	5950.56	-289.67	-324.40	-18.98	1695109.75	14279079.34	39°19'17.664"N	80°48'23.790"W	324.96	183.349	9.27	8.84	10.61	
6021.00	21.370	340.140	5992.06	-275.09	-310.82	-24.32	1695104.42	14279092.91	39°19'17.798"N	80°48'23.858"W	311.77	184.474	9.43	9.05	8.02	
6065.00	25.720	340.990	6032.39	-257.57	-294.25	-30.16	1695098.58	14279109.48	39°19'17.962"N	80°48'23.932"W	295.79	185.851	9.92	9.89	1.93	
6110.00	29.940	339.320	6072.18	-236.61	-274.50	-37.31	1695091.44	14279129.22	39°19'18.158"N	80°48'24.022"W	277.02	187.739	9.54	9.38	-3.71	
6154.00	32.510	335.200	6109.80	-213.81	-253.49	-46.14	1695082.60	14279150.22	39°19'18.366"N	80°48'24.134"W	257.66	190.317	7.59	5.84	-9.36	
6198.00	35.500	332.000	6146.28	-189.25	-231.47	-57.11	1695071.64	14279172.23	39°19'18.583"N	80°48'24.273"W	238.41	193.859	7.92	6.80	-7.27	
6242.00	39.270	331.830	6181.23	-162.62	-207.90	-69.68	1695059.07	14279195.79	39°19'18.817"N	80°48'24.432"W	219.27	198.529	8.57	8.57	-0.39	
6286.00	43.520	332.900	6214.23	-133.60	-182.13	-83.16	1695045.60	14279221.55	39°19'19.072"N	80°48'24.603"W	200.22	204.542	9.79	9.66	2.43	
6321.00	46.220	332.770	6239.04	-108.96	-160.16	-94.44	1695034.33	14279243.51	39°19'19.289"N	80°48'24.746"W	185.93	210.525	7.72	7.71	-0.37	
6352.00	50.440	331.930	6259.64	-85.87	-139.66	-105.18	1695023.58	14279264.01	39°19'19.492"N	80°48'24.882"W	174.84	216.985	13.76	13.61	-2.71	BH AT Curve <8-1/2"> (6321')(6352'-15765')
6399.00	54.480	330.560	6288.27	-48.76	-107.00	-123.12	1695005.66	14279296.65	39°19'19.815"N	80°48'25.110"W	163.12	229.007	8.90	8.60	-2.91	
6411.00	55.260	330.150	6295.18	-39.00	-98.47	-127.97	1695000.80	14279305.18	39°19'19.899"N	80°48'25.171"W	161.47	232.423	7.08	6.50	-3.42	
6442.00†	57.450	329.823	6312.35	-13.36	-76.13	-140.88	1694987.90	14279327.51	39°19'20.121"N	80°48'25.335"W	160.13	241.615	7.12	7.06	-1.06	Burkett: 6442' MD
6458.00	58.580	329.660	6320.83	0.12	-64.41	-147.72	1694981.07	14279339.23	39°19'20.237"N	80°48'25.421"W	161.15	246.443	7.12	7.07	-1.02	
6498.00†	62.147	329.915	6340.61	34.65	-34.36	-165.21	1694963.58	14279369.26	39°19'20.534"N	80°48'25.643"W	168.75	258.250	8.94	8.92	0.64	Tully: 6498' MD

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# Actual Wellpath Report

Goldsmith Unit 1H AWP Proj: 15789'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #05
Area	Doddridge Co., WV	Well	Goldsmith Unit 1H
Field	Doddridge	Wellbore	Goldsmith Unit 1H AWB
Facility	Middle Pad		

WELLPATH DATA (197 stations) † = interpolated/extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
6507.00	62.950	329.970	6344.75	42.59	-27.45	-169.21	1694959.58	14279376.17	39°19'20.602"N	80°48'25.694"W	171.42	260.785	8.94	8.92	0.61	
6554.00	67.090	329.890	6364.60	84.91	9.41	-190.55	1694938.25	14279413.02	39°19'20.967"N	80°48'25.964"W	190.79	272.827	8.81	8.81	-0.17	
6588.00†	70.256	330.161	6376.96	116.38	36.84	-206.38	1694922.43	14279440.44	39°19'21.238"N	80°48'26.165"W	209.64	280.122	9.34	9.31	0.80	Hamilton: 6588' MD
6602.00	71.560	330.270	6381.54	129.54	48.32	-212.95	1694915.87	14279451.91	39°19'21.352"N	80°48'26.248"W	218.36	282.785	9.34	9.31	0.78	
6614.00†	72.754	330.634	6385.22	140.90	58.26	-218.58	1694910.23	14279461.85	39°19'21.450"N	80°48'26.320"W	226.21	284.925	10.36	9.95	3.03	Marcellus POE: 6614' MD
6649.00	76.240	331.670	6394.57	174.48	87.80	-234.85	1694893.97	14279491.37	39°19'21.743"N	80°48'26.526"W	250.72	290.498	10.36	9.96	2.96	
6697.00	79.790	332.570	6404.54	221.29	129.30	-256.80	1694872.03	14279532.85	39°19'22.153"N	80°48'26.804"W	287.51	296.725	7.62	7.40	1.87	
6744.00	81.470	331.850	6412.19	267.54	170.32	-278.42	1694850.42	14279573.86	39°19'22.559"N	80°48'27.078"W	326.38	301.456	3.88	3.57	-1.53	
6792.00	83.460	331.100	6418.48	314.94	212.12	-301.14	1694827.71	14279615.65	39°19'22.973"N	80°48'27.366"W	368.35	305.161	4.43	4.15	-1.56	
6839.00	89.510	330.580	6421.36	361.61	253.07	-323.99	1694804.87	14279656.58	39°19'23.378"N	80°48'27.656"W	411.11	307.994	12.92	12.87	-1.11	
6888.00	90.120	333.000	6421.52	410.45	296.25	-347.15	1694781.72	14279699.74	39°19'23.805"N	80°48'27.949"W	456.37	310.476	5.09	1.24	4.94	
6983.00	89.940	331.870	6421.47	505.22	380.46	-391.11	1694737.77	14279783.92	39°19'24.639"N	80°48'28.506"W	545.64	314.209	1.20	-0.19	-1.19	
7078.00	89.690	334.600	6421.78	600.07	465.28	-433.89	1694695.01	14279868.70	39°19'25.478"N	80°48'29.048"W	636.19	316.999	2.89	-0.26	2.87	
7173.00	89.970	335.050	6422.06	695.03	551.25	-474.30	1694654.62	14279954.64	39°19'26.328"N	80°48'29.560"W	727.21	319.291	0.56	0.29	0.47	
7268.00	90.000	331.950	6422.09	789.90	636.26	-516.68	1694612.25	14280039.62	39°19'27.169"N	80°48'30.097"W	819.63	320.921	3.26	0.03	-3.26	
7363.00	89.540	334.860	6422.47	884.76	721.20	-559.21	1694569.74	14280124.52	39°19'28.010"N	80°48'30.636"W	912.60	322.210	3.10	-0.48	3.06	
7459.00	90.430	341.130	6422.49	980.67	810.16	-595.16	1694533.81	14280213.45	39°19'28.890"N	80°48'31.091"W	1005.27	323.698	6.60	0.93	6.53	
7554.00	90.580	343.100	6421.66	1075.19	900.56	-624.33	1694504.64	14280303.81	39°19'29.784"N	80°48'31.460"W	1095.81	325.268	2.08	0.16	2.07	
7649.00	90.620	339.210	6420.66	1169.84	990.45	-655.01	1694473.98	14280393.66	39°19'30.673"N	80°48'31.848"W	1187.44	326.522	4.09	0.04	-4.09	
7744.00	90.740	335.130	6419.53	1264.80	1077.98	-691.86	1694437.14	14280481.16	39°19'31.539"N	80°48'32.315"W	1280.90	327.307	4.30	0.13	-4.29	
7840.00	90.180	332.830	6418.76	1360.71	1164.24	-733.97	1694395.05	14280567.39	39°19'32.392"N	80°48'32.848"W	1376.29	327.771	2.47	-0.58	-2.40	
7935.00	90.090	330.070	6418.54	1455.35	1247.68	-779.37	1694349.67	14280650.79	39°19'33.218"N	80°48'33.424"W	1471.09	328.009	2.91	-0.09	-2.91	
8030.00	89.450	332.160	6418.92	1549.93	1330.85	-825.25	1694303.80	14280733.93	39°19'34.041"N	80°48'34.005"W	1565.96	328.197	2.30	-0.67	2.20	
8125.00	89.260	333.840	6419.99	1644.76	1415.49	-868.38	1694260.69	14280818.54	39°19'34.878"N	80°48'34.552"W	1660.63	328.472	1.78	-0.20	1.77	
8219.00	90.490	337.310	6420.19	1738.73	1501.06	-907.24	1694221.85	14280904.08	39°19'35.725"N	80°48'35.044"W	1753.93	328.851	3.92	1.31	3.69	
8315.00	90.520	336.560	6419.35	1834.72	1589.39	-944.85	1694184.25	14280992.36	39°19'36.599"N	80°48'35.520"W	1849.02	329.270	0.78	0.03	-0.78	
8410.00	90.460	333.030	6418.54	1929.67	1675.32	-985.30	1694143.82	14281078.27	39°19'37.449"N	80°48'36.033"W	1943.59	329.539	3.72	-0.06	-3.72	
8505.00	90.120	334.750	6418.05	2024.57	1760.62	-1027.11	1694102.03	14281163.53	39°19'38.293"N	80°48'36.562"W	2038.32	329.742	1.85	-0.36	1.81	
8600.00	90.060	335.410	6417.91	2119.55	1846.78	-1067.13	1694062.02	14281249.65	39°19'39.145"N	80°48'37.069"W	2132.92	329.979	0.70	-0.06	0.69	
8695.00	89.850	335.550	6417.98	2214.53	1933.21	-1106.56	1694022.61	14281336.05	39°19'40.000"N	80°48'37.569"W	2227.51	330.213	0.27	-0.22	0.15	



# Actual Wellpath Report

Goldsmith Unit 1H AWP Proj: 15789'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #05
Area	Doddridge Co., WV		Well	Goldsmith Unit 1H
Field	Doddridge		Wellbore	Goldsmith Unit 1H AWP
Facility	Middle Pad			

WELLPATH DATA (197 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
8790.00	88.490	337.650	6419.36	2309.52	2020.38	-1144.28	1693984.90	14281423.19	39°19'40.863"N	80°48'38.046"W	2321.92	330.474	2.63	-1.43	2.21	
8885.00	90.150	341.200	6420.48	2404.36	2109.30	-1177.66	1693951.54	14281512.07	39°19'41.742"N	80°48'38.469"W	2415.79	330.825	4.12	1.75	3.74	
8980.00	90.550	341.390	6419.90	2499.01	2199.28	-1208.12	1693921.08	14281602.01	39°19'42.632"N	80°48'38.854"W	2509.26	331.219	0.47	0.42	0.20	
9075.00	90.250	338.730	6419.24	2593.80	2288.57	-1240.52	1693888.70	14281691.27	39°19'43.515"N	80°48'39.264"W	2603.16	331.540	2.82	-0.32	-2.80	
9170.00	89.660	340.370	6419.31	2688.66	2377.58	-1273.71	1693855.52	14281780.25	39°19'44.396"N	80°48'39.684"W	2697.27	331.821	1.83	-0.62	1.73	
9265.00	89.750	344.990	6419.80	2783.06	2468.25	-1301.98	1693827.26	14281870.88	39°19'45.293"N	80°48'40.041"W	2790.60	332.189	4.86	0.09	4.86	
9360.00	90.370	345.320	6419.70	2876.95	2560.08	-1326.32	1693802.93	14281962.67	39°19'46.201"N	80°48'40.349"W	2883.25	332.612	0.74	0.65	0.35	
9455.00	89.880	332.880	6419.50	2971.66	2648.65	-1360.15	1693769.12	14282051.21	39°19'47.077"N	80°48'40.777"W	2977.48	332.818	13.10	-0.52	-13.09	
9550.00	89.600	330.370	6419.93	3066.32	2732.23	-1405.29	1693724.00	14282134.75	39°19'47.904"N	80°48'41.349"W	3072.45	332.782	2.66	-0.29	-2.64	
9645.00	89.510	336.980	6420.67	3161.16	2817.33	-1447.40	1693681.91	14282219.82	39°19'48.746"N	80°48'41.883"W	3167.38	332.808	6.96	-0.09	6.96	
9739.00	90.220	338.480	6420.89	3255.13	2904.31	-1483.02	1693646.30	14282306.77	39°19'49.606"N	80°48'42.334"W	3261.04	332.950	1.77	0.76	1.60	
9833.00	89.780	332.630	6420.89	3349.08	2989.85	-1521.90	1693607.43	14282392.27	39°19'50.452"N	80°48'42.826"W	3354.91	333.023	6.24	-0.47	-6.22	
9927.00	89.780	331.170	6421.25	3442.79	3072.77	-1566.17	1693563.18	14282475.15	39°19'51.273"N	80°48'43.387"W	3448.88	332.992	1.55	0.00	-1.55	
10021.00	89.750	330.010	6421.63	3536.30	3154.65	-1612.33	1693517.04	14282557.01	39°19'52.083"N	80°48'43.973"W	3542.80	332.929	1.23	-0.03	-1.23	
10115.00	89.660	329.950	6422.12	3629.71	3236.04	-1659.36	1693470.03	14282638.36	39°19'52.888"N	80°48'44.569"W	3636.68	332.852	0.12	-0.10	-0.06	
10209.00	89.480	331.810	6422.82	3723.27	3318.15	-1705.10	1693424.31	14282720.44	39°19'53.701"N	80°48'45.149"W	3730.62	332.803	1.99	-0.19	1.98	
10303.00	89.750	335.340	6423.46	3817.14	3402.32	-1746.92	1693382.50	14282804.57	39°19'54.534"N	80°48'45.679"W	3824.59	332.822	3.77	0.29	3.76	
10396.00	89.630	336.190	6423.96	3910.13	3487.12	-1785.10	1693344.34	14282889.34	39°19'55.373"N	80°48'46.162"W	3917.47	332.892	0.92	-0.13	0.91	
10490.00	89.260	335.780	6424.87	4004.12	3572.98	-1823.35	1693306.10	14282975.16	39°19'56.222"N	80°48'46.647"W	4011.33	332.964	0.59	-0.39	-0.44	
10584.00	89.260	337.380	6426.08	4098.11	3659.22	-1860.71	1693268.76	14283061.38	39°19'57.075"N	80°48'47.120"W	4105.14	333.047	1.70	0.00	1.70	
10677.00	90.030	342.870	6426.66	4190.88	3746.65	-1892.31	1693237.17	14283148.77	39°19'57.940"N	80°48'47.520"W	4197.41	333.203	5.96	0.83	5.90	
10771.00	90.680	345.510	6426.08	4284.00	3837.08	-1917.92	1693211.57	14283239.16	39°19'58.834"N	80°48'47.844"W	4289.71	333.442	2.89	0.69	2.81	
10865.00	89.940	342.100	6425.57	4377.20	3927.34	-1944.13	1693185.37	14283329.38	39°19'59.727"N	80°48'48.175"W	4382.20	333.663	3.71	-0.79	-3.63	
10959.00	89.820	336.150	6425.77	4471.05	4015.13	-1977.61	1693151.90	14283417.14	39°20'00.595"N	80°48'48.599"W	4475.74	333.778	6.33	-0.13	-6.33	
11053.00	90.090	333.080	6425.84	4564.99	4100.04	-2017.91	1693111.62	14283502.02	39°20'01.435"N	80°48'49.109"W	4569.71	333.795	3.28	0.29	-3.27	
11147.00	90.090	330.670	6425.69	4658.69	4182.94	-2062.21	1693067.33	14283584.88	39°20'02.255"N	80°48'49.671"W	4663.66	333.756	2.56	0.00	-2.56	
11242.00	90.090	329.120	6425.54	4753.08	4265.12	-2109.86	1693019.70	14283667.03	39°20'03.069"N	80°48'50.275"W	4758.44	333.679	1.63	0.00	-1.63	
11336.00	90.030	331.610	6425.44	4846.55	4346.82	-2156.34	1692973.25	14283748.69	39°20'03.877"N	80°48'50.864"W	4852.28	333.615	2.65	-0.06	2.65	
11429.00	89.970	329.130	6425.44	4939.03	4427.65	-2202.32	1692927.29	14283829.49	39°20'04.677"N	80°48'51.447"W	4945.13	333.554	2.67	-0.06	-2.67	
11523.00	90.120	332.530	6425.37	5032.57	4509.71	-2248.13	1692881.50	14283911.53	39°20'05.489"N	80°48'52.028"W	5039.01	333.503	3.62	0.16	3.62	

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# Actual Wellpath Report

Goldsmith Unit 1H AWP Proj: 15789'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #05
Area	Doddridge Co., WV	Well	Goldsmith Unit 1H
Field	Doddridge	Wellbore	Goldsmith Unit 1H AWP
Facility	Middle Pad		

## WELLPATH DATA (197 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
11617.00	89.880	336.020	6425.37	5126.49	4594.39	-2288.92	1692840.72	14283996.16	39°20'06.327"N	80°48'52.545"W	5132.98	333.518	3.72	-0.26	3.71	
11711.00	90.340	337.500	6425.19	5220.49	4680.76	-2326.01	1692803.65	14284082.50	39°20'07.181"N	80°48'53.015"W	5226.83	333.576	1.65	0.49	1.57	
11804.00	90.340	339.380	6424.64	5313.42	4767.24	-2360.18	1692769.49	14284168.95	39°20'08.037"N	80°48'53.448"W	5319.50	333.661	2.02	0.00	2.02	
11898.00	90.680	341.450	6423.80	5407.18	4855.80	-2391.69	1692737.99	14284257.47	39°20'08.912"N	80°48'53.846"W	5412.85	333.778	2.23	0.36	2.20	
11992.00	90.220	339.200	6423.06	5500.95	4944.30	-2423.33	1692706.36	14284345.94	39°20'09.788"N	80°48'54.247"W	5506.24	333.889	2.44	-0.49	-2.39	
12085.00	89.110	338.960	6423.61	5593.85	5031.17	-2456.54	1692673.17	14284432.77	39°20'10.647"N	80°48'54.667"W	5598.86	333.975	1.22	-1.19	-0.26	
12179.00	90.310	340.690	6424.08	5687.67	5119.39	-2488.96	1692640.76	14284520.96	39°20'11.520"N	80°48'55.077"W	5692.37	334.072	2.24	1.28	1.84	
12273.00	90.310	338.430	6423.57	5781.52	5207.47	-2521.78	1692607.95	14284609.00	39°20'12.391"N	80°48'55.493"W	5785.94	334.161	2.40	0.00	-2.40	
12366.00	90.310	336.580	6423.07	5874.50	5293.39	-2557.36	1692572.38	14284694.89	39°20'13.241"N	80°48'55.943"W	5878.78	334.214	1.99	0.00	-1.99	
12460.00	90.000	334.740	6422.82	5968.49	5379.03	-2596.10	1692533.66	14284780.49	39°20'14.088"N	80°48'56.434"W	5972.74	334.236	1.99	-0.33	-1.96	
12554.00	89.880	335.390	6422.91	6062.46	5464.26	-2635.73	1692494.05	14284865.70	39°20'14.931"N	80°48'56.936"W	6066.73	334.249	0.70	-0.13	0.69	
12648.00	90.550	337.360	6422.56	6156.45	5550.38	-2673.40	1692456.39	14284951.78	39°20'15.783"N	80°48'57.414"W	6160.66	334.282	2.21	0.71	2.10	
12741.00	90.400	336.450	6421.79	6249.45	5635.92	-2709.88	1692419.93	14285037.29	39°20'16.629"N	80°48'57.876"W	6253.56	334.321	0.99	-0.16	-0.98	
12835.00	90.120	334.160	6421.36	6343.42	5721.32	-2749.15	1692380.68	14285122.65	39°20'17.474"N	80°48'58.373"W	6347.54	334.335	2.45	-0.30	-2.44	
12928.00	89.940	337.830	6421.32	6436.40	5806.26	-2786.97	1692342.86	14285207.56	39°20'18.314"N	80°48'58.853"W	6440.49	334.359	3.95	-0.19	3.95	
13022.00	89.850	341.550	6421.49	6530.23	5894.40	-2819.60	1692310.26	14285295.66	39°20'19.186"N	80°48'59.265"W	6534.07	334.436	3.96	-0.10	3.96	
13115.00	90.180	344.520	6421.46	6622.60	5983.34	-2846.73	1692283.13	14285384.57	39°20'20.066"N	80°48'59.608"W	6626.03	334.556	3.21	0.35	3.19	
13209.00	90.520	343.230	6420.89	6715.80	6073.64	-2872.83	1692257.04	14285474.83	39°20'20.959"N	80°48'59.938"W	6718.80	334.686	1.42	0.36	-1.37	
13303.00	91.260	339.080	6419.43	6809.44	6162.57	-2903.19	1692226.70	14285563.73	39°20'21.838"N	80°49'00.322"W	6812.18	334.775	4.48	0.79	-4.41	
13396.00	90.620	336.620	6417.90	6902.39	6248.69	-2938.24	1692191.66	14285649.81	39°20'22.690"N	80°49'00.766"W	6905.03	334.816	2.73	-0.69	-2.65	
13490.00	89.720	332.050	6417.62	6996.30	6333.39	-2978.94	1692150.97	14285734.48	39°20'23.528"N	80°49'01.282"W	6999.00	334.810	4.96	-0.96	-4.86	
13584.00	89.570	331.120	6418.21	7089.97	6416.07	-3023.67	1692106.26	14285817.12	39°20'24.346"N	80°49'01.849"W	7092.85	334.767	1.00	-0.16	-0.99	
13677.00	89.510	332.080	6418.95	7182.64	6497.87	-3067.90	1692062.05	14285898.89	39°20'25.156"N	80°49'02.410"W	7185.70	334.726	1.03	-0.06	1.03	
13771.00	89.690	335.730	6419.61	7276.53	6582.27	-3109.24	1692020.72	14285983.26	39°20'25.991"N	80°49'02.934"W	7279.68	334.716	3.89	0.19	3.88	
13865.00	89.820	342.630	6420.01	7370.36	6670.08	-3142.63	1691987.35	14286071.03	39°20'26.859"N	80°49'03.357"W	7373.34	334.772	7.34	0.14	7.34	
13958.00	89.600	341.380	6420.48	7462.92	6758.53	-3171.36	1691958.63	14286159.44	39°20'27.734"N	80°49'03.720"W	7465.60	334.862	1.36	-0.24	-1.34	
14052.00	90.030	334.910	6420.79	7556.82	6845.72	-3206.34	1691923.67	14286246.61	39°20'28.596"N	80°49'04.163"W	7559.40	334.903	6.90	0.46	-6.88	
14146.00	89.750	329.930	6420.97	7650.56	6929.02	-3249.84	1691880.18	14286329.87	39°20'29.421"N	80°49'04.715"W	7653.28	334.873	5.31	-0.30	-5.30	
14240.00	89.880	327.440	6421.27	7743.71	7009.32	-3298.70	1691831.35	14286410.13	39°20'30.215"N	80°49'05.335"W	7746.74	334.798	2.65	0.14	-2.65	
14333.00	89.020	330.210	6422.16	7835.88	7088.87	-3346.83	1691783.23	14286489.66	39°20'31.002"N	80°49'05.945"W	7839.22	334.727	3.12	-0.92	2.98	

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# Actual Wellpath Report

Goldsmith Unit 1H AWP Proj: 15789'  
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REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Area	Doddridge Co., WV
Field	Doddridge
Facility	Middle Pad
Slot	Slot #05
Well	Goldsmith Unit 1H
Wellbore	Goldsmith Unit 1H AWB

WELLPATH DATA (197 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 (F/100ft)	Build Rate (F/100ft)	Turn Rate (F/100ft)	Comments
14427.00	89.540	333.340	6423.34	7929.55	7171.68	-3391.28	1691738.80	14286572.43	39°20'31.822"N	80°49'06.509"W	7933.08	334.692	3.38	0.55	3.33	
14520.00	89.970	336.080	6423.74	8022.50	7255.76	-3431.00	1691699.09	14286656.48	39°20'32.654"N	80°49'07.012"W	8026.07	334.692	2.98	0.46	2.95	
14614.00	89.780	338.380	6423.95	8116.49	7342.43	-3467.38	1691662.73	14286743.11	39°20'33.511"N	80°49'07.473"W	8119.97	334.721	2.46	-0.20	2.45	
14708.00	89.970	341.770	6424.15	8210.28	7430.79	-3499.41	1691630.71	14286831.43	39°20'34.385"N	80°49'07.878"W	8213.55	334.783	3.61	0.20	3.61	
14802.00	89.750	342.200	6424.38	8303.83	7520.18	-3528.48	1691601.65	14286920.79	39°20'35.269"N	80°49'08.246"W	8306.82	334.864	0.51	-0.23	0.46	
14895.00	90.050	340.860	6424.54	8396.46	7608.38	-3557.94	1691572.20	14287008.96	39°20'36.141"N	80°49'08.619"W	8399.19	334.938	1.48	0.33	-1.44	
14989.00	89.820	339.780	6424.64	8490.24	7696.89	-3589.60	1691540.56	14287097.43	39°20'37.017"N	80°49'09.020"W	8492.78	334.997	1.18	-0.26	-1.15	
15083.00	90.250	340.860	6424.58	8584.02	7785.40	-3621.25	1691508.92	14287185.91	39°20'37.892"N	80°49'09.420"W	8586.38	335.055	1.24	0.46	1.15	
15177.00	90.050	338.560	6424.32	8677.85	7873.56	-3653.85	1691476.34	14287274.03	39°20'38.764"N	80°49'09.833"W	8680.07	335.106	2.46	-0.20	-2.45	
15271.00	90.090	338.310	6424.20	8771.79	7960.98	-3688.40	1691441.80	14287361.42	39°20'39.629"N	80°49'10.270"W	8773.91	335.141	0.27	0.03	-0.27	
15365.00	90.340	337.870	6423.85	8865.75	8048.19	-3723.47	1691406.74	14287448.59	39°20'40.491"N	80°49'10.715"W	8867.79	335.173	0.54	0.27	-0.47	
15460.00	90.620	334.420	6423.05	8960.73	8135.06	-3761.89	1691368.34	14287535.43	39°20'41.351"N	80°49'11.201"W	8962.75	335.183	3.64	0.29	-3.63	
15555.00	90.340	332.470	6422.26	9055.60	8220.03	-3804.35	1691325.89	14287620.36	39°20'42.191"N	80°49'11.740"W	9057.70	335.165	2.07	-0.29	-2.05	
15651.00	90.000	331.370	6421.97	9151.30	8304.73	-3849.54	1691280.72	14287705.03	39°20'43.029"N	80°49'12.313"W	9153.55	335.131	1.20	-0.35	-1.15	
15745.00	90.150	330.580	6421.85	9244.88	8386.92	-3895.15	1691235.13	14287787.19	39°20'43.843"N	80°49'12.891"W	9247.30	335.088	0.86	0.16	-0.84	
15765.00	89.880	329.930	6421.84	9264.77	8404.29	-3905.07	1691225.21	14287804.55	39°20'44.015"N	80°49'13.017"W	9267.23	335.078	3.52	-1.35	-3.25	
15789.00	89.880	329.930	6421.89	9288.61	8425.06	-3917.10	1691213.19	14287825.31	39°20'44.220"N	80°49'13.170"W	9291.14	335.065	0.00	0.00	0.00	Projected MD at TD: 15789'



# Actual Wellpath Report

Goldsmith Unit 1H AWP Proj: 15789'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #05
Area	Doddridge Co., WV	Well	Goldsmith Unit 1H
Field	Doddridge	Wellbore	Goldsmith Unit 1H AWB
Facility	Middle Pad		

HOLE & CASING SECTIONS - Ref Wellbore: Goldsmith Unit 1H AWB Ref Wellpath: Goldsmith Unit 1H AWP Proj: 15789'									
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	-0.11	-0.15
17.5in Open Hole	112.00	548.00	436.00	112.00	547.99	-0.11	-0.15	-0.94	-2.06
13.375in Casing Surface	32.00	548.00	516.00	32.00	547.99	0.00	0.00	-0.94	-2.06
12.25in Open Hole	548.00	2625.00	2077.00	547.99	2623.53	-0.94	-2.06	-40.15	-21.92
9.625in Casing Intermediate	32.00	2625.00	2593.00	32.00	2623.53	0.00	0.00	-40.15	-21.92
8.75in Open Hole	2625.00	6388.00	3763.00	2623.53	6281.81	-40.15	-21.92	-114.76	-118.77
8.5in Open Hole	6388.00	15789.00	9401.00	6281.81	6421.89	-114.76	-118.77	8425.06	-3917.10
5.5in Casing Production	32.00	15789.00	15757.00	32.00	6421.89	0.00	0.00	8425.06	-3917.10

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Goldsmith Unit 1H POE Rev-2	6375.00	33.14	-199.41	1694929.39	14279436.73	39°19'21.202"N	80°48'26.077"W	point
Goldsmith Unit 1H BHL Rev-2	6415.00	8382.60	-3897.40	1691232.88	14287782.87	39°20'43.800"N	80°49'12.920"W	point
Goldsmith Unit 1H LP Rev-1	6415.00	226.63	-312.48	1694816.37	14279630.15	39°19'23.117"N	80°48'27.510"W	point

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# Actual Wellpath Report

Goldsmith Unit 1H AWP Proj: 15789'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #05
Area	Doddridge Co., WV	Well	Goldsmith Unit 1H
Field	Doddridge	Wellbore	Goldsmith Unit 1H AWB
Facility	Middle Pad		

## WELLPATH COMPOSITION - Ref Wellbore: Goldsmith Unit 1H AWB Ref Wellpath: Goldsmith Unit 1H AWP Proj: 15789'

Start MD (ft)	End MD (ft)	Positional Uncertainty Model	Log Name/Comment	Wellbore
32.00	520.00	Gyrodata standard - Drop gyro or Multi-shot	01 Gyrodata MS Gyro <17-1/2"> (100'-503')	Goldsmith Unit 1H AWB
520.00	791.00	Gyrodata standard - Drop gyro or Multi-shot	02 Gyrodata MS Gyro <12-1/4"> (503')(593'-774')	Goldsmith Unit 1H AWB
791.00	2553.00	ISCVSA MWD, Rev. 4 (Standard)	03 Directional ONE MWD <12-1/4"> (774')(834'-2536')	Goldsmith Unit 1H AWB
2553.00	6321.00	ISCVSA MWD, Rev. 4 (Standard)	04 Directional ONE MWD <8-3/4"> (2536')(2651'-6304')	Goldsmith Unit 1H AWB
6321.00	15765.00	BHI AutoTrak Curve (Axial)	05 BH AT Curve <8-1/2">(6321')(6352'-15765')	Goldsmith Unit 1H AWB
15765.00	15789.00	Blind Drilling (std)	Projection to bit	Goldsmith Unit 1H AWB

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Goldsmith Unit 1H AWP Proj: 15789'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #05
Area	Doddridge Co., WV	Well	Goldsmith Unit 1H
Field	Doddridge	Wellbore	Goldsmith Unit 1H AWB
Facility	Middle Pad		

COMMENTS
<p><b>Wellpath general comments</b> API: 47-017-06820-0000 BHI Job #: 9067098 Rig: Frontier 32 Duration: 03/19/2018-03/22/2018 Gyrodata MS Gyro &lt;17-1/2"&gt; (100'-503') Gyrodata MS Gyro &lt;12-1/4"&gt; (503')(593'-774') Directional ONE MWD &lt;12-1/4"&gt; (774')(834'-2536') Directional ONE MWD &lt;8-3/4"&gt; (2536')(2651'-6304') BH AT Curve &lt;8-1/2"&gt; (6321')(6352'-15765') Burkett: 6442' MD Tully: 6498' MD Hamilton: 6588' MD Marcellus POE: 6614' MD Projected MD at TD: 15789'</p>

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