

ANTERO RESOURCES CORPORATION

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

Slot: Slot #03
 Well: Barr Unit 2H
 Wellbore: Barr Unit 2H PWB



API: 47-085-10368-0000
 BHI Job #: 109314863
 Rig: Patterson 342
 Duration: 07/28/2018-07/31/2018



Plot reference wellpath is Barr Unit 2H PWB Rev-A.0	Grid System NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to Patterson 342 (RKB)	North Reference: Grid north
Measured depths are referenced to Patterson 342 (RKB)	Scale: True distance
Patterson 342 (RKB) to Mean Sea Level: 1209 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot: Slot#03): -1184 feet	Created by: delbert on 2018-08-16
Coordinates are in feet referenced to Slot	Database: WA_MPL_EasternUS_Defin

Gyrodata MS Gyro <17-112> : 0.46° Inc, 100.00ft MD, 100.00ft TVD, -0.23ft VS
 Gyrodata MS Gyro <12-114> : (411)(446-476) : 0.21° Inc, 446.00ft MD, 446.00ft TVD, -1.17ft VS
 Panther EM <12-114> : (478)(505-2653) : 0.27° Inc, 505.00ft MD, 504.99ft TVD, -0.94ft VS

Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
Pool Pad	165425.320	14270439.840	39°17'52.6977N
Slot	Local E (ft)	Grid North (US ft)	Longitude
Slot #03	18.49	-8.52	39°17'52.880°N
Patterson 342 (RKB) to Ground level (At Slot: Slot #03)	1665416.808	14270458.320	25R
Mean Sea Level to Ground level (At Slot: Slot #03)			-1184ft
Patterson 342 (RKB) to Mean Sea Level			1209ft

Panther EM <8-3/4> : (2653)(2754-5017.8) : 23.23° Inc, 2754.00ft MD, 2634.90ft TVD, -383.14ft VS

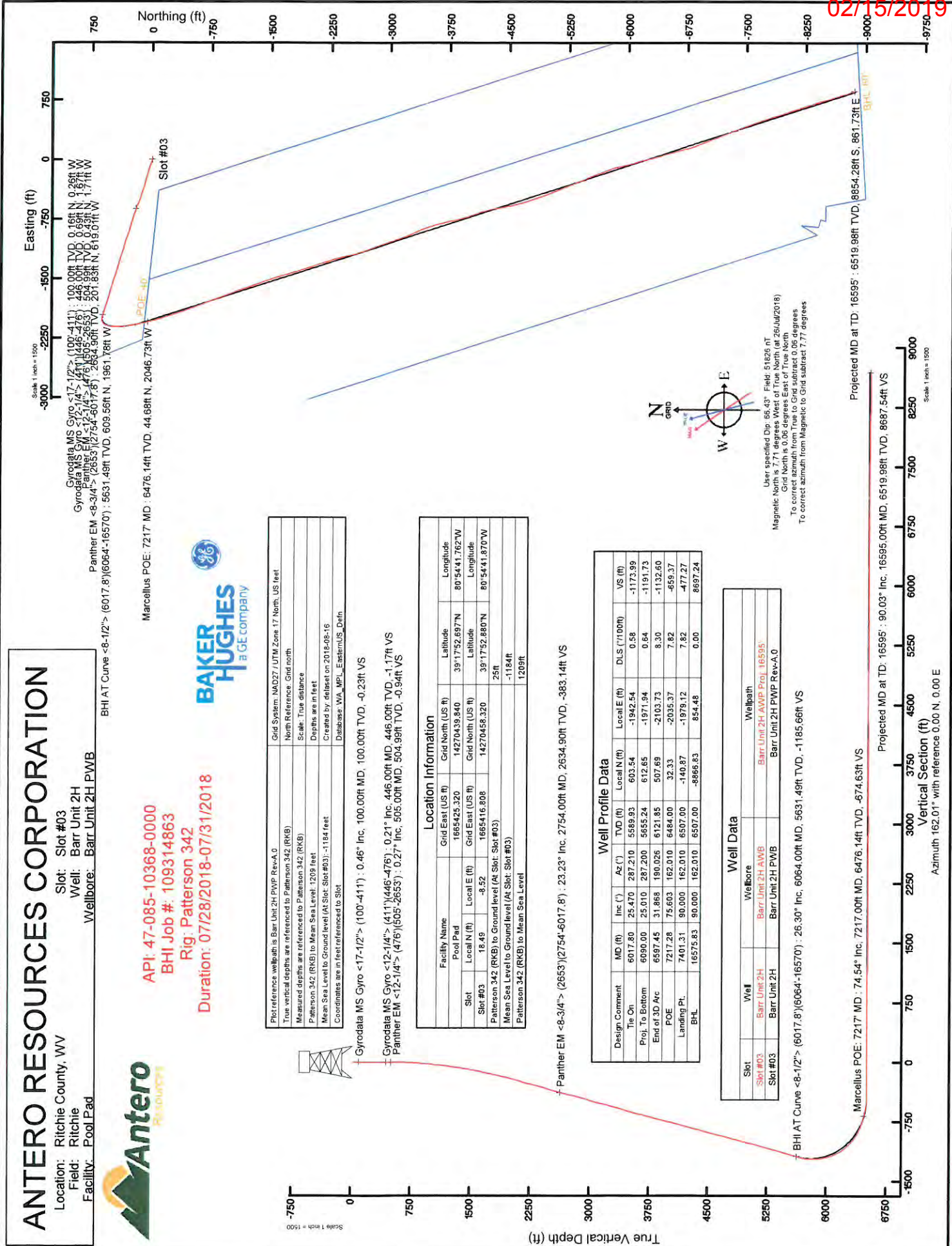
Well Profile Data						
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local E (ft)	VS (ft)
Tie On	6017.80	25.470	287.210	5589.93	603.54	-1942.54
Proj. To Bottom	6090.00	25.010	287.200	5655.24	612.65	-1971.94
End of 3D Arc	6597.45	31.868	190.026	6121.85	507.69	-2103.73
POE	7217.28	75.603	162.010	6484.00	32.33	-2035.37
Landing Pt.	7401.31	90.000	162.010	6507.00	-140.87	-1979.12
BHL	16575.83	90.000	162.010	6507.00	-8666.83	854.48
						0.00
						8697.24

Well Data		
Slot	Well	Wellpath
Slot #03	Barr Unit 2H	Barr Unit 2H AWP
Slot #03	Barr Unit 2H	Barr Unit 2H AWP Prod. 16595
Slot #03	Barr Unit 2H	Barr Unit 2H PWB Rev-A.0

BHI AT Curve <8-1/2> : (6017.8)(6064-16570) : 26.30° Inc, 6064.00ft MD, 5631.49ft TVD, -1185.56ft VS

Marcellus POE: 7217° MD : 74.54° Inc, 7217.00ft MD, 6476.14ft TVD, -674.63ft VS

Projected MD at TD: 16595° : 90.03° Inc, 16595.00ft MD, 6519.98ft TVD, 8687.54ft VS
 Azimuth 162.01° with reference 0.00 N, 0.00 E



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Actual Wellpath Report

Barr Unit 2H AWP Proj: 16595'

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REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Area	Ritchie County, WV
Field	Ritchie
Facility	Pool Pad
Slot	Slot #03
Well	Barr Unit 2H
Wellbore	Barr Unit 2H AWB

REPORT SETUP INFORMATION	
Projection System	NAD27 / UTM Zone 17 North, US feet
North Reference	Grid
Scale	0.999601
Convergence at slot	0.06° East
Software System	WellArchitect® 5.1
User	Delaset
Report Generated	16/Aug/2018 at 15:46
Database/Source file	WA_MPL_EasternUS_Defn/Barr_Unit_2H_AWP_Proj_16595_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North [ft]	East [ft]	Easting [US ft]	Northing [US ft]	Latitude	Longitude
Slot Location	18.49	-8.52	1665416.81	14270458.32	39°17'52.880"N	80°54'41.870"W
Facility Reference Pt			1665425.32	14270439.84	39°17'52.697"N	80°54'41.762"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM	
Calculation method	Minimum curvature
Horizontal Reference Pt	Slot
Vertical Reference Pt	Patterson 342 (RKB)
MD Reference Pt	Patterson 342 (RKB)
Field Vertical Reference	Mean Sea Level
	Patterson 342 (RKB) to Facility Vertical Datum
	Patterson 342 (RKB) to Mean Sea Level
	Patterson 342 (RKB) to Ground Level at Slot (Slot #03)
	Section Origin
	Section Azimuth
	25.00ft
	1209.00ft
	25.00ft
	N 0.00, E 0.00 ft
	162.01°



Actual Wellpath Report

Barr Unit 2H AWP Proj: 16595

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Ritchie County, WV	Well	Barr Unit 2H
Field	Ritchie	Wellbore	Barr Unit 2H AWB
Facility	Pool Pad		

WELLPATH DATA (211 stations) † = interpolated/extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
0.00†	0.000	302.060	0.00	0.00	0.00	0.00	1665416.81	14270458.32	39°17'52.880"N	80°54'41.870"W	0.00	0.000	0.00	0.00	0.00	
25.00	0.000	302.060	25.00	0.00	0.00	0.00	1665416.81	14270458.32	39°17'52.880"N	80°54'41.870"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.460	302.060	100.00	-0.23	0.16	-0.26	1665416.55	14270458.48	39°17'52.882"N	80°54'41.873"W	0.30	302.060	0.61	0.61	-77.25	Gyrodatta MS Gyro <17-1/2"> (100'-411')
125.00	0.510	301.060	125.00	-0.39	0.27	-0.44	1665416.37	14270458.59	39°17'52.883"N	80°54'41.876"W	0.51	301.843	0.20	0.20	-4.00	
150.00	0.180	288.400	150.00	-0.50	0.34	-0.57	1665416.24	14270458.66	39°17'52.883"N	80°54'41.877"W	0.66	300.921	1.35	-1.32	-50.64	
175.00	0.280	292.320	175.00	-0.56	0.38	-0.66	1665416.15	14270458.70	39°17'52.884"N	80°54'41.878"W	0.76	299.641	0.41	0.40	18.08	
200.00	0.150	288.550	200.00	-0.66	0.44	-0.76	1665416.04	14270458.76	39°17'52.884"N	80°54'41.880"W	0.88	300.064	0.38	0.04	76.84	
225.00	0.320	275.820	225.00	-0.78	0.51	-0.94	1665415.87	14270458.82	39°17'52.885"N	80°54'41.882"W	1.07	298.543	0.71	0.68	-50.92	
250.00	0.220	276.940	250.00	-0.83	0.53	-1.06	1665415.75	14270458.85	39°17'52.885"N	80°54'41.883"W	1.18	296.381	0.40	-0.40	4.48	
300.00	0.230	279.580	300.00	-0.87	0.54	-1.16	1665415.65	14270458.86	39°17'52.885"N	80°54'41.885"W	1.28	295.014	0.06	0.04	10.56	
325.00	0.220	284.500	325.00	-0.92	0.56	-1.25	1665415.56	14270458.88	39°17'52.886"N	80°54'41.886"W	1.37	294.091	0.09	-0.04	19.68	
350.00	0.230	284.910	350.00	-0.97	0.59	-1.35	1665415.46	14270458.90	39°17'52.886"N	80°54'41.887"W	1.47	293.467	0.04	0.04	1.64	
375.00	0.290	299.650	375.00	-1.05	0.63	-1.45	1665415.36	14270458.95	39°17'52.886"N	80°54'41.888"W	1.58	293.444	0.36	0.24	58.96	
400.00	0.260	297.850	400.00	-1.13	0.69	-1.56	1665415.25	14270459.01	39°17'52.887"N	80°54'41.890"W	1.70	293.821	0.12	-0.12	-7.20	
411.00	0.260	303.600	411.00	-1.17	0.71	-1.60	1665415.21	14270459.03	39°17'52.887"N	80°54'41.890"W	1.75	294.017	0.24	0.00	52.27	
446.00	0.210	181.760	446.00	-1.17	0.69	-1.67	1665415.14	14270459.01	39°17'52.887"N	80°54'41.891"W	1.81	292.553	1.18	-0.14	-348.11	Gyrodatta MS Gyro <12-1/4"> (411')(446'-476')
476.00	0.310	178.040	476.00	-1.04	0.56	-1.67	1665415.14	14270458.88	39°17'52.886"N	80°54'41.891"W	1.76	288.466	0.34	0.33	-12.40	
505.00	0.270	226.070	504.99	-0.94	0.43	-1.71	1665415.10	14270458.75	39°17'52.886"N	80°54'41.892"W	1.77	284.114	0.82	-0.14	165.62	Panther EM <12-1/4"> (476')(505'-2653')
595.00	1.460	272.500	594.98	-1.25	0.33	-3.01	1665413.80	14270458.65	39°17'52.883"N	80°54'41.908"W	3.03	276.323	1.43	1.32	51.59	
685.00	3.560	284.530	685.89	-3.17	1.09	-6.91	1665409.91	14270459.41	39°17'52.891"N	80°54'41.958"W	6.99	278.996	2.37	2.31	13.22	
778.00	5.680	290.240	777.59	-7.53	3.39	-13.94	1665402.87	14270461.70	39°17'52.914"N	80°54'42.047"W	14.35	283.647	2.36	2.30	6.21	
872.00	6.950	288.940	871.02	-13.82	6.84	-23.69	1665393.13	14270465.16	39°17'52.948"N	80°54'42.171"W	24.65	286.108	1.36	1.35	-1.38	
966.00	8.940	288.190	964.11	-21.55	10.97	-36.01	1665380.82	14270469.28	39°17'52.989"N	80°54'42.328"W	37.64	286.940	2.12	2.12	-0.80	
1060.00	10.100	289.170	1056.81	-30.84	15.95	-50.73	1665366.10	14270474.27	39°17'53.038"N	80°54'42.515"W	53.18	287.457	1.25	1.23	1.04	
1154.00	11.120	290.950	1149.20	-41.52	21.90	-66.98	1665349.65	14270480.21	39°17'53.097"N	80°54'42.722"W	70.47	288.106	1.14	1.09	1.89	
1248.00	12.700	288.880	1241.18	-53.42	28.49	-85.23	1665331.62	14270486.79	39°17'53.162"N	80°54'42.954"W	89.86	288.482	1.74	1.68	-2.20	
1343.00	13.830	288.490	1333.64	-66.43	35.47	-105.87	1665310.98	14270493.77	39°17'53.232"N	80°54'43.216"W	111.66	288.520	1.19	1.19	-0.41	
1436.00	15.940	286.570	1423.52	-80.29	42.63	-128.66	1665288.20	14270500.94	39°17'53.303"N	80°54'43.506"W	135.54	288.334	2.33	2.27	-2.06	
1531.00	17.990	286.110	1514.38	-95.91	50.43	-155.26	1665261.61	14270508.73	39°17'53.380"N	80°54'43.844"W	163.24	287.993	2.16	2.16	-0.48	



Actual Wellpath Report

Barr Unit 2H AWP Proj: 16595'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Ritchie County, WV	Well	Barr Unit 2H
Field	Ritchie	Wellbore	Barr Unit 2H AWB
Facility	Pool Pad		

WELLPATH DATA (211 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
1626.00	20.660	285.590	1604.02	-113.41	59.00	-185.50	1665231.38	14270517.30	39°17'53.465"N	80°54'44.229"W	194.66	287.644	2.82	2.81	-0.55	
1720.00	23.330	285.530	1691.17	-132.86	68.44	-219.41	1665197.48	14270526.74	39°17'53.559"N	80°54'44.660"W	229.84	287.325	2.84	2.84	-0.06	
1814.00	22.810	282.990	1777.65	-152.92	77.52	-255.10	1665161.81	14270535.81	39°17'53.649"N	80°54'45.114"W	266.62	286.904	1.19	-0.55	-2.70	
1908.00	22.860	284.360	1864.29	-171.87	86.15	-290.55	1665126.38	14270544.43	39°17'53.734"N	80°54'45.565"W	303.05	286.515	0.57	0.05	1.46	
2003.00	22.620	286.510	1951.90	-191.89	95.92	-325.94	1665091.00	14270554.20	39°17'53.831"N	80°54'46.015"W	339.76	286.398	0.91	-0.25	2.26	
2097.00	25.070	289.340	2037.88	-214.21	107.65	-362.07	1665054.88	14270565.93	39°17'53.947"N	80°54'46.474"W	377.73	286.558	2.88	2.61	3.01	
2192.00	26.820	288.930	2123.30	-239.29	121.27	-401.34	1665015.63	14270579.54	39°17'54.082"N	80°54'46.974"W	419.26	286.813	1.85	1.84	-0.43	
2286.00	25.760	286.800	2207.56	-263.69	134.05	-440.95	1664976.03	14270592.32	39°17'54.209"N	80°54'47.477"W	460.88	286.910	1.51	-1.13	-2.27	
2380.00	23.360	287.170	2293.06	-286.08	145.46	-478.32	1664938.68	14270603.72	39°17'54.322"N	80°54'47.952"W	499.95	286.915	2.56	-2.55	0.39	
2474.00	22.670	291.830	2379.59	-308.41	157.70	-512.94	1664904.07	14270615.96	39°17'54.444"N	80°54'48.393"W	536.64	287.090	2.07	-0.73	4.96	
2568.00	25.130	294.850	2465.53	-333.59	172.83	-547.88	1664869.15	14270628.08	39°17'54.593"N	80°54'48.837"W	574.49	287.508	2.92	2.62	3.21	
2663.00	24.720	292.500	2542.61	-357.40	187.21	-580.67	1664836.37	14270645.46	39°17'54.736"N	80°54'49.254"W	610.11	287.870	1.26	-0.48	-2.76	
2754.00	22.370	288.210	2692.98	-397.72	209.65	-642.13	1664774.93	14270667.88	39°17'54.958"N	80°54'49.741"W	651.08	288.059	2.00	-1.48	-3.33	Panther EIM -8-3/4" > (2653)/(2754-6017.8')
2817.00	22.370	288.210	2692.98	-397.72	209.65	-642.13	1664774.93	14270667.88	39°17'54.958"N	80°54'49.741"W	651.08	288.059	2.00	-1.48	-3.33	
2911.00	23.040	286.500	2779.69	-418.70	220.46	-676.76	1664740.32	14270678.69	39°17'55.065"N	80°54'50.476"W	711.77	288.044	1.00	0.71	-1.82	
3005.00	25.260	287.800	2865.46	-440.85	231.82	-713.50	1664703.59	14270690.05	39°17'55.178"N	80°54'50.943"W	750.21	287.999	2.43	2.36	1.38	
3104.00	27.540	287.650	2954.13	-466.54	245.22	-755.43	1664661.68	14270703.44	39°17'55.311"N	80°54'51.476"W	794.23	287.984	2.30	2.30	-0.15	
3198.00	27.590	286.130	3037.46	-491.42	257.85	-797.05	1664620.68	14270716.07	39°17'55.436"N	80°54'52.005"W	837.72	287.927	0.75	0.05	-1.62	
3293.00	27.710	283.270	3121.61	-515.22	269.04	-839.68	1664577.47	14270727.25	39°17'55.547"N	80°54'52.547"W	881.73	287.766	1.40	0.13	-3.01	
3388.00	25.120	284.950	3206.69	-537.55	279.31	-880.67	1664536.50	14270737.52	39°17'55.649"N	80°54'53.069"W	923.90	287.597	2.84	-2.73	1.77	
3483.00	24.420	289.290	3292.96	-560.51	291.00	-918.69	1664498.49	14270749.20	39°17'55.765"N	80°54'53.552"W	963.67	287.576	2.05	-0.74	4.57	
3577.00	24.510	290.660	3378.52	-584.46	304.30	-955.27	1664461.92	14270762.50	39°17'55.897"N	80°54'54.077"W	1002.57	287.669	0.61	0.10	1.46	
3672.00	25.910	290.610	3464.47	-609.72	318.56	-993.14	1664424.07	14270776.75	39°17'56.038"N	80°54'54.499"W	1042.98	287.784	1.47	1.47	-0.05	
3766.00	25.800	286.600	3549.06	-634.14	331.63	-1031.97	1664385.25	14270789.82	39°17'56.168"N	80°54'54.993"W	1083.95	287.815	1.86	-0.12	-4.27	
3860.00	25.310	283.960	3633.87	-656.39	342.32	-1071.07	1664346.17	14270800.51	39°17'56.274"N	80°54'55.490"W	1124.45	287.724	1.32	-0.52	-2.81	
3955.00	25.160	284.770	3719.80	-678.06	352.37	-1110.31	1664306.95	14270810.55	39°17'56.373"N	80°54'55.989"W	1164.88	287.608	0.40	-0.16	0.85	
4049.00	24.080	287.270	3805.26	-699.95	363.16	-1147.94	1664269.33	14270821.33	39°17'56.480"N	80°54'56.468"W	1204.02	287.555	1.60	-1.15	2.66	
4144.00	24.450	289.970	3891.87	-723.23	375.63	-1184.93	1664232.36	14270833.80	39°17'56.604"N	80°54'56.938"W	1243.04	287.589	1.23	0.39	2.84	
4238.00	23.410	288.060	3977.79	-746.19	388.06	-1220.97	1664196.33	14270846.23	39°17'56.727"N	80°54'57.396"W	1281.15	287.632	1.38	-1.11	-2.03	
4333.00	24.730	287.160	4064.53	-768.73	399.78	-1257.90	1664159.41	14270859.93	39°17'56.843"N	80°54'57.866"W	1319.90	287.631	1.44	1.39	-0.95	



Actual Wellpath Report

Barr Unit 2H AWP Proj: 16595'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Ritche County, WV	Well	Barr Unit 2H
Field	Ritche	Wellbore	Barr Unit 2H AWB
Facility	Pool Pad		

WELLPATH DATA (211 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
	P1	P1	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)			(ft)	(°)	P/100ft	F/100ft	(°/100ft)	
4427.00	26.250	286.010	4149.38	-791.68	411.31	-1296.67	1664120.66	14270869.47	39°17'56.95"N	80°54'58.35"W	1360.34	287.539	1.70	1.62	-1.22	
4522.00	26.100	282.880	4234.64	-814.15	421.76	-1337.24	1664080.11	14270879.91	39°17'57.06"N	80°54'58.87"W	1402.17	287.505	1.46	-0.16	-3.29	
4616.00	23.990	286.900	4319.80	-835.69	431.93	-1375.68	1664041.68	14270890.08	39°17'57.16"N	80°54'59.36"W	1441.90	287.431	2.88	-2.24	4.28	
4710.00	23.310	285.630	4405.91	-856.92	442.50	-1411.88	1664005.50	14270900.64	39°17'57.26"N	80°54'59.82"W	1479.60	287.401	0.90	-0.72	-1.35	
4804.00	23.740	289.690	4492.10	-878.78	453.88	-1447.61	1663969.78	14270912.02	39°17'57.38"N	80°55'00.27"W	1517.09	287.408	1.78	0.46	4.32	
4899.00	23.410	289.050	4579.17	-901.84	466.49	-1483.45	1663933.95	14270924.62	39°17'57.50"N	80°55'00.73"W	1555.07	287.456	0.44	-0.35	-0.67	
4993.00	22.630	286.950	4665.69	-923.45	477.85	-1518.40	1663899.02	14270935.98	39°17'57.61"N	80°55'01.17"W	1591.82	287.469	1.20	-0.83	-2.23	
5087.00	24.190	285.190	4751.95	-944.35	488.17	-1564.29	1663863.14	14270946.30	39°17'57.71"N	80°55'01.63"W	1629.15	287.437	1.82	1.66	-1.87	
5182.00	26.080	287.750	4837.95	-967.20	499.64	-1592.97	1663824.48	14270957.76	39°17'57.83"N	80°55'02.12"W	1669.48	287.414	2.29	1.99	2.69	
5275.00	26.270	286.190	4921.41	-990.71	511.61	-1632.20	1663785.26	14270969.73	39°17'57.95"N	80°55'02.62"W	1710.50	287.404	0.77	0.20	-1.68	
5370.00	26.520	283.450	5006.51	-1013.58	522.41	-1673.02	1663744.46	14270980.52	39°17'58.05"N	80°55'03.14"W	1752.68	287.341	1.31	0.26	-2.88	
5465.00	25.380	286.900	5091.94	-1036.29	533.26	-1713.13	1663704.36	14270991.36	39°17'58.16"N	80°55'03.65"W	1794.21	287.290	1.99	-1.20	3.63	
5560.00	25.510	284.760	5177.72	-1059.00	544.39	-1752.39	1663665.12	14271002.49	39°17'58.27"N	80°55'04.15"W	1835.00	287.258	0.98	0.14	-2.25	
5654.00	26.040	288.010	5262.38	-1082.08	555.93	-1791.59	1663625.94	14271014.02	39°17'58.39"N	80°55'04.65"W	1875.86	287.239	1.61	0.56	3.46	
5749.00	26.060	288.450	5347.73	-1106.73	568.98	-1831.22	1663586.33	14271027.07	39°17'58.52"N	80°55'05.15"W	1917.57	287.261	0.20	0.02	0.46	
5844.00	26.240	286.510	5433.00	-1131.02	581.55	-1871.15	1663546.41	14271039.64	39°17'58.64"N	80°55'05.66"W	1959.44	287.265	0.92	0.19	-2.04	
5939.00	25.020	287.430	5518.65	-1154.56	593.54	-1910.45	1663507.12	14271051.62	39°17'58.76"N	80°55'06.16"W	2000.53	287.259	1.35	-1.28	0.97	
6017.80	25.470	287.210	5589.93	-1173.99	603.54	-1942.54	1663475.05	14271063.61	39°17'58.86"N	80°55'06.67"W	2034.13	287.260	0.58	0.57	-0.28	
6064.00	26.300	287.530	5631.49	-1185.66	609.56	-1969.77	1663447.83	14271075.08	39°17'58.98"N	80°55'07.17"W	2054.30	287.261	1.82	1.80	0.89	BH AT Curve <-8-1/2"> (6017.8')(6064'-16570')
6083.00	25.970	287.140	5648.55	-1190.50	612.06	-1988.77	1663428.84	14271086.62	39°17'59.02"N	80°55'07.67"W	2062.67	287.261	1.96	-1.74	-2.05	
6130.00	23.460	281.850	5691.25	-1201.08	617.01	-1988.77	1663410.94	14271097.81	39°17'59.02"N	80°55'08.17"W	2082.28	287.236	7.11	-5.34	-11.26	
6178.00	20.960	275.110	5735.69	-1209.21	619.74	-2006.68	1663380.73	14271075.08	39°17'59.02"N	80°55'07.16"W	2100.20	287.163	7.43	-5.21	-14.04	
6225.00	18.680	265.980	5779.91	-1214.32	619.96	-2022.56	1663395.06	14271078.03	39°17'59.02"N	80°55'07.59"W	2115.45	287.041	8.17	-4.85	-19.43	
6319.00	17.150	243.950	5869.47	-1215.78	612.60	-2048.95	1663367.68	14271070.67	39°17'59.00"N	80°55'07.93"W	2128.45	286.866	7.97	-2.45	-24.47	
6366.00	17.800	233.050	5914.32	-1212.47	605.24	-2061.92	1663355.72	14271063.31	39°17'58.88"N	80°55'08.09"W	2148.91	286.638	6.72	-0.81	-22.40	
6413.00	18.900	223.260	5958.94	-1206.47	595.37	-2072.88	1663344.76	14271053.45	39°17'58.78"N	80°55'08.23"W	2156.68	286.025	6.95	2.34	-23.19	
6460.00	20.140	211.500	6003.25	-1197.55	582.92	-2082.32	1663335.32	14271041.01	39°17'58.66"N	80°55'08.35"W	2162.38	285.639	8.75	2.64	-25.02	
6507.00	22.810	200.720	6047.00	-1185.18	567.50	-2089.78	1663327.87	14271025.59	39°17'58.50"N	80°55'08.44"W	2165.46	285.193	10.12	5.68	-22.94	
6554.00	27.040	196.400	6089.62	-1169.25	548.72	-2096.02	1663321.63	14271006.82	39°17'58.32"N	80°55'08.52"W	2166.66	284.670	9.79	9.00	-9.19	



Actual Wellpath Report

Barr Unit 2H AWP Proj: 16595'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Ritchie County, WV	Well	Barr Unit 2H
Field	Ritchie	Wellbore	Barr Unit 2H AWB
Facility	Pool Pad		

WELLPATH DATA (211 stations) † = interpolated/extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert.Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
6601.00	30.770	192.570	6130.76	-1150.07	526.72	-2101.66	1663315.99	14270984.83	39°17'58.105"N	80°55'08.597"W	2166.66	284.070	8.86	7.94	-8.15	
6648.00	33.980	187.460	6170.46	-1127.85	501.95	-2105.98	1663311.67	14270980.07	39°17'57.861"N	80°55'08.652"W	2164.98	283.406	8.97	6.83	-10.87	
6695.00	37.710	183.440	6208.55	-1102.60	474.57	-2108.55	1663309.10	14270932.70	39°17'57.590"N	80°55'08.685"W	2161.30	282.684	9.38	7.94	-8.55	
6742.00	41.710	180.080	6244.71	-1074.34	444.57	-2109.44	1663308.22	14270902.71	39°17'57.294"N	80°55'08.697"W	2155.77	281.901	9.66	8.51	-7.15	
6789.00	45.160	176.500	6278.84	-1043.32	412.29	-2108.44	1663309.21	14270870.44	39°17'56.974"N	80°55'08.685"W	2148.37	281.064	9.61	7.34	-7.62	
6837.00	48.540	174.860	6311.66	-1009.30	377.38	-2105.79	1663311.86	14270835.54	39°17'56.829"N	80°55'08.651"W	2139.34	280.160	7.47	7.04	-3.42	Middlesex: 6837 MD
6884.00	52.910	173.620	6341.41	-973.75	341.19	-2102.13	1663315.53	14270799.37	39°17'56.272"N	80°55'08.605"W	2129.63	279.219	9.52	9.30	-2.64	
6978.00	61.100	170.560	6392.83	-896.39	283.35	-2091.35	1663326.30	14270761.30	39°17'55.895"N	80°55'08.545"W	2119.17	278.223	8.22	7.85	-3.00	
7025.00	64.310	169.950	6414.38	-855.06	222.19	-2084.27	1663333.37	14270680.42	39°17'55.095"N	80°55'08.379"W	2096.08	276.085	6.93	6.83	-1.30	
7040.00	65.653	169.673	6420.73	-841.59	208.81	-2081.87	1663335.77	14270667.05	39°17'54.963"N	80°55'08.280"W	2092.31	275.728	9.11	8.95	-1.85	Burkett: 7040 MD
7072.00	68.520	169.100	6433.19	-812.36	179.85	-2076.44	1663341.20	14270638.09	39°17'54.677"N	80°55'08.170"W	2084.21	274.950	9.11	8.96	-1.79	
7119.00	72.140	168.290	6449.00	-768.42	136.46	-2067.76	1663349.88	14270594.72	39°17'54.248"N	80°55'08.136"W	2072.26	273.776	7.87	7.70	-1.72	
7133.00	72.845	167.959	6453.21	-755.14	123.39	-2065.01	1663352.62	14270581.66	39°17'54.119"N	80°55'08.136"W	2068.70	273.420	5.52	5.04	-2.36	July: 7133 MD
7166.00	74.510	167.190	6462.49	-723.62	92.46	-2058.20	1663359.44	14270550.75	39°17'53.813"N	80°55'08.049"W	2060.27	272.572	5.52	5.04	-2.33	
7214.00	74.430	165.900	6475.34	-677.52	47.49	-2047.44	1663370.19	14270505.79	39°17'53.368"N	80°55'07.913"W	2047.99	271.329	2.59	-0.17	-2.69	
7217.00	74.537	165.868	6476.14	-674.63	44.68	-2046.73	1663370.90	14270502.99	39°17'53.341"N	80°55'07.904"W	2047.22	271.251	3.72	3.57	-1.07	Marcellus POE: 7217 MD
7261.00	76.110	165.400	6487.29	-632.16	3.45	-2036.17	1663381.45	14270461.77	39°17'52.933"N	80°55'07.770"W	2036.18	270.097	3.72	3.57	-1.06	
7308.00	80.480	164.910	6496.82	-586.21	-41.02	-2024.38	1663405.74	14270372.52	39°17'52.493"N	80°55'07.621"W	2024.80	268.839	9.35	9.30	-1.04	
7355.00	83.310	163.900	6503.45	-539.73	-85.84	-2011.87	1663405.74	14270372.52	39°17'52.050"N	80°55'07.462"W	2002.69	266.260	5.91	5.32	-2.60	
7402.00	85.810	162.680	6507.91	-492.96	-130.64	-1998.42	1663419.19	14270327.26	39°17'51.607"N	80°55'07.291"W	1991.98	264.948	9.83	9.77	-1.09	
7449.00	90.400	162.170	6509.46	-446.00	-175.41	-1989.24	1663433.36	14270282.98	39°17'51.165"N	80°55'07.112"W	1982.10	263.594	3.52	3.40	0.92	
7497.00	92.030	162.610	6508.44	-398.01	-221.15	-1969.72	1663447.88	14270237.26	39°17'50.712"N	80°55'06.927"W	1965.61	260.879	1.35	-1.11	-0.78	
7592.00	90.980	161.870	6505.95	-303.05	-311.59	-1940.75	1663476.83	14270146.85	39°17'49.818"N	80°55'06.560"W	1951.37	258.131	2.33	-1.06	-2.07	
7687.00	89.970	159.900	6505.16	-208.07	-401.34	-1909.65	1663507.93	14270057.14	39°17'48.049"N	80°55'05.749"W	1939.89	255.354	0.22	-0.09	-0.20	
7782.00	89.880	159.710	6505.28	-113.14	-490.50	-1876.85	1663540.71	14269968.01	39°17'48.049"N	80°55'05.345"W	1933.66	252.579	0.98	0.00	0.98	
7876.00	89.880	160.630	6505.48	-19.19	-578.93	-1844.97	1663572.58	14269879.62	39°17'47.175"N	80°55'04.932"W	1931.36	249.792	1.81	-0.03	-1.81	
7970.00	89.850	158.930	6505.70	74.73	-667.13	-1812.48	1663605.06	14269791.46	39°17'46.303"N	80°55'04.499"W	1932.24	246.975	0.07	0.06	-0.03	
8065.00	89.910	158.900	6505.90	169.59	-755.77	-1778.30	1663639.22	14269702.85	39°17'45.427"N	80°55'04.499"W	1932.24	246.975	0.07	0.06	-0.03	
8160.00	89.940	160.820	6506.02	264.52	-844.96	-1745.59	1663671.92	14269613.70	39°17'44.545"N	80°55'04.084"W	1933.34	244.171	2.02	0.03	2.02	



Actual Wellpath Report

Barr Unit 2H AWP Proj: 16595'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Ritchie County, WV	Well	Barr Unit 2H
Field	Ritchie	Wellbore	Barr Unit 2H AWB
Facility	Pool Pad		

WELLPATH DATA (211 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 (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
8254.00	89.820	159.760	6506.22	358.48	-933.45	-1713.89	1663703.60	14269525.24	39°17'43.670"N	80°55'03.682"W	1951.60	241.426	1.13	-0.13	-1.13	
8349.00	89.880	158.330	6506.47	453.35	-1022.16	-1679.92	1663737.57	14269436.57	39°17'42.793"N	80°55'03.250"W	1966.45	238.681	1.51	0.06	-1.51	
8443.00	89.970	159.050	6506.59	547.19	-1109.74	-1645.76	1663771.71	14269349.03	39°17'41.927"N	80°55'02.817"W	1984.95	236.008	0.77	0.10	0.77	
8538.00	90.060	160.790	6506.57	642.12	-1198.96	-1613.14	1663804.31	14269259.84	39°17'41.045"N	80°55'02.403"W	2009.91	233.379	1.83	0.09	1.83	
8633.00	90.090	160.620	6506.44	737.10	-1288.62	-1581.75	1663835.69	14269170.22	39°17'40.158"N	80°55'02.005"W	2040.22	230.831	0.18	0.03	-0.18	
8728.00	89.450	159.820	6506.83	832.05	-1378.01	-1549.60	1663867.83	14269080.86	39°17'39.275"N	80°55'01.597"W	2073.69	228.354	1.08	-0.67	-0.84	
8822.00	89.570	160.480	6507.63	925.99	-1466.43	-1517.68	1663899.73	14268992.48	39°17'38.400"N	80°55'01.192"W	2110.40	225.984	0.71	0.13	0.70	
8917.00	89.510	162.670	6508.39	1020.98	-1556.55	-1487.66	1663929.74	14268902.40	39°17'37.509"N	80°55'00.811"W	2153.13	223.704	2.31	-0.06	2.31	
9011.00	89.450	162.920	6509.25	1114.97	-1646.34	-1459.86	1663957.54	14268812.64	39°17'36.622"N	80°55'00.459"W	2200.37	221.564	0.27	-0.06	0.27	
9106.00	89.570	163.350	6510.06	1209.95	-1737.25	-1432.30	1663985.08	14268721.77	39°17'35.723"N	80°55'00.109"W	2251.66	219.504	0.47	0.13	0.45	
9200.00	89.510	162.930	6510.81	1303.93	-1827.20	-1405.04	1664012.34	14268631.85	39°17'34.834"N	80°54'59.763"W	2304.95	217.559	0.45	-0.06	-0.45	
9295.00	89.480	162.150	6511.65	1398.92	-1917.82	-1376.53	1664040.83	14268541.27	39°17'33.938"N	80°54'59.402"W	2360.70	215.669	0.82	-0.03	-0.82	
9389.00	90.000	160.930	6512.40	1492.91	-2006.98	-1346.77	1664070.58	14268452.14	39°17'33.056"N	80°54'59.025"W	2416.98	213.863	1.41	0.55	-1.30	
9484.00	89.880	162.000	6512.18	1587.91	-2097.05	-1316.57	1664100.76	14268362.11	39°17'32.166"N	80°54'58.641"W	2476.09	212.121	1.13	-0.13	1.13	
9579.00	89.850	162.900	6512.40	1682.90	-2187.63	-1287.93	1664129.40	14268271.57	39°17'31.270"N	80°54'58.278"W	2538.60	210.487	0.95	-0.03	0.95	
9673.00	89.970	162.320	6512.55	1776.90	-2277.33	-1259.83	1664157.48	14268181.90	39°17'30.383"N	80°54'57.922"W	2602.58	208.952	0.63	0.13	-0.62	
9768.00	89.910	166.100	6512.65	1871.81	-2368.73	-1233.99	1664183.32	14268090.54	39°17'29.480"N	80°54'57.594"W	2670.88	207.517	3.98	-0.06	3.98	
9862.00	89.970	167.890	6512.75	1965.45	-2460.32	-1212.83	1664204.46	14267998.99	39°17'28.574"N	80°54'57.326"W	2743.02	206.241	1.91	0.06	1.90	
9956.00	89.940	165.240	6512.82	2059.14	-2551.74	-1191.00	1664226.29	14267907.61	39°17'27.671"N	80°54'57.050"W	2816.00	205.020	2.82	-0.03	-2.82	
10051.00	89.880	161.520	6512.97	2154.10	-2642.75	-1163.83	1664253.45	14267816.63	39°17'26.771"N	80°54'56.705"W	2887.67	203.768	3.92	-0.06	-3.92	
10146.00	89.940	158.390	6513.12	2249.03	-2731.99	-1131.27	1664285.99	14267727.43	39°17'25.889"N	80°54'56.292"W	2956.95	202.494	3.30	0.06	-3.29	
10240.00	89.940	159.690	6513.22	2342.90	-2819.77	-1097.65	1664319.60	14267639.69	39°17'25.021"N	80°54'55.866"W	3025.87	201.289	1.38	0.00	1.38	
10334.00	89.970	161.640	6513.29	2436.87	-2908.46	-1066.52	1664350.71	14267551.03	39°17'24.144"N	80°54'55.471"W	3097.84	200.138	2.07	0.03	2.07	
10429.00	89.910	161.950	6513.39	2531.87	-2998.70	-1036.84	1664380.38	14267460.82	39°17'23.251"N	80°54'55.094"W	3172.90	199.074	0.33	-0.06	0.33	
10523.00	89.850	161.320	6513.59	2625.87	-3087.97	-1007.38	1664409.83	14267371.59	39°17'22.369"N	80°54'54.721"W	3248.13	198.068	0.46	-0.06	-0.46	
10618.00	89.850	159.180	6513.83	2720.82	-3177.43	-975.44	1664441.76	14267282.17	39°17'21.484"N	80°54'54.316"W	3323.78	197.066	2.46	0.00	-2.46	
10712.00	89.750	155.780	6514.16	2814.51	-3264.25	-939.44	1664477.74	14267195.38	39°17'20.626"N	80°54'53.859"W	3396.74	196.056	3.62	-0.11	-3.62	
10806.00	89.540	157.020	6514.75	2908.06	-3350.38	-901.81	1664515.36	14267109.28	39°17'19.774"N	80°54'53.381"W	3469.63	195.065	1.34	-0.22	1.32	
10900.00	90.150	158.330	6515.00	3001.79	-3437.33	-866.11	1664551.05	14267022.37	39°17'18.915"N	80°54'52.928"W	3544.77	194.142	1.54	0.65	1.39	
10995.00	90.340	164.640	6514.99	3096.73	-3527.37	-835.95	1664581.19	14266932.37	39°17'18.024"N	80°54'52.546"W	3625.07	193.333	6.65	0.20	6.64	



Actual Wellpath Report

Barr Unit 2H AWP Proj: 16595'
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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #03
Operator	ANTERO RESOURCES CORPORATION	Well	Barr Unit 2H
Area	Ritche County, WV	Wellbore	Barr Unit 2H AWB
Field	Ritche		
Facility	Pool Pad		

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
11090.00	90.280	164.130	6514.08	3191.65	-3618.86	-810.38	1664606.75	14266840.91	39°17'17.120"N	80°54'52.222"W	3708.49	192.622	0.54	-0.06	-0.54	
11184.00	90.580	166.910	6513.37	3285.46	-3709.86	-786.88	1664630.24	14266749.94	39°17'16.220"N	80°54'51.924"W	3792.40	191.975	2.97	0.32	2.96	
11278.00	90.340	167.040	6512.61	3380.10	-3802.42	-765.47	1664651.64	14266657.43	39°17'15.305"N	80°54'51.653"W	3878.70	191.382	0.29	-0.25	0.14	
11373.00	90.430	166.340	6511.98	3473.79	-3893.89	-743.83	1664673.27	14266565.99	39°17'14.401"N	80°54'51.378"W	3964.30	190.815	0.75	0.10	-0.74	
11467.00	90.280	162.420	6511.40	3567.69	-3984.40	-718.53	1664698.57	14266475.52	39°17'13.506"N	80°54'51.058"W	4048.67	190.233	4.17	-0.16	-4.17	
11561.00	90.400	160.210	6510.84	3661.67	-4073.44	-688.42	1664728.67	14266386.52	39°17'12.626"N	80°54'50.876"W	4131.20	189.592	2.35	0.13	-2.35	
11655.00	90.060	162.460	6510.46	3755.66	-4162.49	-658.33	1664758.74	14266297.92	39°17'11.745"N	80°54'50.294"W	4214.23	188.987	2.42	-0.36	2.39	
11749.00	90.180	166.840	6510.26	3849.53	-4253.11	-633.46	1664783.60	14266206.92	39°17'10.850"N	80°54'49.979"W	4300.03	188.471	4.66	0.13	4.66	
11843.00	90.090	170.240	6510.04	3942.91	-4345.22	-614.78	1664802.27	14266114.84	39°17'09.939"N	80°54'49.743"W	4388.50	188.053	3.62	-0.10	3.62	
11938.00	90.250	168.530	6509.76	4037.12	-4438.59	-597.29	1664819.76	14266021.51	39°17'09.016"N	80°54'49.521"W	4478.60	187.664	1.81	0.17	-1.80	
12032.00	89.970	168.870	6509.58	4130.48	-4530.77	-578.87	1664838.17	14265929.37	39°17'08.105"N	80°54'49.288"W	4565.80	187.281	0.47	-0.30	0.36	
12126.00	90.030	164.870	6509.58	4224.12	-4622.30	-557.52	1664859.51	14265837.88	39°17'07.200"N	80°54'48.018"W	4655.80	186.877	4.26	0.06	-4.26	
12221.00	90.060	161.600	6509.51	4319.09	-4713.24	-530.12	1664886.90	14265746.97	39°17'06.301"N	80°54'48.670"W	4742.96	186.417	3.44	0.03	-3.44	
12315.00	90.000	161.080	6509.46	4413.08	-4802.30	-500.04	1664916.97	14265657.94	39°17'05.420"N	80°54'48.289"W	4828.27	185.945	0.56	-0.06	-0.55	
12409.00	90.060	159.530	6509.38	4507.07	-4891.24	-469.61	1664947.39	14265569.04	39°17'04.541"N	80°54'47.903"W	4913.73	185.484	0.12	0.10	0.06	
12504.00	90.060	157.090	6509.26	4602.03	-4980.70	-437.64	1664979.34	14265479.62	39°17'03.656"N	80°54'47.498"W	4999.89	185.022	1.70	-0.03	-1.69	
12598.00	89.940	157.090	6509.26	4695.82	-5068.03	-402.90	1665014.07	14265392.32	39°17'02.793"N	80°54'47.057"W	5084.02	184.545	2.60	-0.13	-2.60	
12692.00	90.000	157.230	6509.31	4789.49	-5154.66	-366.42	1665050.54	14265305.72	39°17'01.936"N	80°54'46.594"W	5167.67	184.066	0.16	0.06	0.15	
12786.00	90.000	158.420	6509.31	4883.23	-5241.71	-330.94	1665086.00	14265218.71	39°17'01.076"N	80°54'46.144"W	5252.15	183.613	1.27	0.00	1.27	
12881.00	89.570	157.850	6509.66	4978.02	-5329.88	-295.56	1665121.37	14265130.58	39°17'00.204"N	80°54'45.695"W	5338.06	183.174	0.75	-0.45	-0.60	
12975.00	89.780	158.570	6510.20	5071.81	-5417.16	-260.67	1665156.25	14265043.34	39°16'59.341"N	80°54'45.252"W	5423.42	182.755	0.80	0.22	0.77	
13070.00	89.820	158.990	6510.53	5166.66	-5505.71	-226.28	1665190.62	14264954.81	39°16'58.465"N	80°54'44.816"W	5510.36	182.353	0.44	0.04	0.44	
13164.00	89.630	157.960	6510.98	5260.47	-5593.16	-191.79	1665225.09	14264867.41	39°16'57.601"N	80°54'44.379"W	5596.44	181.964	1.11	-0.20	-1.10	
13258.00	89.570	159.680	6511.64	5354.32	-5680.80	-157.83	1665259.04	14264779.80	39°16'56.734"N	80°54'43.948"W	5682.99	181.591	1.83	-0.06	1.83	
13352.00	89.570	158.850	6512.34	5448.21	-5768.71	-124.55	1665292.30	14264691.92	39°16'55.865"N	80°54'43.526"W	5770.05	181.237	0.88	0.00	-0.88	
13447.00	90.490	167.940	6512.29	5543.08	-5859.65	-97.43	1665319.41	14264601.02	39°16'54.966"N	80°54'43.182"W	5860.46	180.953	9.62	0.97	9.57	
13541.00	90.120	167.020	6511.79	5636.65	-5951.41	-77.06	1665339.78	14264509.29	39°16'54.059"N	80°54'42.924"W	5951.91	180.742	1.05	-0.39	-0.98	
13636.00	90.030	164.000	6511.67	5731.46	-6043.38	-53.29	1665363.54	14264427.36	39°16'53.149"N	80°54'42.623"W	6043.62	180.505	3.18	-0.09	-3.18	
13730.00	89.880	162.870	6511.74	5825.43	-6133.48	-26.49	1665390.33	14264367.30	39°16'52.259"N	80°54'42.283"W	6133.54	180.247	1.21	-0.16	-1.20	
13825.00	89.970	164.900	6511.87	5920.38	-6224.74	-0.12	1665416.68	14264236.08	39°16'51.356"N	80°54'41.949"W	6224.74	180.001	2.14	0.09	2.14	



Actual Wellpath Report

Barr Unit 2H AWP Proj: 16595'

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02/15/2019

REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #03
ANTERO RESOURCES CORPORATION	Well	Barr Unit 2H
Area	Wellbore	Barr Unit 2H AWB
Field		
Facility		

WELLPATH DATA (211 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
13920.00	89.970	166.860	6511.92	6015.16	-6316.87	23.05	1665439.85	14264143.99	39°16'50.446"N	80°54'41.655"W	6316.91	179.791	2.06	0.00	2.06	
14014.00	90.000	163.660	6511.94	6108.99	-6407.76	46.96	1665483.75	14264083.13	39°16'49.547"N	80°54'41.352"W	6407.93	179.580	3.40	0.03	-3.40	
14108.00	89.970	163.050	6511.96	6202.97	-6497.82	73.89	1665490.67	14263963.11	39°16'48.657"N	80°54'41.011"W	6498.24	179.348	0.65	-0.03	-0.65	
14203.00	90.030	166.880	6511.96	6297.82	-6589.55	98.53	1665515.30	14263871.41	39°16'47.750"N	80°54'40.699"W	6590.29	179.143	4.03	0.06	4.03	
14297.00	90.060	167.310	6511.89	6391.45	-6681.18	119.52	1665536.28	14263779.82	39°16'46.844"N	80°54'40.433"W	6682.25	178.975	0.46	0.03	0.46	
14392.00	89.940	165.610	6511.89	6486.16	-6773.53	141.76	1665558.51	14263687.50	39°16'45.931"N	80°54'40.151"W	6775.02	178.801	1.79	-0.13	-1.79	
14486.00	90.120	158.320	6511.84	6580.10	-6862.86	170.85	1665587.59	14263598.22	39°16'45.048"N	80°54'39.783"W	6864.98	178.574	7.76	0.19	-7.76	
14581.00	90.030	156.590	6511.72	6674.80	-6950.59	207.27	1665623.99	14263510.52	39°16'44.180"N	80°54'39.321"W	6953.68	178.292	1.82	-0.09	-1.82	
14675.00	90.030	158.630	6511.67	6768.51	-7037.50	243.07	1665659.78	14263423.64	39°16'43.321"N	80°54'38.866"W	7041.70	178.022	2.17	0.00	2.17	
14770.00	90.060	158.510	6511.57	6863.34	-7125.93	277.78	1665728.78	14263335.25	39°16'42.447"N	80°54'38.426"W	7131.35	177.768	0.14	0.06	-0.13	
14864.00	90.060	158.670	6511.45	6957.17	-7213.45	312.09	1665772.97	14263247.77	39°16'41.581"N	80°54'37.991"W	7220.19	177.523	0.17	-0.03	0.17	
14959.00	90.120	159.120	6511.30	7052.03	-7302.07	346.30	1665762.97	14263159.18	39°16'40.705"N	80°54'37.557"W	7310.28	177.285	0.48	0.06	0.47	
15053.00	90.090	159.220	6511.12	7145.92	-7389.93	379.73	1665796.38	14263071.36	39°16'39.836"N	80°54'37.133"W	7399.68	177.058	0.11	-0.03	0.11	
15147.00	89.480	159.640	6511.48	7239.82	-7477.93	412.75	1665829.40	14262983.39	39°16'38.966"N	80°54'36.714"W	7489.32	176.841	0.79	-0.65	0.45	
15241.00	89.450	159.980	6512.35	7333.75	-7566.15	445.20	1665881.83	14262895.20	39°16'38.094"N	80°54'36.303"W	7579.24	176.633	0.36	-0.03	0.36	
15336.00	89.450	161.090	6513.27	7428.71	-7655.72	476.85	1665893.47	14262805.67	39°16'37.208"N	80°54'35.901"W	7670.56	176.436	1.17	0.00	1.17	
15430.00	89.480	161.880	6514.14	7522.70	-7744.85	506.70	1665923.30	14262716.58	39°16'36.327"N	80°54'35.523"W	7761.41	176.257	0.84	0.03	0.84	
15524.00	89.480	162.070	6515.00	7616.70	-7834.23	535.78	1665952.48	14262627.23	39°16'35.443"N	80°54'35.154"W	7852.53	176.088	0.20	0.00	0.20	
15618.00	89.570	161.850	6515.78	7710.69	-7923.61	564.89	1665981.48	14262537.89	39°16'34.560"N	80°54'34.785"W	7943.72	175.922	0.25	0.10	-0.23	
15713.00	89.600	161.550	6516.46	7805.69	-8013.80	594.72	1666011.29	14262447.73	39°16'33.668"N	80°54'34.407"W	8035.84	175.756	0.32	0.03	-0.32	
15808.00	89.540	161.530	6517.18	7900.68	-8103.91	624.80	1666041.36	14262357.66	39°16'32.777"N	80°54'34.026"W	8127.96	175.591	0.07	-0.06	-0.02	
15902.00	89.510	160.880	6517.96	7994.67	-8192.89	655.09	1666071.63	14262268.71	39°16'31.897"N	80°54'33.642"W	8219.04	175.428	0.69	-0.03	-0.69	
15997.00	89.540	161.440	6518.74	8089.66	-8282.80	685.76	1666102.30	14262178.84	39°16'31.008"N	80°54'33.253"W	8311.14	175.267	0.59	0.03	0.59	
16092.00	89.380	163.050	6519.64	8184.65	-8373.27	714.73	1666131.25	14262088.41	39°16'30.114"N	80°54'32.886"W	8403.72	175.121	1.70	-0.17	1.69	
16186.00	89.970	164.070	6520.17	8278.61	-8463.42	741.33	1666157.84	14261998.29	39°16'29.223"N	80°54'32.548"W	8495.83	174.994	1.25	0.63	1.09	
16281.00	90.000	162.950	6520.20	8373.58	-8554.51	768.30	1666184.80	14261907.24	39°16'28.322"N	80°54'32.207"W	8588.95	174.868	1.18	0.03	-1.18	
16376.00	90.000	162.820	6520.20	8468.57	-8645.31	796.26	1666212.74	14261816.48	39°16'27.424"N	80°54'31.852"W	8681.90	174.738	0.14	0.00	-0.14	
16471.00	90.090	163.340	6520.12	8563.55	-8736.20	823.90	1666240.38	14261725.63	39°16'26.526"N	80°54'31.502"W	8774.96	174.612	0.56	0.09	0.55	
16565.00	90.060	161.640	6520.00	8657.54	-8825.84	852.19	1666268.65	14261636.03	39°16'25.640"N	80°54'31.144"W	8866.88	174.485	1.81	-0.03	-1.81	
16659.00	90.030	161.430	6520.00	8662.54	-8830.58	853.77	1666270.23	14261631.28	39°16'25.593"N	80°54'31.123"W	8871.76	174.478	4.24	-0.60	-4.20	



Actual Wellpath Report

Barr Unit 2H AWP Proj: 16595'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #03
ANTERO RESOURCES CORPORATION	Well	Barr Unit 2H
Area	Wellbore	Barr Unit 2H AWB
Field		
Facility		

WELLPATH DATA (211 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]	Built Rate [°/100ft]	Turn Rate [°/100ft]	Comments
16595.00	90.030	161.430	6519.98	8687.54	-8854.28	861.73	1666278.19	14261607.60	39°16'25.358"N	80°54'31.023"W	8896.11	174.441	0.00	0.00	0.00	Projected MD at TD: 16595'

HOLE & CASING SECTIONS - Ref Wellbore: Barr Unit 2H AWB Ref Wellpath: Barr Unit 2H AWP Proj: 16595'

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	105.00	80.00	25.00	105.00	0.00	0.00	0.18	-0.29
17.5in Open Hole	105.00	407.80	302.80	105.00	407.80	0.18	-0.29	0.70	-1.59
13.375in Casing Surface	25.00	407.80	382.80	25.00	407.80	0.00	0.00	0.70	-1.59
12.25in Open Hole	407.80	2705.50	2297.70	407.80	2590.45	0.70	-1.59	195.20	-600.77
9.625in Casing Intermediate	25.00	2705.50	2680.50	25.00	2590.45	0.00	0.00	195.20	-600.77
8.75in Open Hole	2705.50	6090.00	3384.50	2590.45	5654.85	195.20	-600.77	612.94	-1972.69
8.5in Open Hole	6090.00	16595.00	10505.00	5654.85	6519.98	612.94	-1972.69	-8854.28	861.73
5.5in Casing Production	25.00	16595.00	16570.00	25.00	6519.98	0.00	0.00	-8854.28	861.73

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Barr Unit 2H POE Rev-2	6484.00	32.33	-2035.37	1663382.26	14270490.63	39°17'53.218"N	80°55'07.760"W	point
Barr Unit 2H BHL Rev-2	6507.00	-8866.83	854.48	1666270.94	14261595.04	39°16'25.234"N	80°54'31.115"W	point
Barr Unit 2H LP Rev-1	6507.00	-140.87	-1979.12	1663438.48	14270317.51	39°17'51.506"N	80°55'07.046"W	point



Actual Wellpath Report

Barr Unit 2H AWP Proj: 16595'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Ritchie County, WV	Well	Barr Unit 2H
Field	Ritchie	Wellbore	Barr Unit 2H AWB
Facility	Pool Pad		

WELLPATH COMPOSITION - Ref Wellbore: Barr Unit 2H AWB Ref Wellpath: Barr Unit 2H AWP Proj: 16595'			
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment
25.00	411.00	Gyrodata standard - Drop gyro or Multi-shot	01 Gyrodata MS Gyro <17-1/2">(100'-411')
411.00	476.00	Gyrodata standard - Drop gyro or Multi-shot	02 Gyrodata MS Gyro <12-1/4">(411')(446'-476')
476.00	2653.00	ISCWSA MWD, Rev. 4 (Standard)	03 Panther EM <12-1/4">(476')(505'-2653')
2653.00	6017.80	ISCWSA MWD, Rev. 4 (Standard)	04 Panther EM <8-3/4">(2653')(2754'-6017.8')
6017.80	16570.00	BHI AutoTrak Curve (Short)	05 AT Curve <8-1/2">(6017.80')(6064'-16570')
16570.00	16595.00	Blind Drilling (std)	Projection to bit
			Barr Unit 2H AWB
			Barr Unit 2H AWB
			Barr Unit 2H AWB
			Barr Unit 2H AWB
			Barr Unit 2H AWB
			Barr Unit 2H AWB



Actual Wellpath Report

Barr Unit 2H AWP Proj: 16595'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Ritchie County, WV	Well	Barr Unit 2H
Field	Ritchie	Wellbore	Barr Unit 2H AWB
Facility	Pool Pad		

COMMENTS
<p>Wellpath general comments API: 47-085-10368-0000 BHI Job #: 109314863 Rig: Patterson 342 Duration: 07/28/2018-07/31/2018 Gyrodota MS Gyro <17-1/2"> (100'-411') Gyrodota MS Gyro <12-1/4"> (411')(446'-476') Panther EM <12-1/4"> (476')(505'-2653) Panther EM <8-3/4"> (2653')(2754'-6017.8') BHI AT Curve <8-1/2"> (6017.8')(6064'-16570') Middlesex: 6837' MD Burkett: 7040' MD Tully: 7133' MD Marcellus POE: 7217' MD Projected MD at TD: 16595'</p>