



ANTERO RESOURCES CORPORATION



Location: Doddridge Co., WV
 Field: Doddridge
 Facility: Peggy June Pad

Slot: Slot #03
 Well: Russell Unit 1H
 Wellbore: Russell Unit 1H PWB

Plot reference wellpath is Russell Unit 1H PWP Rev-A.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to H&P 519 (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to H&P 519 (RKB)	Scale: True distance
H&P 519 (RKB) to Mean Sea Level: 1305 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot #03): -1275 feet	Depths are in feet
Offset wellpath MDs are referenced to each well's default MD datum	Created by: edw/ryr on 2021-02-10; Database: WA_NPL_EASTERNUS_Deft

Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Peggy June Pad	1712149.550	14272437.390	39°18'11.5750"N	80°44'47.1230"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Longitude
Slot #03	2.58	-19.90	1712129.980	14272439.970	30°18'11.8010"N 80°44'47.3760"W
Comment	Russell Unit 1H				
H&P 519 (RKB) to Ground level (At Slot: Slot #03)	30ft				
Mean Sea Level to Ground level (At Slot: Slot #03)	-1275ft				
H&P 519 (RKB) to Mean Sea Level	1305ft				

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	8127.00	11.030	297.710	6080.25	291.07	-426.25	2.14	-412.15
Proj. to Bottom	8192.00	11.030	297.710	6144.04	296.86	-437.26	0.00	-421.15
End of 3D Arc	8881.82	27.465	177.373	6815.70	203.03	-474.67	7.00	-344.23
POE	7202.36	69.581	161.336	6954.00	-166.04	-386.81	8.36	33.55
Landing Pt.	7457.60	90.000	161.336	6999.00	-402.76	-308.85	8.00	283.41
BHL	17642.41	90.000	161.336	6999.00	-10051.95	2852.51	0.00	10488.22

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #03	Russell Unit 1H	Russell Unit 1H AWB	Russell Unit 1H AWP Proj. 17816'
Slot #03	Russell Unit 1H	Russell Unit 1H PWB	Russell Unit 1H PWP Rev-A.0

Gyrodata MS Gyro <17-1/2"> (100'-469') : 0.31° Inc, 115.00ft MD, 115.00ft TVD, 0.01ft VS

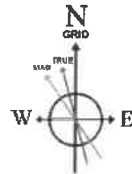
Premier MWD <12-1/4"> (469')(583'-2510') : 1.14° Inc, 598.00ft MD, 597.99ft TVD, 0.72ft VS

Premier MWD <8-3/4"> (2510')(2639'-6112') : 6.06° Inc, 2654.00ft MD, 2648.85ft TVD, -64.97ft VS

BH AT Curve <8-1/2"> (6127')(6175'-17591') : 12.41° Inc, 6175.00ft MD, 6127.24ft TVD, -419.16ft VS

Marcellus POE: 7230' MD : 70.93° Inc, 7230.00ft MD, 6946.56ft TVD, 90.31ft VS

API: 47-017-06900-0000
 BH Job #: 110695216
 Rig: H&P 519
 Duration: 2/4/2021-2/8/2021

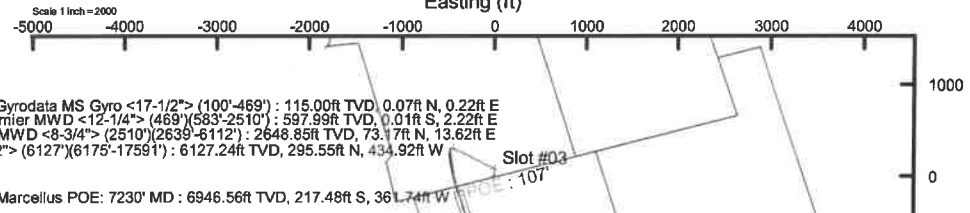
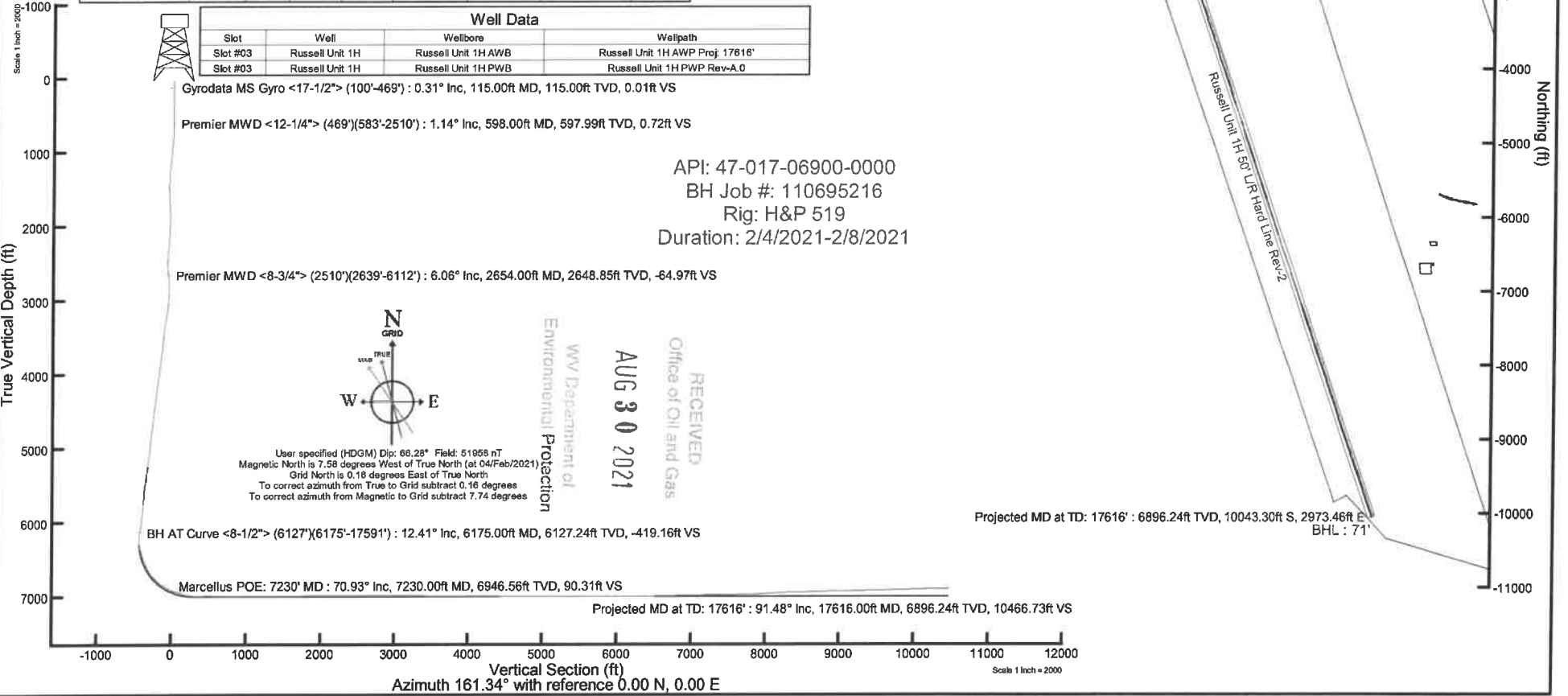


User specified (HDGM) Dip: 68.28° Field: 51668 nT
 Magnetic North is 7.58 degrees West of True North (at 04/Feb/2021)
 Grid North is 0.18 degrees East of True North
 To correct azimuth from True to Grid subtract 0.16 degrees
 To correct azimuth from Magnetic to Grid subtract 7.74 degrees

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Gyrodata MS Gyro <17-1/2"> (100'-469') : 115.00ft TVD, 0.07ft N, 0.22ft E
 Premier MWD <12-1/4"> (469')(583'-2510') : 597.99ft TVD, 0.01ft S, 2.22ft E
 Premier MWD <8-3/4"> (2510')(2639'-6112') : 2648.85ft TVD, 73.17ft N, 13.62ft E
 BH AT Curve <8-1/2"> (6127')(6175'-17591') : 6127.24ft TVD, 295.55ft N, 434.92ft W

Slot #03
 POE : 107'

Marcellus POE: 7230' MD : 6946.56ft TVD, 217.48ft S, 361.74ft W

Projected MD at TD: 17616' : 6896.24ft TVD, 10043.30ft S, 2973.46ft E
 BHL : 71'

Projected MD at TD: 17616' : 91.48° Inc, 17616.00ft MD, 6896.24ft TVD, 10466.73ft VS

Vertical Section (ft) Azimuth 161.34° with reference 0.00 N, 0.00 E

Scale 1 inch = 2000



Actual Wellpath Report

Russell Unit 1H AWP Proj: 17616'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Russell Unit 1H
Field	Doddridge	API	47-017-06900-0000
Facility	Peggy June Pad	Wellbore	Russell Unit 1H AWB
Slot	Slot #03		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect@ 6.0
North Reference	Grid	User	Edsaryar
Scale	0.999606	Report Generated	10/Feb/2021 at 19:24
Convergence at slot	0.16° East	Database	WA_MPL_EASTERNUS_Defn

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	2.58	-19.90	1712129.66	14272439.97	39°18'11.6010"N	80°44'47.3760"W
Facility Reference Pt			1712149.55	14272437.39	39°18'11.5750"N	80°44'47.1230"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.3013"W

WELLPATH DATUM			
Calculation method	Minimum curvature	H&P 519 (RKB) to Facility Vertical Datum	1305.00ft
Horizontal Reference Pt	Slot	H&P 519 (RKB) to Mean Sea Level	1305.00ft
Vertical Reference Pt	H&P 519 (RKB)	H&P 519 (RKB) to Ground Level at Slot (Slot #03)	30.00ft
MD Reference Pt	H&P 519 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	161.34°

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Russell Unit 1H AWP Proj: 17616'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Russell Unit 1H
Field	Doddridge	API	47-017-06900-0000
Facility	Peggy June Pad	Wellbore	Russell Unit 1H AWB
Slot	Slot #03		

WELLPATH DATA (208 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	73.410	0.00	0.00	0.00	0.00	1712129.66	14272439.97	39°18'11.6010"N	80°44'47.3760"W	0.00	0.000	0.00	0.00	0.00	
30.00	0.000	73.410	30.00	0.00	0.00	0.00	1712129.66	14272439.97	39°18'11.6010"N	80°44'47.3760"W	0.00	0.000	0.00	0.00	0.00	
115.00	0.310	73.410	115.00	0.01	0.07	0.22	1712129.88	14272440.04	39°18'11.6017"N	80°44'47.3732"W	0.23	73.410	0.36	0.36	0.00	Gyrodata MS Gyro <17-1/2"> (100'-469')
140.00	0.290	67.630	140.00	0.01	0.11	0.34	1712130.00	14272440.08	39°18'11.6021"N	80°44'47.3716"W	0.36	72.397	0.15	-0.08	-23.12	
165.00	0.230	78.370	165.00	0.01	0.14	0.45	1712130.11	14272440.11	39°18'11.6024"N	80°44'47.3702"W	0.47	72.393	0.31	-0.24	42.96	
190.00	0.210	68.430	190.00	0.01	0.17	0.54	1712130.20	14272440.14	39°18'11.6027"N	80°44'47.3691"W	0.57	72.600	0.17	-0.08	-39.76	
215.00	0.170	134.580	215.00	0.04	0.16	0.61	1712130.27	14272440.13	39°18'11.6026"N	80°44'47.3682"W	0.63	75.263	0.84	-0.16	264.60	
240.00	0.150	134.340	240.00	0.11	0.11	0.66	1712130.32	14272440.08	39°18'11.6021"N	80°44'47.3676"W	0.67	80.388	0.08	-0.08	-0.96	
265.00	0.180	148.890	265.00	0.17	0.06	0.71	1712130.37	14272440.03	39°18'11.6016"N	80°44'47.3670"W	0.71	85.494	0.21	0.12	58.20	
290.00	0.140	167.460	290.00	0.24	-0.01	0.73	1712130.39	14272439.96	39°18'11.6009"N	80°44'47.3667"W	0.73	90.612	0.26	-0.16	74.28	
315.00	0.170	141.100	315.00	0.31	-0.07	0.76	1712130.42	14272439.90	39°18'11.6003"N	80°44'47.3663"W	0.77	94.985	0.31	0.12	-105.44	
340.00	0.210	134.060	340.00	0.38	-0.13	0.82	1712130.48	14272439.84	39°18'11.5997"N	80°44'47.3656"W	0.83	98.833	0.18	0.16	-28.16	
365.00	0.240	137.940	365.00	0.47	-0.20	0.89	1712130.55	14272439.77	39°18'11.5990"N	80°44'47.3647"W	0.91	102.585	0.13	0.12	15.52	
390.00	0.220	131.820	390.00	0.56	-0.27	0.96	1712130.62	14272439.70	39°18'11.5983"N	80°44'47.3638"W	0.99	105.683	0.13	-0.08	-24.48	
415.00	0.230	130.350	415.00	0.65	-0.33	1.03	1712130.69	14272439.64	39°18'11.5977"N	80°44'47.3629"W	1.08	107.908	0.05	0.04	-5.88	
440.00	0.230	142.160	440.00	0.74	-0.41	1.10	1712130.76	14272439.56	39°18'11.5970"N	80°44'47.3620"W	1.17	110.224	0.19	0.00	47.24	
465.00	0.200	137.820	465.00	0.82	-0.48	1.16	1712130.82	14272439.49	39°18'11.5963"N	80°44'47.3612"W	1.26	112.359	0.14	-0.12	-17.36	
484.00	0.210	144.920	484.00	0.89	-0.53	1.20	1712130.86	14272439.44	39°18'11.5957"N	80°44'47.3607"W	1.31	113.797	0.14	0.05	37.37	
598.00	1.140	52.630	597.99	0.72	-0.01	2.22	1712131.88	14272439.96	39°18'11.6008"N	80°44'47.3477"W	2.22	90.338	1.02	0.82	-80.96	remier MWD <12-1/4"> (469')(583'-2510')
690.00	2.910	29.780	689.93	-1.12	2.57	4.11	1712133.77	14272442.54	39°18'11.6263"N	80°44'47.3236"W	4.85	57.998	2.08	1.92	-24.84	
783.00	4.570	21.400	782.73	-5.52	8.07	6.64	1712136.29	14272448.04	39°18'11.6806"N	80°44'47.2913"W	10.45	39.437	1.87	1.78	-9.01	
875.00	5.600	16.850	874.37	-11.98	15.78	9.27	1712138.93	14272455.74	39°18'11.7567"N	80°44'47.2574"W	18.30	30.450	1.20	1.12	-4.95	
968.00	5.980	9.530	966.89	-19.94	24.90	11.39	1712141.05	14272464.86	39°18'11.8468"N	80°44'47.2302"W	27.38	24.587	0.89	0.41	-7.87	
1063.00	6.370	2.850	1061.34	-29.21	35.04	12.47	1712142.13	14272475.00	39°18'11.9470"N	80°44'47.2161"W	37.20	19.594	0.86	0.41	-7.03	
1158.00	6.780	357.140	1155.72	-39.51	45.91	12.46	1712142.11	14272485.86	39°18'12.0544"N	80°44'47.2159"W	47.57	15.181	0.81	0.43	-6.01	
1255.00	5.790	356.920	1252.13	-49.73	56.51	11.91	1712141.56	14272496.46	39°18'12.1592"N	80°44'47.2225"W	57.75	11.899	1.02	-1.02	-0.23	
1350.00	2.790	348.050	1346.86	-56.64	63.56	11.17	1712140.83	14272503.50	39°18'12.2289"N	80°44'47.2316"W	64.53	9.968	3.22	-3.16	-9.34	
1445.00	0.320	322.680	1441.82	-59.19	66.03	10.53	1712140.19	14272505.98	39°18'12.2534"N	80°44'47.2397"W	66.87	9.061	2.64	-2.60	-26.71	
1539.00	1.260	167.240	1535.81	-58.41	65.23	10.60	1712140.26	14272505.18	39°18'12.2455"N	80°44'47.2388"W	66.09	9.230	1.66	1.00	-165.36	
1634.00	2.660	167.130	1630.75	-55.18	62.07	11.32	1712140.98	14272502.01	39°18'12.2141"N	80°44'47.2297"W	63.09	10.338	1.47	1.47	-0.12	

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Russell Unit 1H AWP Proj: 17616'

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REFERENCED WELL PATHS (D) ENHANCED (O)				
Operator	ANTERO RESOURCES CORPORATION		Well	Russell Unit 1H
Field	Doddridge		API	47-017-06900-0000
Facility	Peggy June Pad		Wellbore	Russell Unit 1H AWB
Slot	Slot #03			

WELLPATH DATA (208 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
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]			[ft]	[°]	["/100ft]	["/100R]	["/100ft]	
1729.00	3.510	172.170	1725.61	-50.13	57.04	12.21	1712141.86	14272496.98	39°18'12.1644"N	80°44'47.2186"W	58.33	12.083	0.94	0.89	5.31	
1823.00	2.120	187.880	1819.50	-45.75	52.46	12.36	1712142.02	14272492.41	39°18'12.1192"N	80°44'47.2168"W	53.90	13.260	1.68	-1.48	16.71	
1918.00	1.350	251.470	1914.46	-44.18	50.37	11.06	1712140.72	14272490.32	39°18'12.0985"N	80°44'47.2335"W	51.57	12.386	2.04	-0.81	66.94	
2013.00	1.970	313.790	2009.43	-45.63	51.14	8.82	1712138.48	14272491.09	39°18'12.1062"N	80°44'47.2620"W	51.90	9.786	1.89	0.65	65.60	
2108.00	2.280	312.730	2104.36	-48.74	53.55	6.25	1712135.91	14272493.50	39°18'12.1301"N	80°44'47.2945"W	53.92	6.661	0.33	0.33	-1.12	
2202.00	3.470	328.010	2198.24	-53.15	57.23	3.37	1712133.03	14272497.18	39°18'12.1666"N	80°44'47.3310"W	57.33	3.373	1.50	1.27	16.26	
2297.00	4.740	343.180	2293.00	-59.87	63.43	0.71	1712130.37	14272503.38	39°18'12.2279"N	80°44'47.3646"W	63.43	0.645	1.75	1.34	15.97	
2392.00	5.200	358.680	2387.65	-67.90	71.49	-0.52	1712129.14	14272511.43	39°18'12.3076"N	80°44'47.3801"W	71.49	359.583	1.49	0.48	16.32	
2487.00	3.750	53.940	2482.40	-72.94	77.63	1.89	1712131.55	14272517.57	39°18'12.3682"N	80°44'47.3491"W	77.65	1.397	4.57	-1.53	58.17	
2525.00	4.020	94.270	2520.32	-72.79	78.26	4.23	1712133.88	14272518.20	39°18'12.3744"N	80°44'47.3194"W	78.37	3.091	7.08	0.71	106.13	
2654.00	6.060	134.230	2648.85	-64.97	73.17	13.62	1712143.27	14272513.11	39°18'12.3238"N	80°44'47.2001"W	74.43	10.543	3.05	1.58	30.98	Premier MWD <8-3/4"> (2510')(2639'-6112')
2748.00	4.220	133.440	2742.47	-57.49	67.33	19.69	1712149.34	14272507.27	39°18'12.2660"N	80°44'47.1232"W	70.15	16.297	1.96	-1.96	-0.84	
2843.00	1.090	116.270	2837.35	-53.77	64.53	23.03	1712152.68	14272504.47	39°18'12.2382"N	80°44'47.0807"W	68.52	19.645	3.36	-3.29	-18.07	
2937.00	2.470	319.310	2931.33	-55.01	65.67	22.52	1712152.17	14272505.61	39°18'12.2494"N	80°44'47.0872"W	69.42	18.925	3.72	1.47	-166.98	
3031.00	4.810	307.980	3025.14	-60.18	69.63	18.09	1712147.74	14272509.57	39°18'12.2887"N	80°44'47.1434"W	71.94	14.562	2.59	2.49	-12.05	
3126.00	7.800	307.020	3119.55	-68.84	75.96	9.80	1712139.46	14272515.90	39°18'12.3516"N	80°44'47.2486"W	76.59	7.350	3.15	3.15	-1.01	
3221.00	10.760	304.180	3213.30	-81.23	84.83	-2.69	1712126.97	14272524.77	39°18'12.4395"N	80°44'47.4071"W	84.87	358.186	3.15	3.12	-2.99	
3318.00	11.650	298.570	3308.45	-95.64	94.60	-18.78	1712110.89	14272534.53	39°18'12.5365"N	80°44'47.6115"W	96.45	348.772	1.45	0.92	-5.78	
3413.00	11.140	291.120	3401.58	-108.55	102.49	-35.77	1712093.91	14272542.42	39°18'12.6150"N	80°44'47.8273"W	108.56	340.763	1.64	-0.54	-7.84	
3507.00	9.920	284.840	3494.00	-118.83	107.84	-52.05	1712077.62	14272547.77	39°18'12.6683"N	80°44'48.0344"W	119.75	334.229	1.78	-1.30	-6.68	
3602.00	9.340	285.040	3587.66	-127.62	111.94	-67.42	1712062.27	14272551.86	39°18'12.7092"N	80°44'48.2296"W	130.67	328.940	0.61	-0.61	0.21	
3697.00	8.830	290.330	3681.47	-136.49	116.47	-81.70	1712047.99	14272556.39	39°18'12.7544"N	80°44'48.4112"W	142.27	324.951	1.03	-0.54	5.57	
3791.00	8.430	296.550	3774.41	-145.92	122.06	-94.63	1712035.07	14272561.98	39°18'12.8100"N	80°44'48.5754"W	154.44	322.214	1.08	-0.43	6.62	
3885.00	8.570	302.740	3867.38	-156.28	128.93	-106.69	1712023.02	14272568.84	39°18'12.8782"N	80°44'48.7285"W	167.34	320.392	0.98	0.15	6.59	
3980.00	9.420	304.030	3961.21	-168.00	137.10	-119.08	1712010.62	14272577.02	39°18'12.9594"N	80°44'48.8859"W	181.60	319.024	0.92	0.89	1.36	
4075.00	10.070	298.350	4054.84	-180.26	145.40	-132.84	1711996.88	14272585.31	39°18'13.0418"N	80°44'49.0606"W	196.94	317.585	1.22	0.68	-5.98	
4170.00	10.320	298.220	4148.34	-192.54	153.37	-147.64	1711982.08	14272593.28	39°18'13.1209"N	80°44'49.2487"W	212.88	316.089	0.26	0.26	-0.14	
4264.00	10.120	299.810	4240.85	-204.87	161.45	-162.23	1711967.50	14272601.36	39°18'13.2013"N	80°44'49.4339"W	228.88	314.863	0.37	-0.21	1.69	
4359.00	9.540	295.280	4334.45	-216.58	168.96	-176.59	1711953.14	14272608.87	39°18'13.2759"N	80°44'49.6163"W	244.40	313.736	1.02	-0.61	-4.77	
4454.00	9.490	294.930	4428.15	-227.45	175.63	-190.81	1711938.93	14272615.53	39°18'13.3421"N	80°44'49.7970"W	259.33	312.628	0.08	-0.05	-0.37	

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Actual Wellpath Report

Russell Unit 1H AWP Proj: 17616'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Russell Unit 1H
Field	Doddridge		API	47-017-06900-0000
Facility	Peggy June Pad		Wellbore	Russell Unit 1H AWB
Slot	Slot #03			

WELLPATH DATA (208 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)	
4549.00	9.450	295.700	4521.85	-238.30	182.31	-204.94	1711924.80	14272622.21	39°18'13.4086"N	80°44'49.9765"W	274.29	311.656	0.14	-0.04	0.81	
4643.00	8.280	301.080	4614.73	-248.86	189.15	-217.69	1711912.06	14272629.05	39°18'13.4766"N	80°44'50.1385"W	288.39	310.988	1.52	-1.24	5.72	
4738.00	8.040	300.270	4708.77	-259.09	196.03	-229.29	1711900.47	14272635.92	39°18'13.5449"N	80°44'50.2857"W	301.66	310.529	0.28	-0.25	-0.85	
4833.00	8.100	299.530	4802.83	-269.08	202.68	-240.85	1711888.91	14272642.57	39°18'13.6109"N	80°44'50.4326"W	314.78	310.082	0.13	0.06	-0.78	
4928.00	8.440	299.510	4896.84	-279.27	209.41	-252.74	1711877.02	14272649.30	39°18'13.6778"N	80°44'50.5836"W	328.22	309.644	0.36	0.36	-0.02	
5022.00	8.960	295.640	4989.76	-289.52	215.98	-265.34	1711864.42	14272655.86	39°18'13.7430"N	80°44'50.7437"W	342.13	309.144	0.83	0.55	-4.12	
5117.00	9.120	295.940	5083.58	-299.97	222.47	-278.78	1711850.99	14272662.35	39°18'13.8076"N	80°44'50.9144"W	356.67	308.591	0.18	0.17	0.32	
5212.00	9.250	298.340	5177.36	-310.84	229.39	-292.27	1711837.51	14272669.27	39°18'13.8763"N	80°44'51.0858"W	371.54	308.127	0.43	0.14	2.53	
5306.00	9.720	299.850	5270.08	-322.31	236.93	-305.80	1711823.98	14272676.80	39°18'13.9512"N	80°44'51.2577"W	386.85	307.767	0.57	0.50	1.61	
5401.00	9.230	297.740	5363.78	-333.84	244.46	-319.50	1711810.29	14272684.34	39°18'14.0261"N	80°44'51.4317"W	402.30	307.421	0.63	-0.52	-2.22	
5496.00	9.860	298.980	5457.46	-345.37	251.95	-333.36	1711796.43	14272691.82	39°18'14.1004"N	80°44'51.6077"W	417.86	307.082	0.70	0.66	1.31	
5590.00	10.070	295.750	5550.05	-357.06	259.42	-347.80	1711781.99	14272699.29	39°18'14.1747"N	80°44'51.7911"W	433.90	306.719	0.64	0.22	-3.44	
5685.00	8.990	286.590	5643.74	-367.16	265.15	-362.40	1711767.41	14272705.01	39°18'14.2317"N	80°44'51.9766"W	449.04	306.191	1.96	-1.14	-9.64	
5780.00	8.870	282.680	5737.59	-375.25	268.88	-376.66	1711753.15	14272708.74	39°18'14.2689"N	80°44'52.1579"W	462.78	305.521	0.65	-0.13	-4.12	
5875.00	8.410	290.200	5831.51	-383.42	272.88	-390.32	1711739.49	14272712.75	39°18'14.3089"N	80°44'52.3316"W	476.25	304.958	1.28	-0.48	7.92	
5969.00	8.590	297.840	5924.48	-392.83	278.54	-402.98	1711726.84	14272718.39	39°18'14.3651"N	80°44'52.4924"W	489.87	304.652	1.22	0.19	8.13	
6064.00	9.700	298.850	6018.27	-403.88	285.71	-416.27	1711713.56	14272725.57	39°18'14.4364"N	80°44'52.6611"W	504.88	304.464	1.18	1.17	1.06	
6127.00	11.030	297.710	6080.25	-412.15	291.07	-426.25	1711703.58	14272730.93	39°18'14.4897"N	80°44'52.7880"W	516.15	304.328	2.14	2.11	-1.81	
6175.00	12.410	296.930	6127.24	-419.16	295.55	-434.92	1711694.92	14272735.40	39°18'14.5341"N	80°44'52.8980"W	525.83	304.198	2.89	2.87	-1.63	BH AT Curve <8-1/2"> (6127')(6175'-17591')
6269.00	11.210	261.380	6219.37	-427.98	298.75	-452.98	1711676.88	14272738.61	39°18'14.5663"N	80°44'53.1277"W	542.63	303.406	7.72	-1.28	-37.82	
6364.00	10.860	187.090	6313.03	-421.50	288.44	-463.26	1711666.58	14272728.30	39°18'14.4647"N	80°44'53.2588"W	545.72	301.908	13.98	-0.37	-78.20	
6459.00	16.270	175.550	6405.37	-400.52	266.27	-463.33	1711666.51	14272706.14	39°18'14.2456"N	80°44'53.2605"W	534.39	299.886	6.34	5.69	-12.15	
6553.00	20.680	177.810	6494.50	-371.82	236.55	-461.67	1711668.17	14272676.42	39°18'13.9517"N	80°44'53.2405"W	518.75	297.129	4.75	4.69	2.40	
6569.00†	21.379	176.713	6509.44	-366.30	230.81	-461.40	1711668.44	14272670.69	39°18'13.8950"N	80°44'53.2372"W	515.91	296.576	5.02	4.37	-6.86	Sycamore: 6569' MD
6648.00	24.920	172.170	6582.07	-336.06	199.93	-458.30	1711671.54	14272639.83	39°18'13.5898"N	80°44'53.1990"W	500.02	293.569	5.02	4.48	-5.75	
6742.00	31.640	170.110	6664.80	-292.19	155.98	-451.36	1711678.47	14272595.88	39°18'13.1551"N	80°44'53.1122"W	477.55	289.063	7.22	7.15	-2.19	
6811.00†	37.870	171.105	6721.47	-253.39	117.18	-444.97	1711684.86	14272557.11	39°18'12.7715"N	80°44'53.0323"W	460.15	284.754	9.07	9.03	1.44	Middlesex: 6811' MD
6837.00	40.220	171.410	6741.66	-237.26	101.00	-442.49	1711687.35	14272540.93	39°18'12.6115"N	80°44'53.0012"W	453.87	282.857	9.07	9.04	1.17	
6932.00	49.510	169.910	6808.92	-171.19	34.96	-431.55	1711698.28	14272474.91	39°18'11.9584"N	80°44'52.8645"W	432.97	274.631	9.84	9.78	-1.58	
7021.00†	58.360	166.627	6861.27	-99.85	-35.37	-416.83	1711713.00	14272404.61	39°18'11.2629"N	80°44'52.6797"W	418.33	265.149	10.38	9.94	-3.69	Burkett: 7021' MD

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Russell Unit 1H AWP Proj: 17616'
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Field	Doddridge	API	47-017-06900-0000
Facility	Peggy June Pad	Wellbore	Russell Unit 1H AWB
Slot	Slot #03		

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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)		
7027.00	58.960	166.430	6864.39	-94.75	-40.36	-415.63	1711714.19	14272399.63	39°18'11.2136"N	80°44'52.6647"W	417.59	264.454	10.38	9.99	-3.29		
7074.00	63.700	165.440	6886.93	-53.65	-80.35	-405.61	1711724.21	14272359.66	39°18'10.8181"N	80°44'52.5385"W	413.49	258.796	10.25	10.09	-2.11		
7078.00†	63.921	165.282	6888.70	-50.07	-83.82	-404.70	1711725.12	14272356.18	39°18'10.7838"N	80°44'52.5271"W	413.29	258.299	6.57	5.53	-3.95	Tully: 7078' MD	
7121.00	66.310	163.620	6906.79	-11.13	-121.39	-394.24	1711735.58	14272318.63	39°18'10.4121"N	80°44'52.3954"W	412.51	252.886	6.57	5.56	-3.87		
7168.00	68.360	161.270	6924.91	32.23	-162.74	-381.15	1711748.66	14272277.30	39°18'10.0031"N	80°44'52.2304"W	414.44	246.880	6.35	4.36	-5.00		
7216.00	70.170	159.900	6941.90	77.11	-205.07	-366.23	1711763.57	14272234.98	39°18'9.5843"N	80°44'52.0420"W	419.74	240.754	4.62	3.77	-2.85		
7230.00†	70.925	160.305	6946.56	90.31	-217.48	-361.74	1711768.07	14272222.57	39°18'9.4615"N	80°44'51.9853"W	422.08	238.985	6.04	5.39	2.89	Marcellus POE: 7230' MD	
7311.00	75.310	162.580	6970.08	167.80	-290.94	-337.09	1711792.70	14272149.14	39°18'8.7348"N	80°44'51.6745"W	445.29	229.203	6.04	5.41	2.81		
7405.00	83.800	164.680	6987.11	260.07	-379.56	-311.09	1711818.69	14272060.56	39°18'7.8582"N	80°44'51.3468"W	490.75	219.338	9.29	9.03	2.23		
7500.00	90.860	161.750	6991.53	354.85	-470.34	-283.70	1711846.07	14271969.81	39°18'6.9602"N	80°44'51.0016"W	549.28	211.097	8.04	7.43	-3.08		
7595.00	91.450	161.800	6989.62	449.83	-560.56	-253.99	1711875.77	14271879.63	39°18'6.0677"N	80°44'50.6269"W	615.42	204.376	0.62	0.62	0.05		
7690.00	88.520	160.590	6989.64	544.81	-650.48	-223.37	1711906.37	14271789.75	39°18'5.1781"N	80°44'50.2406"W	687.76	198.953	3.34	-3.08	-1.27		
7784.00	90.150	160.980	6990.73	638.80	-739.23	-192.44	1711937.30	14271701.03	39°18'4.3001"N	80°44'49.8503"W	763.87	194.592	1.78	1.73	0.41		
7879.00	89.320	161.310	6991.17	733.80	-829.13	-161.74	1711967.98	14271611.17	39°18'3.4107"N	80°44'49.4629"W	844.76	191.038	0.94	-0.87	0.35		
7973.00	87.690	159.550	6993.63	827.75	-917.66	-130.27	1711999.44	14271522.67	39°18'2.5348"N	80°44'49.0657"W	926.88	188.079	2.55	-1.73	-1.87		
8068.00	91.390	162.080	6994.39	922.72	-1007.36	-99.06	1712030.64	14271433.01	39°18'1.6473"N	80°44'48.6719"W	1012.22	185.616	4.72	3.89	2.66		
8163.00	90.180	161.780	6993.09	1017.70	-1097.67	-69.59	1712060.09	14271342.74	39°18'0.7540"N	80°44'48.3004"W	1099.87	183.628	1.31	-1.27	-0.32		
8257.00	90.150	161.640	6992.82	1111.70	-1186.92	-40.09	1712089.58	14271253.52	39°17'59.8710"N	80°44'47.9283"W	1187.59	181.935	0.15	-0.03	-0.15		
8352.00	89.940	161.540	6992.74	1206.70	-1277.05	-10.09	1712119.57	14271163.42	39°17'58.9793"N	80°44'47.5499"W	1277.09	180.453	0.24	-0.22	-0.11		
8447.00	90.000	160.210	6992.79	1301.69	-1366.81	21.03	1712150.68	14271073.70	39°17'58.0914"N	80°44'47.1572"W	1366.97	179.118	1.40	0.06	-1.40		
8541.00	91.230	162.480	6991.78	1395.68	-1455.86	51.10	1712180.74	14270984.69	39°17'57.2104"N	80°44'46.7779"W	1456.75	177.990	2.75	1.31	2.41		
8636.00	89.540	161.150	6991.14	1490.67	-1546.11	80.74	1712210.37	14270894.48	39°17'56.3176"N	80°44'46.4041"W	1548.21	177.011	2.26	-1.78	-1.40		
8731.00	90.280	161.510	6991.29	1585.67	-1636.11	111.15	1712240.77	14270804.51	39°17'55.4272"N	80°44'46.0204"W	1639.88	176.113	0.87	0.78	0.38		
8826.00	90.400	162.270	6990.73	1680.66	-1726.40	140.68	1712270.29	14270714.26	39°17'54.5340"N	80°44'45.6480"W	1732.12	175.341	0.81	0.13	0.80		
8920.00	91.230	161.110	6989.39	1774.65	-1815.63	170.21	1712299.80	14270625.06	39°17'53.6513"N	80°44'45.2756"W	1823.59	174.644	1.52	0.88	-1.23		
9015.00	90.180	161.680	6988.22	1869.64	-1905.65	200.52	1712330.10	14270535.07	39°17'52.7606"N	80°44'44.8934"W	1916.17	173.993	1.26	-1.11	0.60		
9110.00	89.780	160.170	6988.26	1964.63	-1995.43	231.56	1712361.13	14270445.33	39°17'51.8724"N	80°44'44.5017"W	2008.83	173.381	1.64	-0.42	-1.59		
9204.00	89.940	161.290	6988.49	2058.62	-2084.17	262.58	1712392.14	14270356.63	39°17'50.9945"N	80°44'44.1103"W	2100.64	172.819	1.20	0.17	1.19		
9299.00	90.430	160.490	6988.18	2153.62	-2173.93	293.68	1712423.23	14270266.90	39°17'50.1065"N	80°44'43.7179"W	2193.68	172.306	0.99	0.52	-0.84		
9393.00	90.030	161.780	6987.80	2247.62	-2262.88	324.08	1712453.61	14270177.99	39°17'49.2265"N	80°44'43.3345"W	2285.97	171.850	1.44	-0.43	1.37		

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Facility	Peggy June Pad	Wellbore	Russell Unit 1H AWB
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[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]			[ft]	[°]	["/100ft]	["/100ft]	["/100ft]	
9488.00	89.940	161.200	6987.83	2342.61	-2352.96	354.24	1712483.75	14270087.94	39°17'48.3353"N	80°44'42.9541"W	2379.48	171.438	0.62	-0.09	-0.61	
9583.00	90.030	160.270	6987.85	2437.61	-2442.64	385.58	1712515.09	14269998.30	39°17'47.4481"N	80°44'42.5586"W	2472.89	171.030	0.98	0.09	-0.98	
9677.00	90.740	160.930	6987.22	2531.60	-2531.30	416.80	1712546.30	14269909.67	39°17'46.5709"N	80°44'42.1647"W	2565.39	170.650	1.03	0.76	0.70	
9772.00	88.770	159.390	6987.63	2626.57	-2620.66	449.04	1712578.52	14269820.35	39°17'45.6869"N	80°44'41.7578"W	2658.85	170.277	2.63	-2.07	-1.62	
9866.00	89.970	161.260	6988.66	2720.54	-2709.16	480.68	1712610.15	14269731.89	39°17'44.8113"N	80°44'41.3585"W	2751.47	169.939	2.36	1.28	1.99	
9961.00	91.110	160.480	6987.77	2815.53	-2798.90	511.82	1712641.27	14269642.17	39°17'43.9234"N	80°44'40.9657"W	2845.32	169.637	1.45	1.20	-0.82	
10056.00	88.310	158.140	6988.25	2910.46	-2887.76	545.37	1712674.82	14269553.35	39°17'43.0442"N	80°44'40.5421"W	2938.81	169.305	3.84	-2.95	-2.46	
10151.00	90.280	161.320	6989.42	3005.39	-2976.86	578.28	1712707.71	14269464.29	39°17'42.1627"N	80°44'40.1267"W	3032.50	169.007	3.94	2.07	3.35	
10245.00	90.460	161.210	6988.81	3099.39	-3065.87	608.47	1712737.89	14269375.31	39°17'41.2820"N	80°44'39.7459"W	3125.67	168.775	0.22	0.19	-0.12	
10340.00	89.850	159.620	6988.55	3194.38	-3155.37	640.31	1712769.72	14269285.85	39°17'40.3966"N	80°44'39.3441"W	3219.69	168.529	1.79	-0.64	-1.67	
10435.00	90.340	159.940	6988.39	3289.34	-3244.52	673.15	1712802.54	14269196.74	39°17'39.5146"N	80°44'38.9297"W	3313.61	168.279	0.62	0.52	0.34	
10529.00	88.650	157.910	6989.22	3383.24	-3332.22	706.94	1712836.32	14269109.07	39°17'38.6468"N	80°44'38.5030"W	3406.38	168.022	2.81	-1.80	-2.16	
10624.00	90.180	160.980	6990.19	3478.17	-3421.15	740.29	1712869.66	14269020.17	39°17'37.7669"N	80°44'38.0820"W	3500.33	167.790	3.61	1.61	3.23	
10718.00	89.690	160.980	6990.30	3572.17	-3510.02	770.93	1712900.28	14268931.34	39°17'36.8877"N	80°44'37.6956"W	3593.69	167.613	0.52	-0.52	0.00	
10813.00	90.000	161.570	6990.56	3667.17	-3599.99	801.42	1712930.76	14268841.40	39°17'35.9976"N	80°44'37.3109"W	3688.12	167.450	0.70	0.33	0.62	
10908.00	88.310	159.750	6991.96	3762.15	-3689.61	832.88	1712962.21	14268751.82	39°17'35.1109"N	80°44'36.9141"W	3782.45	167.280	2.81	-1.78	-1.92	
11002.00	90.060	160.150	6993.29	3856.11	-3777.90	865.10	1712994.42	14268663.56	39°17'34.2374"N	80°44'36.5074"W	3875.69	167.102	1.91	1.86	0.43	
11097.00	90.030	160.620	6993.22	3951.09	-3867.39	896.99	1713026.30	14268574.11	39°17'33.3520"N	80°44'36.1050"W	3970.05	166.942	0.50	-0.03	0.49	
11192.00	90.030	163.420	6993.17	4046.08	-3957.74	926.31	1713055.61	14268483.79	39°17'32.4582"N	80°44'35.7353"W	4064.70	166.827	2.95	0.00	2.95	
11286.00	89.170	163.010	6993.83	4140.02	-4047.74	953.46	1713082.74	14268393.84	39°17'31.5680"N	80°44'35.3933"W	4158.51	166.745	1.01	-0.91	-0.44	
11381.00	90.180	164.840	6994.36	4234.92	-4139.01	979.76	1713109.03	14268302.60	39°17'30.6651"N	80°44'35.0621"W	4253.40	166.682	2.20	1.06	1.93	
11475.00	89.020	163.990	6995.02	4328.78	-4229.55	1005.01	1713134.28	14268212.09	39°17'29.7695"N	80°44'34.7442"W	4347.32	166.633	1.53	-1.23	-0.90	
11570.00	89.450	163.730	6996.29	4423.68	-4320.80	1031.42	1713160.67	14268120.88	39°17'28.8669"N	80°44'34.4116"W	4442.20	166.574	0.53	0.45	-0.27	
11665.00	89.820	163.940	6996.89	4518.59	-4412.04	1057.87	1713187.11	14268029.68	39°17'27.9643"N	80°44'34.0785"W	4537.09	166.517	0.45	0.39	0.22	
11760.00	89.880	163.810	6997.14	4613.49	-4503.30	1084.25	1713213.48	14267938.45	39°17'27.0616"N	80°44'33.7462"W	4631.99	166.463	0.15	0.06	-0.14	
11854.00	89.880	163.660	6997.34	4707.41	-4593.54	1110.58	1713239.80	14267848.25	39°17'26.1690"N	80°44'33.4146"W	4725.89	166.408	0.16	0.00	-0.16	
11949.00	89.850	164.130	6997.56	4802.31	-4684.81	1136.93	1713266.14	14267757.01	39°17'25.2661"N	80°44'33.0828"W	4820.80	166.359	0.50	-0.03	0.49	
12044.00	89.750	164.160	6997.90	4897.20	-4776.20	1162.89	1713292.09	14267665.66	39°17'24.3622"N	80°44'32.7560"W	4915.73	166.316	0.11	-0.11	0.03	
12139.00	88.920	163.520	6999.00	4992.10	-4867.44	1189.33	1713318.51	14267574.46	39°17'23.4597"N	80°44'32.4230"W	5010.63	166.269	1.10	-0.87	-0.67	
12234.00	89.820	163.300	7000.04	5087.03	-4958.48	1216.45	1713345.63	14267483.46	39°17'22.5591"N	80°44'32.0814"W	5105.51	166.216	0.98	0.95	-0.23	

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Actual Wellpath Report

Russell Unit 1H AWP Proj: 17616'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Russell Unit 1H
Field	Doddridge	API	47-017-06900-0000
Facility	Peggy June Pad	Wellbore	Russell Unit 1H AWB
Slot	Slot #03		

WELLPATH DATA (208 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
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]			[ft]	[°]	[°/100ft]	[°/100ft]	[°/100ft]	
12328.00	90.220	161.840	7000.01	5181.01	-5048.16	1244.60	1713373.77	14267393.81	39°17'21.6719"N	80°44'31.7265"W	5199.32	166.150	1.61	0.43	-1.55	
12423.00	89.850	160.920	6999.95	5276.01	-5138.18	1274.94	1713404.09	14267303.82	39°17'20.7813"N	80°44'31.3440"W	5294.00	166.065	1.04	-0.39	-0.97	
12518.00	89.480	160.510	7000.51	5371.00	-5227.85	1306.31	1713435.45	14267214.19	39°17'19.6942"N	80°44'30.9482"W	5388.59	165.970	0.58	-0.39	-0.43	
12613.00	89.600	160.220	7001.27	5465.98	-5317.32	1338.23	1713467.36	14267124.75	39°17'19.0089"N	80°44'30.5455"W	5483.14	165.874	0.33	0.13	-0.31	
12707.00	90.030	161.140	7001.57	5559.98	-5406.03	1369.33	1713498.45	14267036.08	39°17'18.1313"N	80°44'30.1532"W	5576.76	165.786	1.08	0.46	0.98	
12802.00	89.850	161.140	7001.67	5654.97	-5495.93	1400.04	1713529.15	14266946.22	39°17'17.2419"N	80°44'29.7659"W	5671.45	165.708	0.19	-0.19	0.00	
12897.00	89.660	160.440	7002.08	5749.97	-5585.64	1431.30	1713560.39	14266856.54	39°17'16.3544"N	80°44'29.3716"W	5766.10	165.627	0.76	-0.20	-0.74	
12991.00	89.850	161.100	7002.48	5843.96	-5674.39	1462.26	1713591.34	14266767.83	39°17'15.4763"N	80°44'28.9811"W	5859.77	165.550	0.73	0.20	0.70	
13086.00	90.580	161.200	7002.12	5938.96	-5764.30	1492.95	1713622.02	14266677.96	39°17'14.5868"N	80°44'28.5940"W	5954.49	165.479	0.78	0.77	0.11	
13181.00	90.650	161.150	7001.11	6033.95	-5854.21	1523.60	1713652.66	14266588.08	39°17'13.6973"N	80°44'28.2074"W	6049.23	165.412	0.09	0.07	-0.05	
13276.00	90.250	160.400	7000.36	6128.95	-5943.91	1554.88	1713683.93	14266498.42	39°17'12.8099"N	80°44'27.8129"W	6143.92	165.340	0.89	-0.42	-0.79	
13370.00	90.180	161.010	7000.01	6222.94	-6032.63	1585.94	1713714.98	14266409.73	39°17'11.9321"N	80°44'27.4211"W	6237.61	165.271	0.65	-0.07	0.65	
13465.00	90.490	161.300	6999.45	6317.94	-6122.53	1616.63	1713745.65	14266319.86	39°17'11.0426"N	80°44'27.0341"W	6332.37	165.209	0.45	0.33	0.31	
13560.00	90.550	160.900	6998.59	6412.93	-6212.41	1647.40	1713776.41	14266230.02	39°17'10.1535"N	80°44'26.6460"W	6427.12	165.148	0.43	0.06	-0.42	
13654.00	91.850	160.340	6996.62	6506.90	-6301.06	1678.58	1713807.58	14266141.41	39°17'9.2764"N	80°44'26.2527"W	6520.81	165.083	1.51	1.38	-0.60	
13749.00	91.380	161.290	6993.94	6601.86	-6390.75	1709.79	1713838.77	14266051.76	39°17'8.3891"N	80°44'25.8591"W	6615.51	165.022	1.12	-0.49	1.00	
13844.00	90.950	160.310	6992.01	6696.83	-6480.44	1741.03	1713870.00	14265962.10	39°17'7.5017"N	80°44'25.4651"W	6710.24	164.962	1.13	-0.45	-1.03	
13939.00	91.910	160.590	6989.64	6791.79	-6569.94	1772.81	1713901.76	14265872.64	39°17'6.6162"N	80°44'25.0642"W	6804.92	164.899	1.05	1.01	0.29	
14033.00	90.120	160.230	6987.98	6885.76	-6658.48	1804.32	1713933.26	14265784.13	39°17'5.7402"N	80°44'24.6667"W	6898.61	164.838	1.94	-1.90	-0.38	
14128.00	91.790	160.500	6986.39	6980.73	-6747.94	1836.23	1713965.17	14265694.71	39°17'4.8551"N	80°44'24.2641"W	6993.31	164.777	1.78	1.76	0.28	
14222.00	89.880	158.730	6985.02	7074.67	-6836.03	1868.97	1713997.89	14265606.65	39°17'3.9835"N	80°44'23.8510"W	7086.92	164.709	2.77	-2.03	-1.88	
14317.00	92.060	160.120	6983.41	7169.59	-6924.95	1902.35	1714031.26	14265517.76	39°17'3.1037"N	80°44'23.4297"W	7181.50	164.639	2.72	2.29	1.46	
14412.00	90.550	162.060	6981.25	7264.56	-7014.80	1933.13	1714062.02	14265427.95	39°17'2.2148"N	80°44'23.0416"W	7276.29	164.593	2.59	-1.59	2.04	
14506.00	90.250	158.310	6980.59	7358.52	-7103.21	1964.98	1714093.87	14265339.57	39°17'1.3400"N	80°44'22.6397"W	7369.99	164.537	4.00	-0.32	-3.99	
14601.00	91.170	159.950	6979.42	7453.44	-7191.97	1998.82	1714127.69	14265250.85	39°17'0.4618"N	80°44'22.2126"W	7464.56	164.468	1.98	0.97	1.73	
14696.00	90.920	160.420	6977.68	7548.41	-7281.33	2031.02	1714159.88	14265161.53	39°16'59.5777"N	80°44'21.8064"W	7559.28	164.414	0.56	-0.26	0.49	
14790.00	91.170	160.650	6975.97	7642.38	-7369.94	2062.34	1714191.18	14265072.95	39°16'58.7010"N	80°44'21.4113"W	7653.06	164.367	0.36	0.27	0.24	
14885.00	91.510	161.090	6973.75	7737.35	-7459.67	2093.46	1714222.30	14264983.26	39°16'57.8133"N	80°44'21.0188"W	7747.86	164.324	0.59	0.36	0.46	
14979.00	91.170	160.460	6971.55	7831.32	-7548.40	2124.41	1714253.23	14264894.56	39°16'56.9354"N	80°44'20.6285"W	7841.65	164.281	0.76	-0.36	-0.67	
15074.00	93.080	160.980	6968.03	7926.24	-7638.01	2155.75	1714284.56	14264804.99	39°16'56.0488"N	80°44'20.2332"W	7936.40	164.239	2.08	2.01	0.55	

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Actual Wellpath Report

Russell Unit 1H AWP Proj: 17616'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Russell Unit 1H
Field	Doddridge	API	47-017-06900-0000
Facility	Peggy June Pad	Wellbore	Russell Unit 1H AWB
Slot	Slot #03		

WELLPATH DATA (208 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]		
15168.00	92.560	159.770	6963.40	8020.12	-7726.44	2187.28	1714316.08	14264716.59	39°16'55.1739"N	80°44'19.8355"W	8030.07	164.194	1.40	-0.55	-1.29		
15263.00	93.140	161.520	6958.68	8114.99	-7815.95	2218.73	1714347.51	14264627.11	39°16'54.2683"N	80°44'19.4389"W	8124.77	164.152	1.94	0.61	1.84		
15357.00	92.830	159.390	6953.78	8208.84	-7904.41	2250.13	1714378.90	14264538.69	39°16'53.4131"N	80°44'19.0428"W	8218.45	164.110	2.29	-0.33	-2.27		
15452.00	93.170	161.470	6948.81	8303.69	-7993.80	2281.91	1714410.67	14264449.34	39°16'52.5287"N	80°44'18.6419"W	8313.12	164.068	2.22	0.36	2.19		
15547.00	90.340	160.730	6945.90	8398.64	-8083.62	2312.66	1714441.41	14264359.55	39°16'51.6400"N	80°44'18.2541"W	8407.94	164.035	3.08	-2.98	-0.78		
15642.00	90.520	161.150	6945.19	8493.63	-8173.41	2343.69	1714472.42	14264269.80	39°16'50.7517"N	80°44'17.8629"W	8502.80	164.000	0.48	0.19	0.44		
15736.00	91.690	162.220	6943.38	8587.61	-8262.63	2373.22	1714501.94	14264180.61	39°16'49.8590"N	80°44'17.4907"W	8596.70	163.975	1.69	1.24	1.14		
15831.00	92.340	162.270	6940.04	8682.54	-8353.05	2402.17	1714530.88	14264090.23	39°16'48.9745"N	80°44'17.1258"W	8691.60	163.956	0.69	0.68	0.05		
15926.00	91.020	161.840	6937.25	8777.49	-8443.39	2431.43	1714560.12	14263999.93	39°16'48.0808"N	80°44'16.7571"W	8786.50	163.935	1.46	-1.39	-0.45		
16020.00	90.490	161.390	6936.01	8871.48	-8532.58	2461.07	1714589.76	14263910.77	39°16'47.1984"N	80°44'16.3834"W	8880.42	163.911	0.74	-0.56	-0.48		
16115.00	89.540	159.370	6935.99	8966.46	-8622.06	2492.97	1714621.64	14263821.33	39°16'46.3131"N	80°44'15.9811"W	8975.23	163.873	2.35	-1.00	-2.13		
16209.00	92.400	162.860	6934.40	9060.42	-8710.96	2523.38	1714652.04	14263732.46	39°16'45.4336"N	80°44'15.5976"W	9069.09	163.845	4.80	3.04	3.71		
16304.00	92.220	161.690	6930.57	9155.33	-8801.38	2552.28	1714680.93	14263642.08	39°16'44.5391"N	80°44'15.2334"W	9163.97	163.829	1.25	-0.19	-1.23		
16399.00	91.970	161.940	6927.09	9250.26	-8891.57	2581.91	1714710.55	14263551.92	39°16'43.6468"N	80°44'14.8600"W	9258.85	163.808	0.37	-0.26	0.26		
16493.00	92.310	162.170	6923.58	9344.19	-8980.94	2610.85	1714739.48	14263462.59	39°16'42.7627"N	80°44'14.4952"W	9352.74	163.790	0.44	0.36	0.24		
16588.00	90.460	161.530	6921.29	9439.15	-9071.18	2640.43	1714769.05	14263372.38	39°16'41.8699"N	80°44'14.1224"W	9447.66	163.771	2.06	-1.95	-0.67		
16683.00	90.430	158.610	6920.55	9534.12	-9160.48	2672.81	1714801.41	14263283.12	39°16'40.9864"N	80°44'13.7139"W	9542.45	163.734	3.07	-0.03	-3.07		
16777.00	92.460	162.090	6918.18	9628.06	-9248.96	2704.41	1714833.00	14263194.68	39°16'40.1110"N	80°44'13.3155"W	9636.24	163.701	4.28	2.16	3.70		
16871.00	91.050	161.860	6915.30	9722.00	-9338.30	2733.48	1714862.06	14263105.37	39°16'39.2271"N	80°44'12.9491"W	9730.15	163.684	1.52	-1.50	-0.24		
16966.00	91.170	161.130	6913.46	9816.98	-9428.37	2763.63	1714892.19	14263015.33	39°16'38.3360"N	80°44'12.5691"W	9825.06	163.663	0.78	0.13	-0.77		
17061.00	91.940	161.270	6910.88	9911.95	-9518.27	2794.23	1714922.78	14262925.47	39°16'37.4466"N	80°44'12.1832"W	9919.94	163.640	0.82	0.81	0.15		
17155.00	92.030	161.200	6907.62	10005.89	-9607.22	2824.45	1714952.99	14262836.56	39°16'36.5666"N	80°44'11.8022"W	10013.80	163.617	0.12	0.10	-0.07		
17249.00	91.720	161.260	6904.55	10099.84	-9696.17	2854.68	1714983.21	14262747.64	39°16'35.6866"N	80°44'11.4211"W	10107.67	163.595	0.34	-0.33	0.06		
17344.00	91.510	160.990	6901.87	10194.80	-9786.03	2885.40	1715013.92	14262657.82	39°16'34.7976"N	80°44'11.0338"W	10202.54	163.572	0.36	-0.22	-0.28		
17439.00	90.990	160.980	6899.80	10289.78	-9875.82	2916.35	1715044.85	14262568.06	39°16'33.9092"N	80°44'10.6436"W	10297.42	163.548	0.55	-0.55	-0.01		
17533.00	91.020	160.490	6898.15	10383.76	-9964.54	2947.35	1715075.85	14262479.37	39°16'33.0314"N	80°44'10.2526"W	10391.30	163.523	0.52	0.03	-0.52		
17591.00	91.480	162.290	6896.89	10441.74	-10019.50	2965.86	1715094.34	14262424.44	39°16'32.4877"N	80°44'10.0193"W	10449.24	163.511	3.20	0.79	3.10		
17616.00	91.480	162.290	6896.24	10466.73	-10043.30	2973.46	1715101.94	14262400.65	39°16'32.2522"N	80°44'9.9235"W	10474.23	163.508	0.00	0.00	0.00	Projected MD at TD: 17616'	

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Russell Unit 1H AWP Proj: 17616'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Russell Unit 1H
Field	Doddridge	API	47-017-06900-0000
Facility	Peggy June Pad	Wellbore	Russell Unit 1H AWB
Slot	Slot #03		

HOLE & CASING SECTIONS - Ref Wellbore: Russell Unit 1H AWB Ref Wellpath: Russell Unit 1H AWP Proj: 17616'									
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	30.00	110.00	80.00	30.00	110.00	0.00	0.00	0.06	0.20
17.5in Open Hole	110.00	480.00	370.00	110.00	480.00	0.06	0.20	-0.52	1.19
13.375in Casing Surface	30.00	480.00	450.00	30.00	480.00	0.00	0.00	-0.52	1.19
12.25in Open Hole	480.00	2611.00	2131.00	480.00	2606.05	-0.52	1.19	75.85	10.41
9.625in Casing Intermediate	30.00	2611.00	2581.00	30.00	2606.05	0.00	0.00	75.85	10.41
8.75in Open Hole	2611.00	6192.00	3581.00	2606.05	6143.86	75.85	10.41	297.01	-438.18
8.5in Open Hole	6192.00	17616.00	11424.00	6143.86	6896.24	297.01	-438.18	-10043.30	2973.46
5.5in Casing Production	30.00	17616.00	17586.00	30.00	6896.24	0.00	0.00	-10043.30	2973.46

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Russell Unit 1H POE Rev-2	6954.00	-166.04	-386.81	1711743.00	14272274.00	39°18'9.9707"N	80°44'52.3025"W	point
Russell Unit 1H BHL Rev-2	6999.00	-10051.95	2952.51	1715081.00	14262392.00	39°16'32.1673"N	80°44'10.1903"W	point
Russell Unit 1H LP Rev-2	6999.00	-402.76	-306.85	1711822.93	14272037.37	39°18'7.6288"N	80°44'51.2937"W	point
Russell Unit 1H 50' L/R Hard Line Rev-2	7250.00	-5108.99	1282.85	1713412.00	14267333.00	39°17'21.0696"N	80°44'31.2423"W	rectangle
2D Rectangle 10434.7 x 100.								

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Actual Wellpath Report

Russell Unit 1H AWP Proj: 17616'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Russell Unit 1H
Field	Doddridge	API	47-017-06900-0000
Facility	Peggy June Pad	Wellbore	Russell Unit 1H AWB
Slot	Slot #03		

WELLPATH COMPOSITION - Ref Wellbore: Russell Unit 1H AWB Ref Wellpath: Russell Unit 1H AWP Proj: 17616'					
Start MD (ft)	End MD (ft)	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
30.00	484.00	Gyrodatta 2015 - GC+WIR+DPIPE	01_Gyrodatta MS Gyro <17-1/2"> (100'-469')	Russell Unit 1H AWB	13/Dec/2020
484.00	2525.00	OWSG MWD rev2 + HRGM	02_Premier MWD <12-1/4"> (469')(583'-2510')	Russell Unit 1H AWB	13/Dec/2020
2525.00	6127.00	OWSG MWD rev2 + HRGM	03_Premier MWD <8-3/4"> (2510')(2639'-6112')	Russell Unit 1H AWB	13/Dec/2020
6127.00	17616.00	BH AutoTrak Curve/eXpress (2019) (HRGM, X Short spacing)	04_BH AT Curve <8-1/2"> (6127')(6175'-17591')	Russell Unit 1H AWB	03/Feb/2021

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Russell Unit 1H AWP Proj: 17616'

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REFERENCE WELLPATH IDENTIFICATION			
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Field	Doddridge	API	47-017-06900-0000
Facility	Peggy June Pad	Wellbore	Russell Unit 1H AWB
Slot	Slot #03		

COMMENTS

Wellpath general comments

API: 47-017-06900-0000

BH Job #: 110695216

Rig: H&P 519

Duration: 2/4/2021-2/8/2021

Gyrodata MS Gyro <17-1/2"> (100'-469')

Premier MWD <12-1/4"> (469')(583'-2510')

Premier MWD <8-3/4"> (2510')(2639'-6112')

BH AT Curve <8-1/2"> (6127')(6175'-17591')

Sycamore: 6569' MD

Middlesex: 6811' MD

Burkett: 7021' MD

Tully: 7078' MD

Marcellus POE: 7230' MD

Projected MD at TD: 17616'

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