



Actual Wellpath Report

Cortina Unit 1H AWP Proj: 18397'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Cortina Unit 1H
Field	Doddridge	API	47-017-06889-0000
Facility	George Scott Pad	Wellbore	Cortina Unit 1H AWB
Slot	Slot #07		

REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Delaset
Scale	0.999607	Report Generated	11/24/2019 at 10:08:46 PM
Convergence at slot	0.17° 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	-8.11	28.87	1715833.55	14274025.12	39°18'27.1690"N	80°44'0.1811"W
Facility Reference Pt			1715804.69	14274033.23	39°18'27.2500"N	80°44'0.5480"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 317 (RKB) to Facility Vertical Datum	1308.50ft
Horizontal Reference Pt	Slot	H&P 317 (RKB) to Mean Sea Level	1308.50ft
Vertical Reference Pt	H&P 317 (RKB)	H&P 317 (RKB) to Ground Level at Slot (Slot #07)	25.50ft
MD Reference Pt	H&P 317 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	342.51°

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WELLPATH DATA (218 stations) † = interpolated, ‡ = extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
0.00	0.000	223.640	0.00	0.00	0.00	0.00	1715833.55	14274025.12	39°18'27.1690"N	80°44'0.1811"W	0.00	0.000	0.00	0.00	0.00	
25.50	0.000	223.640	25.50	0.00	0.00	0.00	1715833.55	14274025.12	39°18'27.1690"N	80°44'0.1811"W	0.00	0.000	0.00	0.00	0.00	
50.00	0.240	223.640	50.00	-0.02	-0.04	-0.04	1715833.51	14274025.08	39°18'27.1686"N	80°44'0.1815"W	0.05	223.640	0.98	0.98	0.00	Gyrodata MS Gyro <17-1/2">(50'-480')
75.00	0.260	225.150	75.00	-0.08	-0.12	-0.11	1715833.44	14274025.01	39°18'27.1679"N	80°44'0.1825"W	0.16	224.174	0.08	0.08	6.04	
100.00	0.280	232.410	100.00	-0.12	-0.19	-0.20	1715833.35	14274024.93	39°18'27.1671"N	80°44'0.1836"W	0.28	226.113	0.15	0.08	27.84	
125.00	0.310	210.470	125.00	-0.19	-0.29	-0.28	1715833.27	14274024.83	39°18'27.1662"N	80°44'0.1847"W	0.40	224.431	0.46	0.12	-86.56	
150.00	0.420	209.620	150.00	-0.30	-0.43	-0.36	1715833.19	14274024.69	39°18'27.1648"N	80°44'0.1857"W	0.56	220.358	0.44	0.44	-3.40	
175.00	0.500	215.670	175.00	-0.43	-0.59	-0.47	1715833.08	14274024.53	39°18'27.1631"N	80°44'0.1871"W	0.76	218.395	0.37	0.32	24.20	
200.00	0.480	215.740	200.00	-0.55	-0.77	-0.60	1715832.95	14274024.35	39°18'27.1614"N	80°44'0.1887"W	0.97	217.803	0.08	-0.08	0.28	
225.00	0.540	209.490	225.00	-0.70	-0.96	-0.72	1715832.84	14274024.16	39°18'27.1596"N	80°44'0.1902"W	1.19	216.805	0.33	0.24	-25.00	
250.00	0.660	205.100	249.99	-0.88	-1.19	-0.83	1715832.72	14274023.93	39°18'27.1573"N	80°44'0.1917"W	1.45	215.060	0.51	0.48	-17.56	
275.00	0.570	213.270	274.99	-1.07	-1.42	-0.96	1715832.59	14274023.70	39°18'27.1550"N	80°44'0.1934"W	1.72	214.100	0.50	-0.36	32.68	
300.00	0.550	205.900	299.99	-1.23	-1.63	-1.08	1715832.47	14274023.49	39°18'27.1529"N	80°44'0.1949"W	1.96	213.548	0.30	-0.08	-29.48	
325.00	0.540	210.120	324.99	-1.40	-1.84	-1.20	1715832.35	14274023.28	39°18'27.1508"N	80°44'0.1963"W	2.20	212.948	0.17	-0.04	16.88	
350.00	0.500	211.900	349.99	-1.55	-2.04	-1.31	1715832.24	14274023.08	39°18'27.1489"N	80°44'0.1978"W	2.43	212.763	0.17	-0.16	7.12	
375.00	0.480	202.100	374.99	-1.70	-2.23	-1.41	1715832.14	14274022.89	39°18'27.1470"N	80°44'0.1991"W	2.64	212.307	0.34	-0.08	-39.20	
400.00	0.460	209.760	399.99	-1.85	-2.41	-1.50	1715832.05	14274022.71	39°18'27.1452"N	80°44'0.2002"W	2.84	211.842	0.26	-0.08	30.64	
425.00	0.540	207.760	424.99	-2.00	-2.60	-1.60	1715831.95	14274022.52	39°18'27.1433"N	80°44'0.2015"W	3.06	211.617	0.33	0.32	-8.00	
450.00	0.490	212.200	449.99	-2.15	-2.80	-1.72	1715831.84	14274022.32	39°18'27.1414"N	80°44'0.2030"W	3.28	211.498	0.26	-0.20	17.76	
480.00	0.590	221.700	479.98	-2.32	-3.02	-1.89	1715831.66	14274022.10	39°18'27.1392"N	80°44'0.2052"W	3.56	211.963	0.45	0.33	31.67	
609.00	0.380	258.640	608.98	-2.61	-3.60	-2.75	1715830.80	14274021.52	39°18'27.1335"N	80°44'0.2161"W	4.53	217.326	0.28	-0.16	28.64	APS EM <12-1/4">(480')(609'-2575')
701.00	0.470	257.480	700.98	-2.55	-3.75	-3.41	1715830.14	14274021.38	39°18'27.1321"N	80°44'0.2246"W	5.07	222.360	0.10	0.10	-1.26	
794.00	0.500	232.200	793.97	-2.65	-4.08	-4.11	1715829.44	14274021.05	39°18'27.1288"N	80°44'0.2335"W	5.79	225.221	0.23	0.03	-27.18	
888.00	0.560	186.860	887.97	-3.21	-4.78	-4.49	1715829.06	14274020.34	39°18'27.1219"N	80°44'0.2383"W	6.56	223.165	0.44	0.06	-48.23	
983.00	1.600	181.110	982.95	-4.89	-6.57	-4.57	1715828.98	14274018.55	39°18'27.1042"N	80°44'0.2394"W	8.00	214.807	1.10	1.09	-6.05	
1078.00	1.990	176.580	1077.91	-7.75	-9.54	-4.50	1715829.06	14274015.58	39°18'27.0748"N	80°44'0.2386"W	10.55	205.222	0.44	0.41	-4.77	
1173.00	1.040	152.420	1172.87	-10.20	-11.95	-4.00	1715829.55	14274013.17	39°18'27.0510"N	80°44'0.2324"W	12.60	198.491	1.18	-1.00	-25.43	
1268.00	0.840	82.220	1267.86	-11.17	-12.62	-2.91	1715830.64	14274012.50	39°18'27.0443"N	80°44'0.2185"W	12.95	192.975	1.15	-0.21	-73.89	
1363.00	0.700	93.630	1362.85	-11.49	-12.57	-1.64	1715831.91	14274012.56	39°18'27.0449"N	80°44'0.2024"W	12.67	187.433	0.22	-0.15	12.01	
1457.00	0.260	48.720	1456.85	-11.61	-12.46	-0.91	1715832.64	14274012.66	39°18'27.0459"N	80°44'0.1930"W	12.50	184.159	0.58	-0.47	-47.78	

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Field	Doddridge		API	47-017-06889-0000
Facility	George Scott Pad		Wellbore	Cortina Unit 1H AWB
Slot	Slot #07			

WELLPATH DATA (218 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
1552.00	0.300	177.840	1551.85	-11.77	-12.57	-0.73	1715832.62	14274012.56	39°18'27.0448"N	80°44'0.1909"W	12.59	183.346	0.53	0.04	135.92	
1647.00	0.540	204.470	1646.85	-12.34	-13.22	-0.91	1715832.64	14274011.90	39°18'27.0383"N	80°44'0.1931"W	13.26	183.940	0.32	0.25	28.03	
1742.00	0.870	208.540	1741.84	-13.17	-14.27	-1.44	1715832.11	14274010.86	39°18'27.0281"N	80°44'0.1999"W	14.34	185.768	0.35	0.35	4.28	
1837.00	1.390	209.310	1836.82	-14.46	-15.90	-2.35	1715831.20	14274009.22	39°18'27.0119"N	80°44'0.2115"W	16.08	188.404	0.55	0.55	0.81	
1932.00	0.670	266.730	1931.81	-15.11	-16.94	-3.47	1715830.08	14274008.19	39°18'27.0017"N	80°44'0.2258"W	17.29	191.570	1.24	-0.76	60.44	
2026.00	0.860	308.520	2025.80	-14.40	-16.53	-4.57	1715828.96	14274008.59	39°18'27.0057"N	80°44'0.2398"W	17.15	195.448	0.61	0.20	44.46	
2121.00	1.120	274.500	2120.79	-13.46	-16.02	-6.05	1715827.50	14274009.11	39°18'27.0109"N	80°44'0.2586"W	17.12	200.701	0.66	0.27	-35.81	
2216.00	1.710	272.240	2215.76	-12.63	-15.89	-8.39	1715825.16	14274009.24	39°18'27.0122"N	80°44'0.2884"W	17.97	207.850	0.62	0.62	-2.38	
2311.00	1.710	259.730	2310.72	-11.97	-16.08	-11.21	1715822.35	14274009.04	39°18'27.0104"N	80°44'0.3242"W	19.60	214.863	0.39	0.00	-13.17	
2406.00	0.820	224.140	2405.69	-12.12	-16.83	-13.07	1715820.48	14274008.30	39°18'27.0031"N	80°44'0.3480"W	21.31	217.848	1.21	-0.94	-37.46	
2501.00	0.960	155.560	2500.68	-13.23	-18.04	-13.22	1715820.34	14274007.09	39°18'26.9911"N	80°44'0.3499"W	22.36	216.233	1.06	0.15	-72.19	
2575.00	1.410	143.660	2574.67	-14.71	-19.34	-12.42	1715821.13	14274005.79	39°18'26.9783"N	80°44'0.3398"W	22.98	212.718	0.69	0.61	-16.08	
2639.00	1.950	128.650	2638.64	-16.36	-20.65	-11.10	1715822.45	14274004.48	39°18'26.9652"N	80°44'0.3231"W	23.45	208.270	1.08	0.84	-23.45	APS EM <8-3/4"> (2575)(2639-6722)
2734.00	1.810	121.440	2733.59	-18.83	-22.44	-8.56	1715824.99	14274002.69	39°18'26.9475"N	80°44'0.2908"W	24.02	200.884	0.29	-0.15	-7.59	
2829.00	1.350	120.140	2828.55	-20.79	-23.79	-6.31	1715827.24	14274001.34	39°18'26.9341"N	80°44'0.2623"W	24.61	194.867	0.49	-0.48	-1.37	
2924.00	4.630	114.320	2923.41	-24.17	-25.93	-1.85	1715831.70	14273999.20	39°18'26.9128"N	80°44'0.2056"W	25.99	184.084	3.46	3.45	-6.13	
3022.00	7.270	101.760	3020.88	-29.84	-28.82	7.83	1715841.37	14273996.31	39°18'26.8839"N	80°44'0.0826"W	29.86	164.809	2.99	2.69	-12.82	
3117.00	7.430	105.460	3115.10	-36.12	-31.68	19.63	1715853.17	14273993.45	39°18'26.8553"N	80°43'59.9325"W	37.27	148.219	0.53	0.17	3.89	
3211.00	9.510	121.990	3208.08	-45.33	-37.42	32.08	1715865.62	14273987.72	39°18'26.7982"N	80°43'59.7744"W	49.29	139.395	3.39	2.21	17.59	
3306.00	11.830	127.690	3301.43	-59.29	-47.53	46.44	1715879.97	14273977.61	39°18'26.6979"N	80°43'59.5920"W	66.45	135.664	2.68	2.44	6.00	
3401.00	10.750	123.730	3394.60	-74.19	-58.41	61.52	1715895.04	14273966.74	39°18'26.5900"N	80°43'59.4006"W	84.83	133.514	1.40	-1.14	-4.17	
3496.00	11.470	117.440	3487.82	-87.77	-67.68	77.27	1715910.79	14273957.47	39°18'26.4978"N	80°43'59.2006"W	102.72	131.215	1.48	0.76	-6.62	
3591.00	10.510	110.450	3581.08	-99.77	-75.06	93.77	1715927.28	14273950.09	39°18'26.4244"N	80°43'58.9909"W	120.11	128.675	1.73	-1.01	-7.36	
3686.00	10.900	116.130	3674.43	-111.30	-82.04	109.95	1715943.46	14273943.11	39°18'26.3549"N	80°43'58.7853"W	137.19	126.728	1.18	0.41	5.98	
3780.00	10.200	115.040	3766.84	-123.05	-89.48	125.47	1715958.97	14273935.68	39°18'26.2810"N	80°43'58.5882"W	154.11	125.494	0.77	-0.74	-1.16	
3875.00	9.290	112.160	3860.47	-133.63	-95.93	140.20	1715973.69	14273929.23	39°18'26.2168"N	80°43'58.4011"W	169.88	124.382	1.09	-0.96	-3.03	
3970.00	10.020	115.660	3954.12	-144.18	-102.40	154.75	1715988.24	14273922.76	39°18'26.1524"N	80°43'58.2162"W	185.56	123.494	0.99	0.77	3.68	
4065.00	8.990	110.930	4047.82	-154.44	-108.63	169.13	1716002.61	14273916.53	39°18'26.0904"N	80°43'58.0335"W	201.01	122.713	1.36	-1.08	-4.98	
4160.00	9.780	119.080	4141.55	-164.92	-115.21	183.12	1716016.59	14273909.96	39°18'26.0250"N	80°43'57.8558"W	216.34	122.176	1.63	0.83	8.58	
4255.00	11.640	118.750	4234.89	-177.70	-123.74	198.57	1716032.04	14273901.43	39°18'25.9402"N	80°43'57.6595"W	233.97	121.929	1.96	1.96	-0.35	

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4350.00	10.690	110.410	4326.10	-190.03	-131.42	215.23	1716048.70	14273893.75	39°18'25.8638"N	80°43'57.4479"W	252.19	121.408	1.97	-1.00	-8.78	
4444.00	11.160	117.630	4420.40	-201.83	-138.68	231.46	1716064.92	14273886.49	39°18'25.7916"N	80°43'57.2416"W	269.83	120.928	1.54	0.50	7.68	
4539.00	11.320	121.400	4513.58	-215.37	-147.80	247.57	1716081.02	14273877.37	39°18'25.7009"N	80°43'57.0371"W	288.33	120.838	0.79	0.17	3.97	
4634.00	12.230	126.600	4606.58	-230.56	-158.67	263.60	1716097.05	14273866.51	39°18'25.5931"N	80°43'56.8336"W	307.67	121.045	1.48	0.96	5.54	
4729.00	11.040	119.360	4699.63	-245.35	-169.14	279.60	1716113.04	14273856.05	39°18'25.4891"N	80°43'56.6304"W	326.78	121.171	1.99	-1.25	-7.68	
4823.00	10.140	107.540	4792.04	-256.67	-176.05	295.34	1716128.77	14273849.14	39°18'25.4204"N	80°43'56.4305"W	343.83	120.799	2.50	-0.96	-12.57	
4918.00	8.850	96.490	4885.75	-264.44	-179.39	310.57	1716144.00	14273845.80	39°18'25.3869"N	80°43'56.2368"W	358.66	120.011	2.34	-1.36	-11.63	
5013.00	7.570	80.580	4979.78	-268.29	-179.19	324.01	1716157.43	14273846.00	39°18'25.3885"N	80°43'56.0659"W	370.26	118.945	2.73	-1.35	-16.75	
5108.00	7.830	73.010	5073.93	-269.22	-176.28	336.37	1716169.79	14273848.91	39°18'25.4169"N	80°43'55.9085"W	379.76	117.657	1.10	0.27	-7.97	
5205.00	7.690	62.320	5170.04	-268.13	-171.33	348.44	1716181.85	14273853.85	39°18'25.4654"N	80°43'55.7548"W	388.28	116.184	1.49	-0.14	-11.02	
5300.00	10.280	83.920	5263.90	-268.68	-167.48	362.50	1716195.91	14273857.71	39°18'25.5031"N	80°43'55.5757"W	399.32	114.798	4.43	2.73	22.74	
5395.00	10.980	91.830	5357.27	-273.35	-166.87	379.98	1716213.38	14273858.31	39°18'25.5086"N	80°43'55.3534"W	415.00	113.709	1.70	0.74	8.33	
5490.00	11.690	99.970	5450.42	-280.79	-168.83	398.50	1716231.89	14273856.36	39°18'25.4887"N	80°43'55.1178"W	432.79	112.960	1.84	0.75	8.57	
5585.00	10.760	112.100	5543.62	-290.88	-173.83	416.20	1716249.58	14273851.36	39°18'25.4388"N	80°43'54.8929"W	451.04	112.669	2.67	-0.98	12.77	
5679.00	9.610	121.750	5636.14	-302.41	-181.26	431.00	1716264.38	14273843.93	39°18'25.3649"N	80°43'54.7048"W	467.57	112.810	2.18	-1.22	10.27	
5774.00	9.290	114.170	5729.86	-313.52	-188.57	444.74	1716278.11	14273836.62	39°18'25.2922"N	80°43'54.5303"W	483.07	112.977	1.35	-0.34	-7.98	
5869.00	10.120	117.850	5823.50	-324.55	-195.61	459.12	1716292.48	14273829.58	39°18'25.2222"N	80°43'54.3477"W	499.05	113.077	1.09	0.87	3.87	
5964.00	10.330	129.590	5917.00	-337.64	-204.94	473.06	1716306.42	14273820.26	39°18'25.1296"N	80°43'54.1707"W	515.55	113.423	2.20	0.22	12.36	
6058.00	11.400	119.190	6009.32	-351.48	-214.84	487.67	1716321.02	14273810.36	39°18'25.0313"N	80°43'53.9852"W	532.90	113.776	2.37	1.14	-11.06	
6153.00	12.350	119.660	6102.29	-365.75	-224.45	504.69	1716338.04	14273800.76	39°18'24.9359"N	80°43'53.7690"W	552.35	113.976	1.01	1.00	0.49	
6248.00	15.960	108.700	6194.40	-380.92	-233.67	525.90	1716359.24	14273791.54	39°18'24.8441"N	80°43'53.4995"W	575.48	113.957	4.72	3.80	-11.54	
6343.00	16.100	84.890	6285.81	-391.47	-236.69	551.42	1716384.75	14273788.53	39°18'24.8135"N	80°43'53.1750"W	600.07	113.231	6.88	0.15	-25.06	
6438.00	17.230	51.680	6377.02	-389.29	-226.77	575.64	1716408.96	14273798.44	39°18'24.9109"N	80°43'52.8666"W	618.69	111.502	9.96	1.19	-34.96	
6532.00	18.150	24.090	6466.73	-373.36	-204.73	592.56	1716425.88	14273820.47	39°18'25.1282"N	80°43'52.6504"W	626.93	109.060	8.89	0.98	-29.35	
6627.00	24.530	4.430	6555.29	-343.92	-171.49	600.14	1716433.46	14273853.70	39°18'25.4566"N	80°43'52.5527"W	624.16	105.947	10.01	6.72	-20.69	
6722.00	29.710	350.830	6639.89	-302.27	-128.51	597.91	1716431.23	14273896.66	39°18'25.8813"N	80°43'52.5795"W	611.57	102.130	8.47	5.45	-14.32	
6766.00	32.380	347.690	6677.59	-279.74	-106.23	593.66	1716426.98	14273918.93	39°18'26.1017"N	80°43'52.6327"W	603.09	100.145	7.10	6.07	-7.14	BH AT Curve <8-1/2">(6722')(6766'-18373')
6832.00	36.562	343.526	6732.00	-242.46	-70.09	584.31	1716417.63	14273955.05	39°18'26.4591"N	80°43'52.7502"W	588.50	96.840	7.27	6.34	-6.31	Middlesex: 6832' MD
6861.00	38.440	341.950	6755.00	-224.81	-53.24	579.07	1716412.39	14273971.90	39°18'26.6259"N	80°43'52.8163"W	581.51	95.253	7.27	6.47	-5.44	
6956.00	46.470	341.420	6825.04	-160.74	7.58	558.91	1716392.24	14274032.70	39°18'27.2276"N	80°43'53.0704"W	558.97	89.223	8.46	8.45	-0.56	

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Actual Wellpath Report

Cortina Unit 1H AWP Proj: 18397'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Cortina Unit 1H
Field	Doddridge	API	47-017-06889-0000
Facility	George Scott Pad	Wellbore	Cortina Unit 1H AWB
Slot	Slot #07		

WELLPATH DATA (218 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
7003.00	50.630	341.560	6856.14	-125.53	40.98	547.73	1716381.07	14274066.09	39°18'27.5580"N	80°43'53.2114"W	549.27	85.721	8.85	8.85	0.30	
7039.00†	53.825	341.165	6878.19	-97.08	67.94	538.64	1716371.98	14274093.03	39°18'27.8248"N	80°43'53.3261"W	542.91	82.811	8.92	8.87	-1.10	Burkett: 7039' MD
7051.00	54.890	341.040	6885.18	-87.33	77.17	535.48	1716368.82	14274102.26	39°18'27.9160"N	80°43'53.3659"W	541.01	81.800	8.92	8.88	-1.04	
7092.00†	58.510	341.373	6907.69	-53.08	109.60	524.45	1716357.79	14274134.68	39°18'28.2370"N	80°43'53.5051"W	535.78	78.196	8.86	8.83	0.81	Tully: 7092' MD
7098.00	59.040	341.420	6910.80	-47.95	114.47	522.81	1716356.15	14274139.54	39°18'28.2851"N	80°43'53.5257"W	535.19	77.650	8.86	8.83	0.78	
7146.00	62.000	341.160	6934.42	-6.18	154.04	509.41	1716342.75	14274179.10	39°18'28.6766"N	80°43'53.6947"W	532.19	73.175	6.18	6.17	-0.54	
7193.00	65.830	340.460	6955.08	36.01	193.90	495.53	1716328.88	14274218.94	39°18'29.0709"N	80°43'53.8698"W	532.11	68.630	8.26	8.15	-1.49	
7241.00	69.560	340.400	6973.30	80.38	235.73	480.66	1716314.02	14274260.76	39°18'29.4849"N	80°43'54.0574"W	535.35	63.875	7.77	7.77	-0.12	
7243.00†	69.715	340.457	6973.99	82.25	237.50	480.03	1716313.39	14274262.52	39°18'29.5023"N	80°43'54.0653"W	535.57	63.676	8.18	7.74	2.84	Marcellus POE: 7243' MD
7336.00	76.930	342.990	7000.67	171.26	322.04	452.15	1716285.52	14274347.03	39°18'30.3387"N	80°43'54.4168"W	555.11	54.540	8.18	7.76	2.72	
7431.00	83.680	344.620	7016.66	264.83	411.92	426.06	1716259.44	14274436.87	39°18'31.2278"N	80°43'54.7454"W	592.62	45.967	7.30	7.11	1.72	
7526.00	89.450	343.960	7022.35	359.57	503.16	400.39	1716233.78	14274528.08	39°18'32.1304"N	80°43'55.0685"W	643.03	38.511	6.11	6.07	-0.69	
7620.00	88.920	340.680	7023.69	453.55	592.70	371.85	1716205.25	14274617.59	39°18'33.0162"N	80°43'55.4282"W	699.69	32.103	3.53	-0.56	-3.49	
7715.00	89.140	341.050	7025.29	548.49	682.44	340.71	1716174.13	14274707.29	39°18'33.9041"N	80°43'55.8209"W	762.76	26.531	0.45	0.23	0.39	
7810.00	88.980	341.220	7026.85	643.45	772.32	310.00	1716143.43	14274797.14	39°18'34.7933"N	80°43'56.2083"W	832.22	21.870	0.25	-0.17	0.18	
7905.00	90.620	341.250	7027.19	738.43	862.27	279.44	1716112.88	14274887.05	39°18'35.6832"N	80°43'56.5936"W	906.42	17.956	1.73	1.73	0.03	
8000.00	88.830	342.220	7027.64	833.41	952.48	249.67	1716083.12	14274977.22	39°18'36.5757"N	80°43'56.9690"W	984.66	14.688	2.14	-1.88	1.02	
8094.00	89.200	341.680	7029.26	927.39	1041.84	220.55	1716054.01	14275066.55	39°18'37.4597"N	80°43'57.3361"W	1064.93	11.952	0.70	0.39	-0.57	
8189.00	89.200	341.170	7030.58	1022.37	1131.88	190.29	1716023.76	14275156.55	39°18'38.3506"N	80°43'57.7177"W	1147.77	9.543	0.54	0.00	-0.54	
8284.00	89.290	340.940	7031.84	1117.33	1221.73	159.45	1715992.94	14275246.36	39°18'39.2395"N	80°43'58.1067"W	1232.09	7.436	0.26	0.09	-0.24	
8379.00	89.780	339.850	7032.61	1212.26	1311.22	127.57	1715961.07	14275335.82	39°18'40.1249"N	80°43'58.5088"W	1317.41	5.557	1.26	0.52	-1.15	
8474.00	89.510	337.090	7033.19	1307.01	1399.58	92.71	1715926.23	14275424.14	39°18'40.9992"N	80°43'58.9490"W	1402.64	3.790	2.92	-0.28	-2.91	
8569.00	89.480	338.660	7034.03	1401.69	1487.58	56.94	1715890.46	14275512.11	39°18'41.8700"N	80°43'59.4009"W	1488.66	2.192	1.65	-0.03	1.65	
8663.00	89.450	340.360	7034.91	1495.56	1575.62	24.04	1715857.58	14275600.12	39°18'42.7412"N	80°43'59.8162"W	1575.80	0.874	1.81	-0.03	1.81	
8758.00	89.420	343.460	7035.85	1590.53	1665.91	-5.46	1715828.09	14275690.37	39°18'43.6344"N	80°44'0.1880"W	1665.92	359.812	3.26	-0.03	3.26	
8853.00	89.750	346.010	7036.54	1685.45	1757.55	-30.47	1715803.10	14275781.97	39°18'44.5409"N	80°44'0.5028"W	1757.81	359.007	2.71	0.35	2.68	
8948.00	89.750	345.820	7036.95	1780.28	1849.69	-53.59	1715779.99	14275874.08	39°18'45.4523"N	80°44'0.7934"W	1850.47	358.341	0.20	0.00	-0.20	
9043.00	89.690	344.770	7037.41	1875.17	1941.58	-77.70	1715755.88	14275965.93	39°18'46.3611"N	80°44'1.0968"W	1943.13	357.708	1.11	-0.06	-1.11	
9138.00	89.780	343.950	7037.85	1970.12	2033.06	-103.31	1715730.28	14276057.37	39°18'47.2660"N	80°44'1.4192"W	2035.68	357.091	0.87	0.09	-0.86	
9233.00	89.880	343.320	7038.14	2065.10	2124.21	-130.08	1715703.52	14276148.49	39°18'48.1677"N	80°44'1.7563"W	2128.19	356.496	0.67	0.11	-0.66	

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Cortina Unit 1H AWP Proj: 18397'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Cortina Unit 1H
Field	Doddridge	API	47-017-06889-0000
Facility	George Scott Pad	Wellbore	Cortina Unit 1H AWB
Slot	Slot #07		

WELLPATH DATA (218 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
9328.00	89.050	339.990	7039.02	2160.07	2214.36	-159.97	1715673.64	14276238.61	39°18'49.0596"N	80°44'2.1333"W	2220.13	355.868	3.61	-0.87	-3.51	
9423.00	89.480	341.130	7040.24	2255.00	2303.94	-191.59	1715642.04	14276328.15	39°18'49.9459"N	80°44'2.5322"W	2311.89	355.246	1.28	0.45	1.20	
9518.00	89.450	343.880	7041.13	2349.99	2394.53	-220.14	1715613.50	14276418.70	39°18'50.8421"N	80°44'2.8921"W	2404.63	354.747	2.89	-0.03	2.89	
9612.00	89.600	346.940	7041.91	2443.86	2485.49	-243.82	1715589.83	14276509.62	39°18'51.7418"N	80°44'3.1899"W	2497.42	354.397	3.26	0.16	3.26	
9707.00	89.110	346.790	7042.98	2538.58	2577.99	-265.40	1715568.25	14276602.09	39°18'52.6567"N	80°44'3.4611"W	2591.62	354.122	0.54	-0.52	-0.16	
9802.00	89.690	347.520	7043.97	2633.26	2670.61	-286.52	1715547.14	14276694.67	39°18'53.5727"N	80°44'3.7263"W	2685.94	353.876	0.98	0.61	0.77	
9897.00	89.630	346.180	7044.54	2727.98	2763.12	-308.13	1715525.54	14276787.14	39°18'54.4876"N	80°44'3.9978"W	2780.24	353.637	1.41	-0.06	-1.41	
9992.00	89.750	344.880	7045.05	2822.85	2855.10	-331.87	1715501.81	14276879.09	39°18'55.3974"N	80°44'4.2964"W	2874.32	353.370	1.37	0.13	-1.37	
10086.00	89.750	342.230	7045.46	2916.82	2945.24	-358.48	1715475.21	14276969.20	39°18'56.2892"N	80°44'4.6316"W	2966.98	353.060	2.82	0.00	-2.82	
10181.00	89.720	341.030	7045.90	3011.81	3035.40	-388.42	1715445.29	14277059.32	39°18'57.1811"N	80°44'5.0091"W	3060.15	352.708	1.26	-0.03	-1.26	
10276.00	89.540	339.150	7046.51	3106.72	3124.72	-420.77	1715412.95	14277148.60	39°18'58.0648"N	80°44'5.4174"W	3152.92	352.331	1.99	-0.19	-1.98	
10371.00	89.660	337.640	7047.18	3201.47	3213.04	-455.74	1715377.99	14277236.89	39°18'58.9388"N	80°44'5.8591"W	3245.20	351.927	1.59	0.13	-1.59	
10466.00	89.820	336.970	7047.61	3296.07	3300.68	-492.40	1715341.35	14277324.50	39°18'59.8061"N	80°44'6.3222"W	3337.21	351.515	0.73	0.17	-0.71	
10561.00	89.780	337.570	7047.94	3390.68	3388.30	-529.10	1715304.66	14277412.08	39°19'0.6731"N	80°44'6.7859"W	3429.36	351.125	0.63	-0.04	0.63	
10656.00	89.750	336.690	7048.33	3485.26	3475.83	-566.02	1715267.75	14277499.58	39°19'1.5393"N	80°44'7.2524"W	3521.62	350.751	0.93	-0.03	-0.93	
10751.00	89.540	337.040	7048.92	3579.79	3563.19	-603.35	1715230.44	14277586.90	39°19'2.4038"N	80°44'7.7241"W	3613.91	350.389	0.43	-0.22	0.37	
10846.00	89.750	339.770	7049.51	3674.54	3651.51	-638.31	1715195.49	14277675.19	39°19'3.2778"N	80°44'8.1656"W	3706.88	350.084	2.88	0.22	2.87	
10940.00	89.820	340.130	7049.86	3768.44	3739.81	-670.54	1715163.28	14277763.46	39°19'4.1514"N	80°44'8.5724"W	3799.45	349.835	0.39	0.07	0.38	
11035.00	89.790	338.690	7050.19	3863.30	3828.74	-703.94	1715129.88	14277852.35	39°19'5.0313"N	80°44'8.9941"W	3892.92	349.582	1.52	-0.04	-1.52	
11130.00	89.780	340.450	7050.56	3958.17	3917.76	-737.10	1715096.74	14277941.33	39°19'5.9121"N	80°44'9.4127"W	3986.50	349.345	1.85	0.00	1.85	
11225.00	89.850	343.340	7050.86	4053.16	4008.05	-766.62	1715067.23	14278031.58	39°19'6.8054"N	80°44'9.7850"W	4080.71	349.172	3.04	0.07	3.04	
11320.00	89.820	346.100	7051.14	4148.08	4099.68	-791.66	1715042.21	14278123.18	39°19'7.7117"N	80°44'10.1001"W	4175.42	349.071	2.91	-0.03	2.91	
11415.00	89.850	347.450	7051.41	4242.81	4192.16	-813.39	1715020.48	14278215.62	39°19'8.6264"N	80°44'10.3732"W	4270.34	349.020	1.42	0.03	1.42	
11510.00	89.910	348.450	7051.61	4337.38	4285.07	-833.22	1715000.66	14278308.49	39°19'9.5452"N	80°44'10.6221"W	4365.32	348.996	1.05	0.06	1.05	
11605.00	89.940	348.730	7051.73	4431.85	4378.19	-852.02	1714981.87	14278401.58	39°19'10.4661"N	80°44'10.8577"W	4460.32	348.988	0.30	0.03	0.29	
11700.00	89.880	347.810	7051.88	4526.36	4471.20	-871.33	1714962.57	14278494.55	39°19'11.3860"N	80°44'11.1000"W	4555.31	348.973	0.97	-0.06	-0.97	
11794.00	90.340	343.780	7051.70	4620.19	4562.31	-894.39	1714939.51	14278585.63	39°19'12.2871"N	80°44'11.3901"W	4649.15	348.908	4.32	0.49	-4.29	
11889.00	89.850	341.530	7051.54	4715.18	4652.98	-922.71	1714911.20	14278676.26	39°19'13.1841"N	80°44'11.7471"W	4743.59	348.783	2.42	-0.52	-2.37	
11984.00	89.720	341.170	7051.90	4810.16	4742.99	-953.09	1714880.84	14278766.24	39°19'14.0746"N	80°44'12.1303"W	4837.81	348.638	0.40	-0.14	-0.38	
12079.00	89.880	341.250	7052.23	4905.14	4832.93	-983.69	1714850.25	14278856.14	39°19'14.9644"N	80°44'12.5163"W	4932.02	348.495	0.19	0.17	0.08	

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Facility	George Scott Pad	Wellbore	Cortina Unit 1H AWB
Slot	Slot #07		

WELLPATH DATA (218 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
12174.00	89.820	343.840	7052.48	5000.13	4923.55	-1012.18	1714821.77	14278946.72	39°19'15.8609"N	80°44'12.8755"W	5026.51	348.383	2.73	-0.06	2.73	
12268.00	89.780	344.600	7052.81	5094.09	5014.00	-1037.74	1714796.22	14279037.14	39°19'16.7556"N	80°44'13.1974"W	5120.27	348.307	0.81	-0.04	0.81	
12363.00	89.690	347.810	7053.25	5188.88	5106.25	-1060.39	1714773.58	14279129.35	39°19'17.6680"N	80°44'13.4822"W	5215.19	348.268	3.38	-0.09	3.38	
12458.00	90.520	350.800	7053.07	5283.20	5199.59	-1078.02	1714755.95	14279222.65	39°19'18.5911"N	80°44'13.7030"W	5310.17	348.287	3.27	0.87	3.15	
12553.00	90.430	349.450	7052.29	5377.35	5293.18	-1094.31	1714739.67	14279316.20	39°19'19.5165"N	80°44'13.9069"W	5405.11	348.319	1.42	-0.09	-1.42	
12648.00	90.990	345.440	7051.11	5471.97	5385.88	-1114.96	1714719.03	14279408.87	39°19'20.4333"N	80°44'14.1661"W	5500.07	348.304	4.26	0.59	-4.22	
12743.00	90.220	339.480	7050.10	5566.93	5476.41	-1143.57	1714690.43	14279499.37	39°19'21.3290"N	80°44'14.5269"W	5594.54	348.205	6.33	-0.81	-6.27	
12838.00	90.740	341.960	7049.31	5661.87	5566.08	-1174.94	1714659.08	14279588.99	39°19'22.2161"N	80°44'14.9227"W	5688.73	348.080	2.67	0.55	2.61	
12933.00	90.030	342.140	7048.67	5756.86	5656.45	-1204.22	1714629.81	14279679.33	39°19'23.1101"N	80°44'15.2919"W	5783.21	347.982	0.77	-0.75	0.19	
13028.00	90.000	341.970	7048.65	5851.86	5746.83	-1233.49	1714600.55	14279769.68	39°19'24.0042"N	80°44'15.6610"W	5877.71	347.886	0.18	-0.03	-0.18	
13122.00	89.820	341.710	7048.79	5945.85	5836.15	-1262.78	1714571.27	14279858.96	39°19'24.8878"N	80°44'16.0305"W	5971.20	347.791	0.34	-0.19	-0.28	
13217.00	89.850	342.620	7049.07	6040.85	5926.58	-1291.88	1714542.18	14279949.35	39°19'25.7825"N	80°44'16.3974"W	6065.75	347.703	0.96	0.03	0.96	
13312.00	90.000	343.340	7049.19	6135.85	6017.42	-1319.68	1714514.39	14280040.16	39°19'26.6811"N	80°44'16.7479"W	6160.43	347.630	0.77	0.16	0.76	
13407.00	90.120	340.770	7049.09	6230.83	6107.79	-1348.95	1714485.13	14280130.49	39°19'27.5751"N	80°44'17.1169"W	6254.98	347.546	2.71	0.13	-2.71	
13502.00	89.880	336.270	7049.09	6325.58	6196.17	-1383.73	1714450.37	14280218.84	39°19'28.4496"N	80°44'17.5562"W	6348.79	347.411	4.74	-0.25	-4.74	
13597.00	89.910	334.520	7049.27	6419.84	6282.54	-1423.28	1714410.83	14280305.17	39°19'29.3044"N	80°44'18.0563"W	6441.74	347.235	1.84	0.03	-1.84	
13692.00	89.970	335.320	7049.37	6514.01	6368.58	-1463.55	1714370.58	14280391.18	39°19'30.1560"N	80°44'18.5656"W	6534.58	347.058	0.84	0.06	0.84	
13787.00	90.000	335.840	7049.39	6608.32	6455.08	-1502.83	1714331.32	14280477.65	39°19'31.0120"N	80°44'19.0622"W	6627.71	346.894	0.55	0.03	0.55	
13882.00	90.030	337.830	7049.37	6702.85	6542.42	-1540.20	1714293.96	14280564.95	39°19'31.8763"N	80°44'19.5345"W	6721.27	346.753	2.09	0.03	2.09	
13977.00	89.780	339.080	7049.52	6797.61	6630.78	-1575.08	1714259.09	14280653.28	39°19'32.7506"N	80°44'19.9752"W	6815.28	346.638	1.34	-0.26	1.32	
14072.00	89.290	339.230	7050.29	6892.44	6719.56	-1608.89	1714225.30	14280742.02	39°19'33.6290"N	80°44'20.4021"W	6909.48	346.535	0.54	-0.52	0.16	
14167.00	89.200	340.920	7051.55	6987.34	6808.86	-1641.26	1714192.94	14280831.29	39°19'34.5126"N	80°44'20.8107"W	7003.88	346.448	1.78	-0.09	1.78	
14261.00	89.910	343.240	7052.28	7081.33	6898.29	-1670.18	1714164.03	14280920.68	39°19'35.3973"N	80°44'21.1754"W	7097.60	346.390	2.58	0.76	2.47	
14356.00	90.090	344.350	7052.28	7176.31	6989.51	-1696.69	1714137.53	14281011.87	39°19'36.2997"N	80°44'21.5094"W	7192.50	346.356	1.18	0.19	1.17	
14451.00	89.780	344.750	7052.38	7271.24	7081.08	-1722.00	1714112.24	14281103.40	39°19'37.2054"N	80°44'21.8281"W	7287.45	346.332	0.53	-0.33	0.42	
14546.00	89.820	346.080	7052.72	7366.12	7173.02	-1745.92	1714088.32	14281195.30	39°19'38.1148"N	80°44'22.1292"W	7382.44	346.320	1.40	0.04	1.40	
14641.00	88.710	346.150	7053.93	7460.92	7265.23	-1768.71	1714065.54	14281287.48	39°19'39.0268"N	80°44'22.4159"W	7477.43	346.318	1.17	-1.17	0.07	
14736.00	89.140	347.350	7055.72	7555.64	7357.68	-1790.48	1714043.78	14281379.89	39°19'39.9412"N	80°44'22.6895"W	7572.41	346.323	1.34	0.45	1.26	
14830.00	89.480	348.510	7056.85	7649.22	7449.60	-1810.14	1714024.13	14281471.77	39°19'40.8502"N	80°44'22.9362"W	7666.36	346.343	1.29	0.36	1.23	
14926.00	88.950	347.270	7058.16	7744.78	7543.45	-1830.27	1714004.00	14281565.59	39°19'41.7784"N	80°44'23.1891"W	7762.32	346.362	1.40	-0.55	-1.29	

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Cortina Unit 1H AWP Proj: 18397'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Cortina Unit 1H
Field	Doddridge	API	47-017-06889-0000
Facility	George Scott Pad	Wellbore	Cortina Unit 1H AWB
Slot	Slot #07		

WELLPATH DATA (218 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
15021.00	88.680	346.810	7060.13	7839.46	7636.01	-1851.57	1713982.71	14281658.11	39°19'42.6938"N	80°44'23.4567"W	7857.29	346.370	0.56	-0.28	-0.48	
15115.00	89.050	345.240	7061.99	7933.27	7727.21	-1874.27	1713960.02	14281749.27	39°19'43.5958"N	80°44'23.7422"W	7951.26	346.366	1.72	0.39	-1.67	
15210.00	89.850	344.620	7062.90	8028.18	7818.93	-1898.97	1713935.33	14281840.96	39°19'44.5031"N	80°44'24.0531"W	8046.23	346.349	1.07	0.84	-0.65	
15305.00	89.140	346.440	7063.74	8123.03	7910.91	-1922.70	1713911.61	14281932.90	39°19'45.4129"N	80°44'24.3518"W	8141.21	346.339	2.06	-0.75	1.92	
15400.00	88.400	344.630	7065.78	8217.88	8002.88	-1946.43	1713887.89	14282024.83	39°19'46.3225"N	80°44'24.6504"W	8236.19	346.330	2.06	-0.78	-1.91	
15495.00	89.940	343.490	7067.16	8312.83	8094.21	-1972.51	1713861.82	14282116.13	39°19'47.2259"N	80°44'24.9790"W	8331.09	346.304	2.02	1.62	-1.20	
15590.00	89.110	339.900	7067.94	8407.80	8184.38	-2002.35	1713832.00	14282206.27	39°19'48.1180"N	80°44'25.3553"W	8425.76	346.252	3.88	-0.87	-3.78	
15684.00	89.110	338.540	7069.40	8501.63	8272.26	-2035.69	1713798.67	14282294.10	39°19'48.9875"N	80°44'25.7764"W	8519.05	346.175	1.45	0.00	-1.45	
15779.00	88.950	337.900	7071.01	8596.35	8360.46	-2070.93	1713763.44	14282382.27	39°19'49.8603"N	80°44'26.2217"W	8613.13	346.088	0.69	-0.17	-0.67	
15874.00	88.980	340.050	7072.73	8691.15	8449.12	-2105.01	1713729.37	14282470.89	39°19'50.7375"N	80°44'26.6521"W	8707.39	346.010	2.26	0.03	2.26	
15969.00	90.060	343.240	7073.52	8786.12	8539.27	-2134.92	1713699.47	14282561.01	39°19'51.6293"N	80°44'27.0295"W	8802.10	345.963	3.54	1.14	3.36	
16064.00	89.600	344.050	7073.81	8881.10	8630.42	-2161.67	1713672.73	14282652.13	39°19'52.5310"N	80°44'27.3666"W	8897.02	345.938	0.98	-0.48	0.85	
16159.00	89.600	343.240	7074.47	8976.08	8721.57	-2188.42	1713646.00	14282743.25	39°19'53.4327"N	80°44'27.7037"W	8991.94	345.914	0.85	0.00	-0.85	
16254.00	89.570	341.310	7075.16	9071.07	8812.06	-2217.34	1713617.09	14282833.69	39°19'54.3278"N	80°44'28.0684"W	9086.75	345.876	2.03	-0.03	-2.03	
16349.00	89.690	338.910	7075.77	9165.98	8901.38	-2249.66	1713584.78	14282922.98	39°19'55.2116"N	80°44'28.4764"W	9181.26	345.817	2.53	0.13	-2.53	
16443.00	89.450	336.070	7076.48	9259.60	8988.21	-2285.64	1713548.81	14283009.77	39°19'56.0708"N	80°44'28.9312"W	9274.27	345.732	3.03	-0.26	-3.02	
16538.00	88.890	337.430	7077.85	9354.11	9075.48	-2323.14	1713511.33	14283097.01	39°19'56.9344"N	80°44'29.4052"W	9368.10	345.642	1.55	-0.59	1.43	
16633.00	88.860	339.440	7079.72	9448.85	9163.81	-2358.05	1713476.44	14283185.31	39°19'57.8084"N	80°44'29.8463"W	9462.34	345.570	2.12	-0.03	2.12	
16728.00	88.550	342.920	7081.87	9543.78	9253.70	-2388.68	1713445.81	14283275.16	39°19'58.6976"N	80°44'30.2328"W	9557.02	345.526	3.68	-0.33	3.66	
16823.00	89.420	342.960	7083.55	9638.77	9344.50	-2416.55	1713417.96	14283365.92	39°19'59.5959"N	80°44'30.5842"W	9651.91	345.501	0.92	0.92	0.04	
16918.00	89.450	339.220	7084.49	9733.72	9434.35	-2447.33	1713387.19	14283455.74	39°20'0.4848"N	80°44'30.9726"W	9746.61	345.458	3.94	0.03	-3.94	
17012.00	89.510	340.210	7085.34	9827.60	9522.52	-2479.91	1713354.62	14283543.87	39°20'1.3572"N	80°44'31.3842"W	9840.14	345.403	1.06	0.06	1.05	
17107.00	89.080	338.160	7086.51	9922.43	9611.31	-2513.67	1713320.88	14283632.63	39°20'2.2357"N	80°44'31.8105"W	9934.57	345.344	2.20	-0.45	-2.16	
17202.00	88.950	335.800	7088.14	10016.96	9698.72	-2550.81	1713283.75	14283720.01	39°20'3.1007"N	80°44'32.2800"W	10028.55	345.265	2.49	-0.14	-2.48	
17297.00	88.920	335.400	7089.91	10111.26	9785.22	-2590.05	1713244.53	14283806.47	39°20'3.9567"N	80°44'32.7762"W	10122.20	345.174	0.42	-0.03	-0.42	
17392.00	88.430	338.630	7092.10	10205.78	9872.64	-2627.13	1713207.46	14283893.86	39°20'4.8218"N	80°44'33.2450"W	10216.21	345.099	3.44	-0.52	3.40	
17487.00	88.980	341.760	7094.25	10300.67	9961.99	-2659.30	1713175.30	14283983.17	39°20'5.7058"N	80°44'33.6512"W	10310.83	345.054	3.34	0.58	3.29	
17582.00	89.110	342.980	7095.83	10395.65	10052.51	-2688.07	1713146.54	14284073.66	39°20'6.6013"N	80°44'34.0141"W	10405.71	345.029	1.29	0.14	1.28	
17676.00	88.920	342.280	7097.45	10489.64	10142.21	-2716.13	1713118.49	14284163.32	39°20'7.4886"N	80°44'34.3679"W	10499.61	345.008	0.77	-0.20	-0.74	
17771.00	88.890	342.800	7099.27	10584.62	10232.82	-2744.63	1713090.01	14284253.89	39°20'8.3850"N	80°44'34.7273"W	10594.51	344.986	0.55	-0.03	0.55	

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Cortina Unit 1H
Field	Doddridge		API	47-017-06889-0000
Facility	George Scott Pad		Wellbore	Cortina Unit 1H AWB
Slot	Slot #07			

WELLPATH DATA (218 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
17866.00	88.770	343.800	7101.21	10679.59	10323.79	-2771.92	1713062.72	14284344.83	39°20'9.2849"N	80°44'35.0714"W	10689.45	344.971	1.06	-0.13	1.05	
17961.00	88.980	346.580	7103.07	10774.46	10415.61	-2796.20	1713038.46	14284436.61	39°20'10.1930"N	80°44'35.3770"W	10784.42	344.973	2.93	0.22	2.93	
18056.00	89.050	346.840	7104.70	10869.19	10508.05	-2818.03	1713016.63	14284529.02	39°20'11.1073"N	80°44'35.6516"W	10879.36	344.988	0.28	0.07	0.27	
18151.00	89.110	345.470	7106.23	10963.98	10600.28	-2840.76	1712993.91	14284621.21	39°20'12.0195"N	80°44'35.9375"W	10974.33	344.998	1.44	0.06	-1.44	
18246.00	88.950	348.420	7107.84	11058.67	10692.80	-2862.22	1712972.46	14284713.69	39°20'12.9345"N	80°44'36.2072"W	11069.25	345.015	3.11	-0.17	3.11	
18341.00	88.890	347.700	7109.63	11153.21	10785.73	-2881.87	1712952.82	14284806.58	39°20'13.8535"N	80°44'36.4540"W	11164.10	345.040	0.76	-0.06	-0.76	
18373.00	88.920	347.220	7110.24	11185.09	10816.96	-2888.82	1712945.88	14284837.80	39°20'14.1624"N	80°44'36.5413"W	11196.06	345.047	1.50	0.09	-1.50	
18397.00‡	88.920	347.220	7110.69	11209.00	10840.36	-2894.12	1712940.57	14284861.19	39°20'14.3938"N	80°44'36.6080"W	11220.04	345.052	0.00	0.00	0.00	Projected MD at TD: 18397'

HOLE & CASING SECTIONS - Ref Wellbore: Cortina Unit 1H AWB Ref Wellpath: Cortina Unit 1H AWP Proj: 18397'									
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	25.50	105.50	80.00	25.50	105.50	0.00	0.00	-0.21	-0.22
17.5in Open Hole	105.50	564.20	458.70	105.50	564.18	-0.21	-0.22	-3.49	-2.45
13.375in Casing Surface	25.50	564.20	538.70	25.50	564.18	0.00	0.00	-3.49	-2.45
12.25in Open Hole	564.20	2645.00	2080.80	564.18	2644.64	-3.49	-2.45	-20.78	-10.95
9.625in Casing Intermediate	25.50	2625.00	2599.50	25.50	2624.65	0.00	0.00	-20.35	-11.46
8.75in Open Hole	2645.00	6786.00	4141.00	2644.64	6694.36	-20.78	-10.95	-95.62	591.21
8.5in Open Hole	6786.00	18397.00	11611.00	6694.36	7110.69	-95.62	591.21	10840.36	-2894.12
5.5in Casing Production	25.50	18397.00	18371.50	25.50	7110.69	0.00	0.00	10840.36	-2894.12

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Operator	ANTERO RESOURCES CORPORATION	Well	Cortina Unit 1H
Field	Doddridge	API	47-017-06889-0000
Facility	George Scott Pad	Wellbore	Cortina Unit 1H AWB
Slot	Slot #07		

TARGETS								
Name	TVD (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Shape
Cortina Unit 1H - POE - Rev-2	6974.00	219.97	464.63	1716298.00	14274245.00	39°18'29.3295"N	80°43'54.2619"W	point
Cortina Unit 1H - BHL - Rev-2	7020.00	10848.17	-2883.69	1712951.00	14284869.00	39°20'14.4707"N	80°44'36.4750"W	point
Cortina Unit 1H - LP - Rev-2	7020.00	460.83	388.75	1716222.14	14274485.77	39°18'31.7124"N	80°43'55.2182"W	point

WELLPATH COMPOSITION - Ref Wellbore: Cortina Unit 1H AWB Ref Wellpath: Cortina Unit 1H AWP Proj: 18397'					
Start MD (ft)	End MD (ft)	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
25.50	480.00	Gyrodata 2015 - GC+WIR+DPIPE	01 Gyrodata MS Gyro <17-1/2">(50'-480')	Cortina Unit 1H AWB	
480.00	2575.00	BH NaviTrak (Axial)	02 APS EM <12-1/4">(480')(609'-2575')	Cortina Unit 1H AWB	
2575.00	6722.00	BH NaviTrak (2019) (Axial)	03 APS EM <8-3/4">(2575')(2639'-6722')	Cortina Unit 1H AWB	
6722.00	18397.00	BH AutoTrak Curve (2019) (Short spacing)	04 BH AT Curve <8-1/2">(6722')(6766'-18373')	Cortina Unit 1H AWB	

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