



ANTERO RESOURCES CORPORATION

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

Slot: Slot A
 Well: Ralph Unit 1H
 Wellbore: Ralph Unit 1H PWB

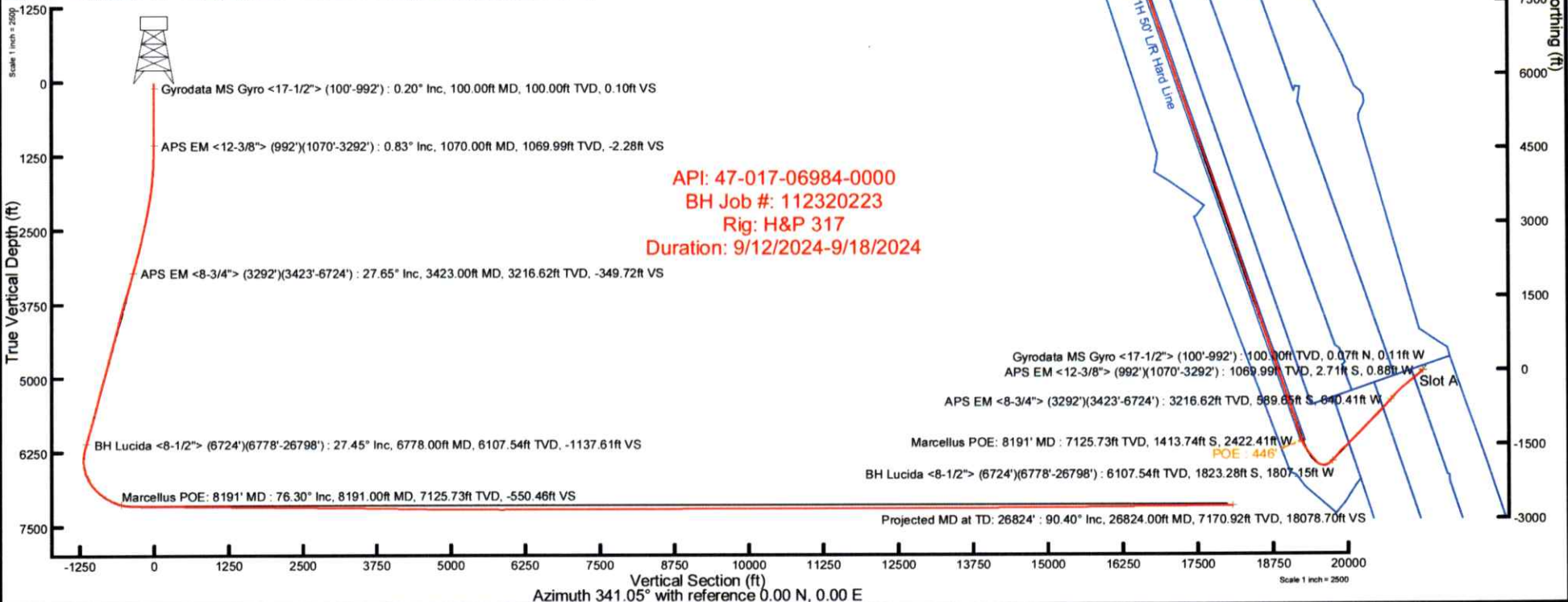


Plot reference wellpath is Ralph Unit 1H PWP Rev-B.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to H&P 317 (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to H&P 317 (RKB)	Scale: True distance
H&P 317 (RKB) to Mean Sea Level: 1247.5 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot A): -1222 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: edstayer on 2024-10-05, Database: WA_MPL_EASTERNUS_Data

Location Information				
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Crimson Pad	1729192.990	14302137.140	39°23'4.7014"N	80°41'8.9159"W
Slot	Local N (ft)	Local E (ft)	Grid North (US ft)	Longitude
Slot A	-33.75	-29.76	1729163.240	14302103.400
Comment	Ralph Unit 1H			
H&P 317 (RKB) to Ground level (At Slot: Slot A)	25.5ft			
Mean Sea Level to Ground level (At Slot: Slot A)	-1222ft			
H&P 317 (RKB) to Mean Sea Level	1247.5ft			

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	3292.00	28.500	220.900	3101.04	-542.46	-600.74	1.77	-317.98
Proj. to Bottom	3362.00	28.500	220.900	3162.56	-567.71	-622.61	0.00	-334.75
Drill Out	3442.00	28.500	220.900	3232.86	-596.56	-647.60	0.00	-353.92
End of 3D Arc	3526.28	30.624	223.682	3306.17	-627.29	-675.60	3.00	-373.90
Curve KOP	6887.61	30.624	223.682	6198.69	-1865.58	-1858.18	0.00	-1161.04
POE	8173.84	74.817	341.052	7118.00	-1419.69	-2402.99	7.00	-562.39
Landing Pt.	8363.63	90.000	341.052	7143.00	-1242.28	-2463.90	8.00	-374.61
BHL	26714.93	90.000	341.052	16114.65	-8422.69	0.00	0.00	17976.48

Well Data			
Slot	Well	Wellbore	Wellpath
Slot A	Ralph Unit 1H	Ralph Unit 1H AWB	Ralph Unit 1H AWP Proj. 26824'
Slot A	Ralph Unit 1H	Ralph Unit 1H PWB	Ralph Unit 1H PWP Rev-B.0





Actual Wellpath Report

Ralph Unit 1H AWP Proj: 26824'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Ralph Unit 1H
Field	Doddridge	API	47-017-06984-0000
Facility	Crimson Pad	Wellbore	Ralph Unit 1H AWB
Slot	Slot A		

REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Edsaryar
Scale	0.999609	Report Generated	10/6/2024 at 12:56:06 PM
Convergence at slot	0.20° 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	-33.75	-29.76	1729163.24	14302103.40	39°23'4.3688"N	80°41'9.2964"W
Facility Reference Pt			1729192.99	14302137.14	39°23'4.7014"N	80°41'8.9159"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	1247.50ft
Horizontal Reference Pt	Slot	H&P 317 (RKB) to Mean Sea Level	1247.50ft
Vertical Reference Pt	H&P 317 (RKB)	H&P 317 (RKB) to Ground Level at Slot (Slot A)	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	341.05°

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Ralph Unit 1H AWP Proj: 26824'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Ralph Unit 1H
Field	Doddridge	API	47-017-06984-0000
Facility	Crimson Pad	Wellbore	Ralph Unit 1H AWB
Slot	Slot A		

WELLPATH DATA (289 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	301.890	0.00	0.00	0.00	0.00	1729163.24	14302103.40	39°23'4.3688"N	80°41'9.2964"W	0.00	0.000	0.00	0.00	0.00	
25.50	0.000	301.890	25.50	0.00	0.00	0.00	1729163.24	14302103.40	39°23'4.3688"N	80°41'9.2964"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.200	301.890	100.00	0.10	0.07	-0.11	1729163.13	14302103.47	39°23'4.3695"N	80°41'9.2978"W	0.13	301.890	0.27	0.27	0.00	Gyrodatta MS Gyro <17-1/2"> (100'-992')
200.00	0.210	302.570	200.00	0.38	0.26	-0.41	1729162.83	14302103.66	39°23'4.3714"N	80°41'9.3017"W	0.49	302.145	0.01	0.01	0.68	
300.00	0.100	314.750	300.00	0.60	0.42	-0.63	1729162.61	14302103.82	39°23'4.3730"N	80°41'9.3044"W	0.76	303.691	0.11	-0.11	12.18	
400.00	0.170	262.930	400.00	0.71	0.46	-0.84	1729162.40	14302103.86	39°23'4.3734"N	80°41'9.3071"W	0.96	298.893	0.13	0.07	-51.82	
500.00	0.150	178.700	500.00	0.62	0.31	-0.98	1729162.26	14302103.71	39°23'4.3719"N	80°41'9.3089"W	1.03	287.700	0.22	-0.02	-84.23	
600.00	0.180	158.490	600.00	0.33	0.04	-0.92	1729162.32	14302103.44	39°23'4.3692"N	80°41'9.3082"W	0.92	272.278	0.06	0.03	-20.21	
700.00	0.300	164.650	700.00	-0.08	-0.36	-0.80	1729162.44	14302103.04	39°23'4.3653"N	80°41'9.3066"W	0.87	245.535	0.12	0.12	6.16	
800.00	0.290	161.420	800.00	-0.60	-0.85	-0.65	1729162.59	14302102.55	39°23'4.3604"N	80°41'9.3047"W	1.07	217.076	0.02	-0.01	-3.23	
900.00	0.310	178.890	899.99	-1.11	-1.36	-0.56	1729162.68	14302102.04	39°23'4.3553"N	80°41'9.3036"W	1.47	202.298	0.09	0.02	17.47	
992.00	0.400	189.040	991.99	-1.63	-1.93	-0.61	1729162.63	14302101.47	39°23'4.3497"N	80°41'9.3042"W	2.02	197.407	0.12	0.10	11.03	
1070.00	0.830	204.560	1069.99	-2.28	-2.71	-0.88	1729162.36	14302100.69	39°23'4.3420"N	80°41'9.3078"W	2.85	198.024	0.59	0.55	19.90	APS EM <12-3/8"> (992')(1070'-3292')
1165.00	1.570	211.670	1164.97	-3.60	-4.45	-1.85	1729161.39	14302098.95	39°23'4.3249"N	80°41'9.3202"W	4.82	202.612	0.79	0.78	7.48	
1260.00	3.210	214.900	1259.88	-6.00	-7.74	-4.06	1729159.18	14302095.67	39°23'4.2925"N	80°41'9.3484"W	8.74	207.676	1.73	1.73	3.40	
1354.00	4.750	223.970	1353.65	-9.32	-12.70	-8.27	1729154.98	14302090.71	39°23'4.2436"N	80°41'9.4022"W	15.15	213.066	1.76	1.64	9.65	
1448.00	7.190	225.850	1447.14	-13.60	-19.60	-15.19	1729148.06	14302083.81	39°23'4.1757"N	80°41'9.4907"W	24.79	217.781	2.60	2.60	2.00	
1543.00	10.090	227.590	1541.05	-19.45	-29.35	-25.60	1729137.65	14302074.06	39°23'4.0796"N	80°41'9.6238"W	38.95	221.097	3.06	3.05	1.83	
1637.00	12.980	229.380	1633.14	-26.62	-41.78	-39.70	1729123.56	14302061.64	39°23'3.9572"N	80°41'9.8038"W	57.63	223.536	3.10	3.07	1.90	
1731.00	16.000	229.780	1724.14	-35.22	-57.02	-57.61	1729105.66	14302046.40	39°23'3.8072"N	80°41'10.0326"W	81.06	225.292	3.21	3.21	0.43	
1826.00	19.770	229.840	1814.53	-45.79	-75.84	-79.89	1729083.38	14302027.59	39°23'3.6219"N	80°41'10.3172"W	110.16	226.488	3.97	3.97	0.06	
1920.00	23.290	231.080	1901.96	-57.89	-97.78	-106.51	1729056.77	14302005.66	39°23'3.4061"N	80°41'10.6572"W	144.58	227.447	3.78	3.74	1.32	
2014.00	26.890	231.730	1987.08	-71.28	-122.63	-137.66	1729025.63	14301980.82	39°23'3.1615"N	80°41'11.0551"W	184.36	228.306	3.84	3.83	0.69	
2109.00	28.380	231.070	2071.24	-86.10	-150.12	-172.10	1728991.21	14301953.34	39°23'2.8910"N	80°41'11.4948"W	228.37	228.901	1.60	1.57	-0.69	
2203.00	27.860	230.210	2154.14	-101.55	-178.22	-206.35	1728956.97	14301925.25	39°23'2.6145"N	80°41'11.9323"W	272.66	229.184	0.70	-0.55	-0.91	
2297.00	27.660	229.590	2237.32	-117.34	-206.42	-239.84	1728923.49	14301897.06	39°23'2.3369"N	80°41'12.3601"W	316.44	229.284	0.37	-0.21	-0.66	
2392.00	29.340	229.750	2320.81	-133.87	-235.75	-274.40	1728888.95	14301867.74	39°23'2.0482"N	80°41'12.8015"W	361.76	229.332	1.77	1.77	0.17	
2486.00	31.210	230.650	2401.98	-150.72	-266.08	-310.81	1728852.55	14301837.43	39°23'1.7497"N	80°41'13.2665"W	409.15	229.434	2.05	1.99	0.96	
2581.00	30.950	230.080	2483.35	-168.04	-297.36	-348.58	1728814.80	14301806.16	39°23'1.4418"N	80°41'13.7489"W	458.18	229.534	0.41	-0.27	-0.60	
2675.00	30.410	228.890	2564.19	-185.67	-328.51	-385.04	1728778.35	14301775.02	39°23'1.1351"N	80°41'14.2147"W	506.14	229.530	0.86	-0.57	-1.27	

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Actual Wellpath Report

Ralph Unit 1H AWP Proj: 26824'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Ralph Unit 1H
Field	Doddridge	API	47-017-06984-0000
Facility	Crimson Pad	Wellbore	Ralph Unit 1H AWB
Slot	Slot A		

WELLPATH DATA (289 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
2770.00	30.180	228.690	2646.22	-203.82	-360.09	-421.10	1728742.31	14301743.46	39°23'0.8243"N	80°41'14.6752"W	554.06	229.466	0.26	-0.24	-0.21	
2864.00	29.660	226.600	2727.69	-222.44	-391.66	-455.74	1728707.67	14301711.89	39°23'0.5134"N	80°41'15.1179"W	600.92	229.324	1.24	-0.55	-2.22	
2959.00	29.360	225.220	2810.37	-242.31	-424.22	-489.35	1728674.08	14301679.35	39°23'0.1928"N	80°41'15.5473"W	647.63	229.078	0.78	-0.32	-1.45	
3053.00	28.980	223.880	2892.45	-262.75	-456.87	-521.50	1728641.95	14301646.71	39°22'59.8712"N	80°41'15.9581"W	693.31	228.779	0.80	-0.40	-1.43	
3148.00	29.570	223.240	2975.31	-284.20	-490.53	-553.51	1728609.95	14301613.06	39°22'59.5396"N	80°41'16.3673"W	739.59	228.452	0.70	0.62	-0.67	
3242.00	29.160	222.130	3057.24	-306.09	-524.41	-584.76	1728578.71	14301579.19	39°22'59.2058"N	80°41'16.7668"W	785.46	228.114	0.72	-0.44	-1.18	
3292.00	28.500	220.900	3101.04	-317.98	-542.46	-600.74	1728562.74	14301561.15	39°22'59.0280"N	80°41'16.9711"W	809.42	227.918	1.77	-1.32	-2.46	
3423.00	27.650	219.180	3216.62	-349.72	-589.65	-640.41	1728523.08	14301513.98	39°22'58.5629"N	80°41'17.4784"W	870.52	227.363	0.90	-0.65	-1.31	APS EM <8-3/4"> (3292')(3423'-6724')
3517.00	28.430	219.560	3299.59	-372.93	-623.81	-668.44	1728495.06	14301479.84	39°22'58.2263"N	80°41'17.8368"W	914.30	226.978	0.85	0.83	0.40	
3611.00	29.770	222.470	3381.73	-395.78	-658.28	-698.45	1728465.06	14301445.38	39°22'57.8866"N	80°41'18.2205"W	959.77	226.696	2.07	1.43	3.10	
3705.00	32.300	225.080	3462.27	-417.95	-693.23	-732.00	1728431.53	14301410.44	39°22'57.5423"N	80°41'18.6493"W	1008.16	226.558	3.05	2.69	2.78	
3800.00	32.760	223.830	3542.36	-440.82	-729.70	-767.77	1728395.77	14301373.99	39°22'57.1831"N	80°41'19.1065"W	1059.21	226.456	0.86	0.48	-1.32	
3894.00	32.310	220.020	3621.62	-465.41	-767.29	-801.54	1728362.01	14301336.42	39°22'56.8128"N	80°41'19.5382"W	1109.59	226.251	2.23	-0.48	-4.05	
3989.00	32.590	222.050	3701.79	-490.90	-805.73	-835.00	1728328.56	14301297.99	39°22'56.4339"N	80°41'19.9661"W	1160.36	226.022	1.18	0.29	2.14	
4083.00	32.190	225.220	3781.17	-514.08	-842.17	-869.74	1728293.85	14301261.56	39°22'56.0750"N	80°41'20.4100"W	1210.65	225.923	1.86	-0.43	3.37	
4177.00	32.370	223.800	3860.64	-536.51	-877.97	-904.93	1728258.67	14301225.78	39°22'55.7224"N	80°41'20.8597"W	1260.84	225.866	0.83	0.19	-1.51	
4272.00	30.570	224.750	3941.67	-558.86	-913.48	-939.54	1728224.07	14301190.28	39°22'55.3725"N	80°41'21.3021"W	1310.41	225.806	1.97	-1.89	1.00	
4366.00	30.090	222.860	4022.80	-580.59	-947.73	-972.40	1728191.23	14301156.04	39°22'55.0352"N	80°41'21.7220"W	1357.85	225.736	1.14	-0.51	-2.01	
4460.00	29.480	224.710	4104.39	-601.98	-981.44	-1004.70	1728158.94	14301122.34	39°22'54.7031"N	80°41'22.1349"W	1404.51	225.671	1.17	-0.65	1.97	
4554.00	30.100	226.470	4185.97	-622.05	-1014.11	-1038.06	1728125.59	14301089.68	39°22'54.3813"N	80°41'22.5612"W	1451.21	225.669	1.14	0.66	1.87	
4649.00	30.800	226.040	4267.86	-642.24	-1047.41	-1072.84	1728090.82	14301056.41	39°22'54.0534"N	80°41'23.0055"W	1499.35	225.687	0.77	0.74	-0.45	
4743.00	30.070	223.030	4348.92	-663.48	-1081.33	-1106.23	1728057.44	14301022.50	39°22'53.7193"N	80°41'23.4323"W	1546.94	225.652	1.80	-0.78	-3.20	
4837.00	30.000	222.930	4430.29	-685.62	-1115.75	-1138.31	1728025.38	14300988.09	39°22'53.3802"N	80°41'23.8423"W	1593.94	225.573	0.09	-0.07	-0.11	
4932.00	30.880	224.550	4512.20	-707.69	-1150.51	-1171.59	1727992.11	14300953.34	39°22'53.0377"N	80°41'24.2676"W	1642.04	225.520	1.27	0.93	1.71	
5026.00	31.180	225.690	4592.75	-728.88	-1184.70	-1205.93	1727957.79	14300919.16	39°22'52.7010"N	80°41'24.7064"W	1690.50	225.509	0.70	0.32	1.21	
5120.00	29.830	222.920	4673.74	-750.32	-1218.82	-1239.26	1727924.47	14300885.06	39°22'52.3649"N	80°41'25.1324"W	1738.19	225.476	2.07	-1.44	-2.95	
5214.00	29.650	221.960	4755.36	-772.65	-1253.23	-1270.73	1727893.01	14300850.66	39°22'52.0258"N	80°41'25.5347"W	1784.75	225.397	0.54	-0.19	-1.02	
5309.00	31.160	225.190	4837.30	-794.80	-1288.03	-1303.88	1727859.87	14300815.87	39°22'51.6830"N	80°41'25.9584"W	1832.79	225.350	2.34	1.59	3.40	
5403.00	32.470	226.900	4917.17	-815.73	-1322.42	-1339.56	1727824.21	14300781.50	39°22'51.3444"N	80°41'26.4142"W	1882.34	225.369	1.69	1.39	1.82	
5497.00	32.230	223.820	4996.59	-837.53	-1357.74	-1375.34	1727788.44	14300746.19	39°22'50.9964"N	80°41'26.8715"W	1932.62	225.369	1.77	-0.26	-3.28	

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Ralph Unit 1H AWP Proj: 26824'

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Field	Doddridge	API	47-017-06984-0000
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Slot	Slot A		

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5591.00	30.900	222.850	5076.68	-860.40	-1393.53	-1409.11	1727754.68	14300710.42	39°22'50.6439"N	80°41'27.3031"W	1981.80	225.319	1.51	-1.41	-1.03	
5685.00	29.600	223.990	5157.88	-882.37	-1427.93	-1441.65	1727722.15	14300676.03	39°22'50.3050"N	80°41'27.7190"W	2029.12	225.274	1.51	-1.38	1.21	
5780.00	29.660	224.700	5240.46	-903.48	-1461.51	-1474.48	1727689.34	14300642.46	39°22'49.9742"N	80°41'28.1385"W	2076.08	225.253	0.37	0.06	0.75	
5875.00	29.740	225.570	5322.98	-924.05	-1494.72	-1507.84	1727655.99	14300609.27	39°22'49.6472"N	80°41'28.5648"W	2123.15	225.250	0.46	0.08	0.92	
5970.00	31.710	227.060	5404.64	-944.34	-1528.22	-1542.95	1727620.90	14300575.78	39°22'49.3172"N	80°41'29.0134"W	2171.67	225.275	2.22	2.07	1.57	
6064.00	32.410	228.720	5484.30	-963.95	-1561.67	-1579.97	1727583.89	14300542.34	39°22'48.9878"N	80°41'29.4862"W	2221.51	225.334	1.20	0.74	1.77	
6158.00	30.870	226.790	5564.33	-983.43	-1594.81	-1616.48	1727547.40	14300509.22	39°22'48.6616"N	80°41'29.9526"W	2270.77	225.387	1.96	-1.64	-2.05	
6253.00	30.890	222.580	5645.88	-1005.07	-1629.45	-1650.75	1727513.14	14300474.59	39°22'48.3203"N	80°41'30.3905"W	2319.50	225.372	2.27	0.02	-4.43	
6347.00	31.940	220.900	5726.10	-1029.07	-1666.02	-1683.35	1727480.55	14300438.04	39°22'47.9600"N	80°41'30.8074"W	2368.39	225.297	1.45	1.12	-1.79	
6441.00	29.460	217.780	5806.92	-1054.24	-1703.09	-1713.80	1727450.11	14300400.98	39°22'47.5947"N	80°41'31.1967"W	2416.12	225.180	3.13	-2.64	-3.32	
6535.00	26.810	218.700	5889.81	-1078.27	-1737.91	-1741.22	1727422.70	14300366.17	39°22'47.2514"N	80°41'31.5474"W	2460.12	225.055	2.86	-2.82	0.98	
6630.00	25.610	216.530	5975.04	-1101.37	-1771.13	-1766.84	1727397.09	14300332.97	39°22'46.9240"N	80°41'31.8751"W	2501.72	224.931	1.62	-1.26	-2.28	
6724.00	26.620	218.130	6059.44	-1124.33	-1804.02	-1791.94	1727372.01	14300300.09	39°22'46.5997"N	80°41'32.1962"W	2542.74	224.807	1.31	1.07	1.70	
6778.00	27.450	218.470	6107.54	-1137.61	-1823.28	-1807.15	1727356.80	14300280.83	39°22'46.4099"N	80°41'32.3907"W	2567.13	224.745	1.56	1.54	0.63	BH Lucida <8-1/2"> (6724')(6778'-26798')
6819.00	27.180	219.770	6143.97	-1147.56	-1837.88	-1819.02	1727344.94	14300266.24	39°22'46.2660"N	80°41'32.5425"W	2585.85	224.705	1.60	-0.66	3.17	
6913.00	31.130	233.820	6226.14	-1165.93	-1868.77	-1852.42	1727311.55	14300235.36	39°22'45.9618"N	80°41'32.9692"W	2631.30	224.748	8.38	4.20	14.95	
7008.00	26.690	239.480	6309.30	-1177.49	-1894.12	-1890.64	1727273.34	14300210.02	39°22'45.7125"N	80°41'33.4571"W	2676.23	224.947	5.49	-4.67	5.96	
7101.00	27.810	249.220	6392.02	-1182.37	-1912.43	-1928.94	1727235.06	14300191.72	39°22'45.5328"N	80°41'33.9456"W	2716.29	225.246	4.94	1.20	10.47	
7195.00	28.370	264.790	6475.06	-1177.76	-1922.25	-1971.74	1727192.27	14300181.90	39°22'45.4372"N	80°41'34.4910"W	2753.69	225.728	7.80	0.60	16.56	
7290.00	29.320	279.450	6558.38	-1161.32	-1920.48	-2017.22	1727146.81	14300183.67	39°22'45.4563"N	80°41'35.0701"W	2785.22	226.407	7.50	1.00	15.43	
7384.00	32.180	294.260	6639.27	-1133.19	-1906.40	-2062.82	1727101.23	14300197.75	39°22'45.5970"N	80°41'35.6502"W	2808.84	227.257	8.59	3.04	15.76	
7479.00	34.500	308.980	6718.76	-1093.00	-1879.03	-2106.88	1727057.19	14300225.11	39°22'45.8690"N	80°41'36.2101"W	2823.06	228.272	8.84	2.44	15.49	
7492.00†	35.048	310.978	6729.44	-1086.65	-1874.26	-2112.56	1727051.51	14300229.87	39°22'45.9163"N	80°41'36.2822"W	2824.14	228.420	9.73	4.21	15.37	Sycamore: 7492' MD
7573.00	39.120	322.190	6794.12	-1042.27	-1838.77	-2145.83	1727018.25	14300265.35	39°22'46.2682"N	80°41'36.7044"W	2825.89	229.407	9.73	5.03	13.84	
7667.00	45.460	322.850	6863.62	-982.32	-1788.59	-2184.28	1726979.82	14300315.52	39°22'46.7654"N	80°41'37.1919"W	2823.14	230.688	6.76	6.74	0.70	
7689.00†	46.809	322.053	6878.86	-967.29	-1776.01	-2193.95	1726970.15	14300328.08	39°22'46.8900"N	80°41'37.3145"W	2822.70	231.010	6.67	6.13	-3.62	Middlesex: 7689' MD
7761.00	51.260	319.670	6926.06	-916.29	-1733.88	-2228.28	1726935.83	14300370.20	39°22'47.3076"N	80°41'37.7499"W	2823.40	232.113	6.67	6.18	-3.31	
7855.00	55.340	320.490	6982.22	-845.93	-1676.09	-2276.63	1726887.51	14300427.97	39°22'47.8804"N	80°41'38.3630"W	2827.06	233.639	4.40	4.34	0.87	
7928.00†	59.027	324.543	7021.79	-787.78	-1627.40	-2313.90	1726850.25	14300476.64	39°22'48.3629"N	80°41'38.8357"W	2828.88	234.881	6.87	5.05	5.55	Burkett: 7928' MD
7949.00	60.110	325.650	7032.43	-770.37	-1612.55	-2324.26	1726839.89	14300491.48	39°22'48.5100"N	80°41'38.9669"W	2828.87	235.247	6.87	5.16	5.27	

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Actual Wellpath Report

Ralph Unit 1H AWP Proj: 26824'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Ralph Unit 1H
Field	Doddridge	API	47-017-06984-0000
Facility	Crimson Pad	Wellbore	Ralph Unit 1H AWB
Slot	Slot A		

WELLPATH DATA (289 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
7989.00†	62.175	328.138	7051.74	-736.40	-1583.21	-2343.39	1726820.77	14300520.82	39°22'48.8007"N	80°41'39.2092"W	2828.08	235.957	7.50	5.16	6.22	Tully: 7989' MD
8043.00	65.030	331.350	7075.75	-688.98	-1541.43	-2367.74	1726796.43	14300562.58	39°22'49.2144"N	80°41'39.5175"W	2825.28	236.935	7.50	5.29	5.95	
8138.00	71.430	338.850	7111.01	-601.34	-1461.47	-2404.71	1726759.47	14300642.51	39°22'50.0059"N	80°41'39.9850"W	2813.99	238.711	9.95	6.74	7.89	
8191.00†	76.298	340.447	7125.73	-550.46	-1413.74	-2422.41	1726741.79	14300690.21	39°22'50.4782"N	80°41'40.2082"W	2804.77	239.732	9.63	9.19	3.01	Marcellus POE: 8191' MD
8202.00	77.310	340.770	7128.24	-539.75	-1403.64	-2425.96	1726738.23	14300700.31	39°22'50.5781"N	80°41'40.2531"W	2802.77	239.947	9.63	9.20	2.93	
8232.00	79.040	339.740	7134.39	-510.40	-1376.01	-2435.88	1726728.32	14300727.93	39°22'50.8516"N	80°41'40.3782"W	2797.66	240.538	6.67	5.77	-3.43	
8326.00	85.970	342.590	7146.65	-417.27	-1287.86	-2465.93	1726698.28	14300816.05	39°22'51.7238"N	80°41'40.7571"W	2781.98	242.424	7.96	7.37	3.03	
8421.00	89.720	342.840	7150.22	-322.39	-1197.23	-2494.13	1726670.09	14300906.64	39°22'52.6205"N	80°41'41.1123"W	2766.60	244.358	3.96	3.95	0.26	
8516.00	89.290	342.450	7151.04	-227.43	-1106.56	-2522.47	1726641.76	14300997.28	39°22'53.5176"N	80°41'41.4693"W	2754.51	246.314	0.61	-0.45	-0.41	
8610.00	89.660	343.280	7151.90	-133.48	-1016.73	-2550.16	1726614.08	14301087.06	39°22'54.4063"N	80°41'41.8181"W	2745.37	248.263	0.97	0.39	0.88	
8705.00	89.110	341.120	7152.92	-38.51	-926.29	-2579.20	1726585.05	14301177.47	39°22'55.3012"N	80°41'42.1840"W	2740.49	250.245	2.35	-0.58	-2.27	
8799.00	89.450	341.820	7154.10	55.48	-837.17	-2609.07	1726555.19	14301266.55	39°22'56.1830"N	80°41'42.5606"W	2740.09	252.210	0.83	0.36	0.74	
8893.00	89.420	341.310	7155.03	149.47	-748.00	-2638.79	1726525.48	14301355.69	39°22'57.0653"N	80°41'42.9353"W	2742.76	254.174	0.54	-0.03	-0.54	
8988.00	89.350	341.140	7156.05	244.46	-658.06	-2669.37	1726494.92	14301445.60	39°22'57.9552"N	80°41'43.3208"W	2749.29	256.151	0.19	-0.07	-0.18	
9082.00	89.200	340.210	7157.24	338.45	-569.37	-2700.47	1726463.83	14301534.26	39°22'58.8329"N	80°41'43.7131"W	2759.84	258.094	1.00	-0.16	-0.99	
9176.00	89.290	341.730	7158.48	432.44	-480.51	-2731.12	1726433.19	14301623.07	39°22'59.7121"N	80°41'44.0996"W	2773.07	260.021	1.62	0.10	1.62	
9271.00	89.420	341.630	7159.55	527.43	-390.34	-2760.98	1726403.35	14301713.22	39°23'0.6044"N	80°41'44.4760"W	2788.43	261.953	0.17	0.14	-0.11	
9365.00	89.350	341.270	7160.55	621.42	-301.22	-2790.88	1726373.46	14301802.29	39°23'1.4861"N	80°41'44.8530"W	2807.09	263.840	0.39	-0.07	-0.38	
9460.00	89.720	342.160	7161.32	716.41	-211.03	-2820.69	1726343.66	14301892.46	39°23'2.3786"N	80°41'45.2287"W	2828.57	265.721	1.01	0.39	0.94	
9554.00	89.350	341.210	7162.09	810.40	-121.79	-2850.22	1726314.14	14301981.66	39°23'3.2615"N	80°41'45.6010"W	2852.82	267.553	1.08	-0.39	-1.01	
9648.00	89.320	341.570	7163.18	904.39	-32.71	-2880.22	1726284.15	14302070.70	39°23'4.1429"N	80°41'45.9792"W	2880.40	269.349	0.38	-0.03	0.38	
9743.00	89.380	341.580	7164.26	999.38	57.41	-2910.24	1726254.14	14302160.79	39°23'5.0346"N	80°41'46.3577"W	2910.81	271.130	0.06	0.06	0.01	
9837.00	89.320	341.570	7165.32	1093.37	146.59	-2939.95	1726224.45	14302249.93	39°23'5.9170"N	80°41'46.7323"W	2943.60	272.854	0.06	-0.06	-0.01	
9931.00	89.290	341.750	7166.46	1187.36	235.81	-2969.53	1726194.88	14302339.11	39°23'6.7998"N	80°41'47.1051"W	2978.87	274.540	0.19	-0.03	0.19	
10026.00	89.350	341.510	7167.59	1282.35	325.96	-2999.46	1726164.96	14302429.23	39°23'7.6918"N	80°41'47.4825"W	3017.12	276.202	0.26	0.06	-0.25	
10121.00	89.380	341.620	7168.64	1377.34	416.08	-3029.50	1726134.93	14302519.31	39°23'8.5835"N	80°41'47.8613"W	3057.94	277.820	0.12	0.03	0.12	
10215.00	89.320	341.610	7169.71	1471.33	505.27	-3059.15	1726105.29	14302608.48	39°23'9.4660"N	80°41'48.2350"W	3100.60	279.379	0.06	-0.06	-0.01	
10310.00	89.350	341.410	7170.81	1566.32	595.36	-3089.27	1726075.18	14302698.53	39°23'10.3575"N	80°41'48.6148"W	3146.12	280.908	0.21	0.03	-0.21	
10404.00	89.320	341.190	7171.90	1660.31	684.40	-3119.41	1726045.06	14302787.53	39°23'11.2384"N	80°41'48.9948"W	3193.61	282.375	0.24	-0.03	-0.23	
10499.00	89.320	341.500	7173.03	1755.30	774.40	-3149.80	1726014.68	14302877.49	39°23'12.1289"N	80°41'49.3780"W	3243.59	283.813	0.33	0.00	0.33	

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Actual Wellpath Report

Ralph Unit 1H AWP Proj: 26824'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Ralph Unit 1H
Field	Doddridge		API	47-017-06984-0000
Facility	Crimson Pad		Wellbore	Ralph Unit 1H AWB
Slot	Slot A			

WELLPATH DATA (289 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
10593.00	89.380	341.330	7174.10	1849.29	863.49	-3179.75	1725984.74	14302966.55	39°23'13.0105"N	80°41'49.7557"W	3294.91	285.193	0.19	0.06	-0.18	
10782.00	89.380	341.660	7176.14	2038.28	1042.71	-3239.74	1725924.78	14303145.70	39°23'14.7838"N	80°41'50.5120"W	3403.40	287.841	0.17	0.00	0.17	
10876.00	89.350	342.050	7177.18	2132.26	1132.03	-3269.01	1725895.52	14303234.98	39°23'15.6675"N	80°41'50.8810"W	3459.46	289.101	0.42	-0.03	0.41	
10970.00	89.260	341.860	7178.32	2226.24	1221.40	-3298.12	1725866.41	14303324.32	39°23'16.5518"N	80°41'51.2480"W	3517.02	290.321	0.22	-0.10	-0.20	
11064.00	89.350	341.760	7179.46	2320.23	1310.69	-3327.46	1725837.08	14303413.58	39°23'17.4353"N	80°41'51.6179"W	3576.30	291.500	0.14	0.10	-0.11	
11159.00	89.320	341.290	7180.57	2415.22	1400.79	-3357.57	1725806.99	14303503.64	39°23'18.3268"N	80°41'51.9975"W	3638.06	292.646	0.50	-0.03	-0.49	
11253.00	89.450	342.020	7181.58	2509.21	1490.01	-3387.15	1725777.42	14303592.82	39°23'19.2095"N	80°41'52.3704"W	3700.39	293.745	0.79	0.14	0.78	
11348.00	89.230	341.230	7182.67	2604.19	1580.16	-3417.10	1725747.49	14303682.94	39°23'20.1015"N	80°41'52.7480"W	3764.76	294.817	0.86	-0.23	-0.83	
11442.00	89.380	341.780	7183.81	2698.18	1669.30	-3446.91	1725717.68	14303772.04	39°23'20.9835"N	80°41'53.1240"W	3829.85	295.840	0.61	0.16	0.59	
11537.00	89.230	341.420	7184.96	2793.17	1759.43	-3476.90	1725687.71	14303862.14	39°23'21.8754"N	80°41'53.5020"W	3896.72	296.841	0.41	-0.16	-0.38	
11631.00	89.290	341.440	7186.18	2887.16	1848.53	-3506.83	1725657.79	14303951.20	39°23'22.7570"N	80°41'53.8795"W	3964.20	297.795	0.07	0.06	0.02	
11725.00	89.690	341.810	7187.01	2981.15	1937.73	-3536.46	1725628.17	14304040.37	39°23'23.6396"N	80°41'54.2531"W	4032.54	298.720	0.58	0.43	0.39	
11820.00	89.820	341.980	7187.42	3076.14	2028.03	-3565.98	1725598.66	14304130.63	39°23'24.5330"N	80°41'54.6252"W	4102.33	299.628	0.23	0.14	0.18	
11914.00	89.690	341.690	7187.82	3170.13	2117.34	-3595.29	1725569.37	14304219.91	39°23'25.4167"N	80°41'54.9947"W	4172.44	300.495	0.34	-0.14	-0.31	
12008.00	89.540	341.940	7188.45	3264.12	2206.65	-3624.62	1725540.04	14304309.18	39°23'26.3003"N	80°41'55.3645"W	4243.49	301.333	0.31	-0.16	0.27	
12103.00	89.750	341.710	7189.04	3359.11	2296.91	-3654.25	1725510.42	14304399.40	39°23'27.1933"N	80°41'55.7381"W	4316.17	302.152	0.33	0.22	-0.24	
12197.00	88.710	341.740	7190.31	3453.10	2386.16	-3683.73	1725480.96	14304488.62	39°23'28.0764"N	80°41'56.1097"W	4389.03	302.933	1.11	-1.11	0.03	
12291.00	88.650	341.930	7192.47	3547.06	2475.45	-3713.02	1725451.67	14304577.87	39°23'28.9599"N	80°41'56.4791"W	4462.55	303.691	0.21	-0.06	0.20	
12385.00	88.340	340.840	7194.94	3641.03	2564.50	-3743.02	1725421.69	14304666.89	39°23'29.8410"N	80°41'56.8573"W	4537.27	304.417	1.21	-0.33	-1.16	
12480.00	88.400	340.930	7197.64	3735.99	2654.22	-3774.12	1725390.61	14304756.58	39°23'30.7288"N	80°41'57.2496"W	4613.98	305.118	0.11	0.06	0.09	
12574.00	90.710	343.590	7198.37	3829.95	2743.74	-3802.75	1725361.98	14304846.06	39°23'31.6145"N	80°41'57.6105"W	4689.24	305.811	3.75	2.46	2.83	
12669.00	88.520	341.160	7199.01	3924.91	2834.26	-3831.51	1725333.23	14304936.55	39°23'32.5101"N	80°41'57.9730"W	4765.87	306.491	3.44	-2.31	-2.56	
12763.00	90.060	341.260	7200.18	4018.90	2923.24	-3861.79	1725302.97	14305025.49	39°23'33.3906"N	80°41'58.3548"W	4843.42	307.125	1.64	1.64	0.11	
12858.00	88.740	340.900	7201.17	4113.89	3013.10	-3892.59	1725272.18	14305115.32	39°23'34.2797"N	80°41'58.7433"W	4922.50	307.742	1.44	-1.39	-0.38	
12952.00	88.520	340.750	7203.42	4207.86	3101.86	-3923.45	1725241.33	14305204.04	39°23'35.1580"N	80°41'59.1327"W	5001.50	308.330	0.28	-0.23	-0.16	
13046.00	89.170	341.010	7205.31	4301.84	3190.66	-3954.24	1725210.56	14305292.80	39°23'36.0366"N	80°41'59.5211"W	5080.97	308.900	0.74	0.69	0.28	
13140.00	89.320	341.250	7206.55	4395.83	3279.60	-3984.63	1725180.17	14305381.71	39°23'36.9166"N	80°41'59.9045"W	5160.72	309.456	0.30	0.16	0.26	
13235.00	89.170	340.830	7207.80	4490.83	3369.44	-4015.50	1725149.32	14305471.51	39°23'37.8056"N	80°42'0.2938"W	5241.88	310.000	0.47	-0.16	-0.44	
13329.00	89.050	340.580	7209.26	4584.81	3458.15	-4046.55	1725118.28	14305560.19	39°23'38.6834"N	80°42'0.6856"W	5322.91	310.517	0.29	-0.13	-0.27	
13424.00	89.260	342.020	7210.66	4679.80	3548.12	-4077.01	1725087.83	14305650.12	39°23'39.5736"N	80°42'1.0697"W	5404.73	311.032	1.53	0.22	1.52	

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Actual Wellpath Report

Ralph Unit 1H AWP Proj: 26824'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Ralph Unit 1H
Field	Doddridge	API	47-017-06984-0000
Facility	Crimson Pad	Wellbore	Ralph Unit 1H AWB
Slot	Slot A		

WELLPATH DATA (289 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
13518.00	89.170	340.920	7211.95	4773.79	3637.24	-4106.88	1725057.97	14305739.21	39°23'40.4554"N	80°42'1.4464"W	5485.98	311.530	1.17	-0.10	-1.17	
13612.00	89.480	340.310	7213.06	4867.78	3725.90	-4138.08	1725026.79	14305827.84	39°23'41.3327"N	80°42'1.8401"W	5568.30	312.000	0.73	0.33	-0.65	
13706.00	89.320	339.480	7214.04	4961.75	3814.17	-4170.39	1724994.49	14305916.07	39°23'42.2061"N	80°42'2.2479"W	5651.55	312.446	0.90	-0.17	-0.88	
13800.00	89.660	342.030	7214.88	5055.74	3902.90	-4201.37	1724963.53	14306004.77	39°23'43.0842"N	80°42'2.6387"W	5734.47	312.891	2.74	0.36	2.71	
13895.00	89.970	339.830	7215.19	5150.73	3992.68	-4232.40	1724932.50	14306094.51	39°23'43.9725"N	80°42'3.0303"W	5818.48	313.331	2.34	0.33	-2.32	
13989.00	89.510	339.850	7215.61	5244.71	4080.92	-4264.80	1724900.12	14306182.72	39°23'44.8457"N	80°42'3.4392"W	5902.75	313.738	0.49	-0.49	0.02	
14084.00	90.000	340.330	7216.02	5339.69	4170.24	-4297.15	1724867.78	14306272.00	39°23'45.7296"N	80°42'3.8475"W	5988.02	314.141	0.72	0.52	0.51	
14179.00	89.880	340.410	7216.12	5434.69	4259.72	-4329.06	1724835.88	14306361.45	39°23'46.6150"N	80°42'4.2503"W	6073.39	314.537	0.15	-0.13	0.08	
14273.00	89.660	339.270	7216.50	5528.66	4347.96	-4361.46	1724803.49	14306449.65	39°23'47.4881"N	80°42'4.6592"W	6158.50	314.911	1.24	-0.23	-1.21	
14368.00	89.780	340.190	7216.96	5623.64	4437.08	-4394.37	1724770.60	14306538.73	39°23'48.3700"N	80°42'5.0747"W	6244.85	315.277	0.98	0.13	0.97	
14462.00	89.720	339.770	7217.37	5717.62	4525.39	-4426.55	1724738.43	14306627.02	39°23'49.2439"N	80°42'5.4809"W	6330.37	315.633	0.45	-0.06	-0.45	
14556.00	89.880	339.700	7217.70	5811.59	4613.58	-4459.11	1724705.88	14306715.16	39°23'50.1165"N	80°42'5.8919"W	6416.29	315.975	0.19	0.17	-0.07	
14651.00	90.180	339.980	7217.65	5906.57	4702.75	-4491.85	1724673.15	14306804.31	39°23'50.9990"N	80°42'6.3052"W	6503.28	316.314	0.43	0.32	0.29	
14745.00	90.090	339.540	7217.43	6000.55	4790.95	-4524.37	1724640.65	14306892.47	39°23'51.8718"N	80°42'6.7157"W	6589.62	316.639	0.48	-0.10	-0.47	
14839.00	89.780	340.020	7217.53	6094.52	4879.16	-4556.86	1724608.17	14306980.64	39°23'52.7446"N	80°42'7.1258"W	6676.16	316.956	0.61	-0.33	0.51	
14933.00	90.150	340.060	7217.59	6188.51	4967.51	-4588.95	1724576.10	14307068.96	39°23'53.6189"N	80°42'7.5308"W	6762.73	317.268	0.40	0.39	0.04	
15027.00	90.680	340.210	7216.91	6282.50	5055.91	-4620.89	1724544.17	14307157.33	39°23'54.4937"N	80°42'7.9340"W	6849.44	317.574	0.59	0.56	0.16	
15122.00	90.060	339.530	7216.30	6377.47	5145.11	-4653.58	1724511.49	14307246.49	39°23'55.3763"N	80°42'8.3467"W	6937.43	317.872	0.97	-0.65	-0.72	
15216.00	90.250	340.740	7216.04	6471.46	5233.51	-4685.52	1724479.56	14307334.86	39°23'56.2511"N	80°42'8.7499"W	7024.51	318.162	1.30	0.20	1.29	
15310.00	90.090	339.920	7215.76	6565.45	5322.03	-4717.16	1724447.93	14307423.33	39°23'57.1269"N	80°42'9.1492"W	7111.65	318.448	0.89	-0.17	-0.87	
15404.00	90.090	339.930	7215.62	6659.43	5410.31	-4749.43	1724415.68	14307511.59	39°23'58.0006"N	80°42'9.5565"W	7199.21	318.722	0.01	0.00	0.01	
15499.00	90.120	340.680	7215.44	6754.42	5499.76	-4781.44	1724383.68	14307601.00	39°23'58.8856"N	80°42'9.9606"W	7287.63	318.997	0.79	0.03	0.79	
15593.00	90.000	340.880	7215.34	6848.42	5588.52	-4812.39	1724352.74	14307689.72	39°23'59.7639"N	80°42'10.3510"W	7375.00	319.268	0.25	-0.13	0.21	
15687.00	90.220	341.320	7215.16	6942.42	5677.45	-4842.84	1724322.31	14307778.62	39°24'0.6438"N	80°42'10.7352"W	7462.34	319.536	0.52	0.23	0.47	
15781.00	89.880	340.960	7215.08	7036.42	5766.40	-4873.22	1724291.93	14307867.54	39°24'1.5240"N	80°42'11.1185"W	7549.81	319.799	0.53	-0.36	-0.38	
15876.00	90.650	341.780	7214.64	7131.42	5856.42	-4903.57	1724261.60	14307957.52	39°24'2.4147"N	80°42'11.5013"W	7638.24	320.061	1.18	0.81	0.86	
15970.00	90.490	341.700	7213.71	7225.40	5945.68	-4933.02	1724232.16	14308046.75	39°24'3.2979"N	80°42'11.8727"W	7725.66	320.318	0.19	-0.17	-0.09	
16065.00	90.150	341.040	7213.18	7320.40	6035.70	-4963.37	1724201.82	14308136.73	39°24'4.1886"N	80°42'12.2556"W	7814.39	320.568	0.78	-0.36	-0.69	
16160.00	90.180	340.910	7212.90	7415.40	6125.51	-4994.34	1724170.87	14308226.51	39°24'5.0772"N	80°42'12.6463"W	7903.50	320.808	0.14	0.03	-0.14	
16254.00	90.150	341.350	7212.63	7509.40	6214.46	-5024.74	1724140.48	14308315.42	39°24'5.9573"N	80°42'13.0299"W	7991.72	321.043	0.47	-0.03	0.47	

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Actual Wellpath Report

Ralph Unit 1H AWP Proj: 26824'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Ralph Unit 1H
Field	Doddridge	API	47-017-06984-0000
Facility	Crimson Pad	Wellbore	Ralph Unit 1H AWB
Slot	Slot A		

WELLPATH DATA (289 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
16348.00	90.000	341.290	7212.51	7603.40	6303.51	-5054.84	1724110.38	14308404.43	39°24'6.8384"N	80°42'13.4097"W	8079.96	321.274	0.17	-0.16	-0.06	
16443.00	89.380	339.150	7213.02	7698.38	6392.90	-5086.99	1724078.25	14308493.79	39°24'7.7229"N	80°42'13.8154"W	8169.86	321.490	2.35	-0.65	-2.25	
16537.00	89.910	340.820	7213.61	7792.36	6481.21	-5119.16	1724046.09	14308582.07	39°24'8.5968"N	80°42'14.2216"W	8259.05	321.697	1.86	0.56	1.78	
16631.00	89.750	340.970	7213.88	7886.36	6570.04	-5149.93	1724015.34	14308670.86	39°24'9.4757"N	80°42'14.6098"W	8347.88	321.909	0.23	-0.17	0.16	
16726.00	89.750	341.020	7214.30	7981.36	6659.86	-5180.86	1723984.41	14308760.64	39°24'10.3644"N	80°42'15.0001"W	8437.72	322.120	0.05	0.00	0.05	
16820.00	89.750	340.230	7214.71	8075.35	6748.53	-5212.05	1723953.24	14308849.28	39°24'11.2419"N	80°42'15.3937"W	8526.91	322.320	0.84	0.00	-0.84	
16914.00	90.120	340.940	7214.82	8169.35	6837.19	-5243.29	1723922.01	14308937.90	39°24'12.1191"N	80°42'15.7880"W	8616.22	322.516	0.85	0.39	0.76	
17009.00	90.030	340.890	7214.69	8264.35	6926.96	-5274.36	1723890.96	14309027.64	39°24'13.0074"N	80°42'16.1800"W	8706.42	322.713	0.11	-0.09	-0.05	
17103.00	90.060	341.020	7214.62	8358.35	7015.82	-5305.03	1723860.30	14309116.46	39°24'13.8866"N	80°42'16.5670"W	8795.74	322.905	0.14	0.03	0.14	
17197.00	90.550	341.980	7214.12	8452.34	7104.96	-5334.86	1723830.48	14309205.57	39°24'14.7686"N	80°42'16.9433"W	8884.88	323.098	1.15	0.52	1.02	
17292.00	90.680	345.270	7213.10	8547.23	7196.09	-5361.63	1723803.71	14309296.66	39°24'15.6701"N	80°42'17.2806"W	8973.90	323.311	3.47	0.14	3.46	
17386.00	90.550	342.880	7212.09	8641.09	7286.47	-5387.42	1723777.94	14309387.01	39°24'16.5642"N	80°42'17.6053"W	9061.84	323.522	2.55	-0.14	-2.54	
17480.00	90.920	342.910	7210.88	8735.03	7376.30	-5415.07	1723750.30	14309476.80	39°24'17.4530"N	80°42'17.9538"W	9150.56	323.717	0.39	0.39	0.03	
17575.00	90.280	339.870	7209.89	8830.01	7466.32	-5445.38	1723720.00	14309566.79	39°24'18.3436"N	80°42'18.3362"W	9241.11	323.896	3.27	-0.67	-3.20	
17669.00	91.140	341.480	7208.72	8924.00	7555.01	-5476.48	1723688.91	14309655.44	39°24'19.2212"N	80°42'18.7287"W	9331.13	324.062	1.94	0.91	1.71	
17764.00	90.860	340.990	7207.06	9018.98	7644.95	-5507.04	1723658.37	14309745.35	39°24'20.1111"N	80°42'19.1143"W	9421.93	324.233	0.59	-0.29	-0.52	
17858.00	89.910	341.520	7206.43	9112.98	7733.96	-5537.24	1723628.17	14309834.32	39°24'20.9918"N	80°42'19.4954"W	9511.85	324.399	1.16	-1.01	0.56	
17952.00	90.000	340.720	7206.51	9206.98	7822.90	-5567.66	1723597.77	14309923.23	39°24'21.8719"N	80°42'19.8792"W	9601.91	324.560	0.86	0.10	-0.85	
18047.00	89.970	341.820	7206.53	9301.98	7912.87	-5598.17	1723567.27	14310013.16	39°24'22.7620"N	80°42'20.2641"W	9692.93	324.722	1.16	-0.03	1.16	
18141.00	90.550	342.020	7206.11	9395.96	8002.23	-5627.34	1723538.11	14310102.48	39°24'23.6461"N	80°42'20.6320"W	9782.77	324.884	0.65	0.62	0.21	
18236.00	90.220	341.150	7205.47	9490.96	8092.36	-5657.35	1723508.12	14310192.58	39°24'24.5379"N	80°42'21.0105"W	9873.80	325.043	0.98	-0.35	-0.92	
18330.00	90.280	341.050	7205.06	9584.95	8181.29	-5687.79	1723477.68	14310281.48	39°24'25.4179"N	80°42'21.3948"W	9964.16	325.192	0.12	0.06	-0.11	
18425.00	90.250	340.880	7204.62	9679.95	8271.09	-5718.78	1723446.71	14310371.24	39°24'26.3064"N	80°42'21.7857"W	10055.62	325.339	0.18	-0.03	-0.18	
18519.00	90.280	341.110	7204.18	9773.95	8359.97	-5749.39	1723416.11	14310460.08	39°24'27.1858"N	80°42'22.1720"W	10146.16	325.483	0.25	0.03	0.24	
18613.00	90.280	340.850	7203.72	9867.95	8448.84	-5780.02	1723385.49	14310548.92	39°24'28.0651"N	80°42'22.5586"W	10236.77	325.623	0.28	0.00	-0.28	
18708.00	90.280	340.750	7203.26	9962.95	8538.55	-5811.26	1723354.26	14310638.60	39°24'28.9528"N	80°42'22.9529"W	10328.49	325.761	0.11	0.00	-0.11	
18802.00	90.370	341.080	7202.73	10056.95	8627.38	-5842.00	1723323.54	14310727.39	39°24'29.8318"N	80°42'23.3408"W	10419.25	325.896	0.36	0.10	0.35	
18896.00	90.060	339.680	7202.37	10150.94	8715.92	-5873.56	1723291.99	14310815.90	39°24'30.7079"N	80°42'23.7392"W	10510.28	326.024	1.53	-0.33	-1.49	
18990.00	89.970	340.810	7202.35	10244.93	8804.39	-5905.33	1723260.23	14310904.33	39°24'31.5832"N	80°42'24.1403"W	10601.43	326.149	1.21	-0.10	1.20	
19085.00	90.090	341.510	7202.30	10339.93	8894.30	-5936.01	1723229.56	14310994.20	39°24'32.4728"N	80°42'24.5275"W	10693.21	326.281	0.75	0.13	0.74	

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Operator	ANTERO RESOURCES CORPORATION	Well	Ralph Unit 1H
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Facility	Crimson Pad	Wellbore	Ralph Unit 1H AWB
Slot	Slot A		

WELLPATH DATA (289 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
19179.00	89.850	340.920	7202.35	10433.92	8983.29	-5966.28	1723199.30	14311083.16	39°24'33.3534"N	80°42'24.9094"W	10784.06	326.410	0.68	-0.26	-0.63	
19273.00	89.910	341.180	7202.54	10527.92	9072.20	-5996.81	1723168.79	14311172.03	39°24'34.2330"N	80°42'25.2946"W	10875.04	326.535	0.28	0.06	0.28	
19368.00	89.880	340.850	7202.72	10622.92	9162.03	-6027.71	1723137.90	14311261.83	39°24'35.1219"N	80°42'25.6847"W	10967.04	326.659	0.35	-0.03	-0.35	
19462.00	89.880	341.180	7202.92	10716.92	9250.91	-6058.29	1723107.33	14311350.68	39°24'36.0014"N	80°42'26.0706"W	11058.13	326.780	0.35	0.00	0.35	
19556.00	89.820	340.930	7203.16	10810.92	9339.82	-6088.81	1723076.82	14311439.55	39°24'36.8811"N	80°42'26.4557"W	11149.26	326.899	0.27	-0.06	-0.27	
19651.00	89.940	340.730	7203.36	10905.92	9429.55	-6120.00	1723045.64	14311529.25	39°24'37.7689"N	80°42'26.8495"W	11241.48	327.015	0.25	0.13	-0.21	
19745.00	89.880	340.970	7203.51	10999.92	9518.35	-6150.84	1723014.82	14311618.01	39°24'38.6475"N	80°42'27.2386"W	11332.78	327.129	0.26	-0.06	0.26	
19840.00	89.910	340.860	7203.68	11094.92	9608.13	-6181.90	1722983.77	14311707.75	39°24'39.5359"N	80°42'27.6307"W	11425.06	327.243	0.12	0.03	-0.12	
19934.00	89.880	340.840	7203.85	11188.92	9696.93	-6212.74	1722952.94	14311796.52	39°24'40.4145"N	80°42'28.0199"W	11516.45	327.353	0.04	-0.03	-0.02	
20028.00	89.880	340.970	7204.05	11282.92	9785.76	-6243.49	1722922.20	14311885.31	39°24'41.2934"N	80°42'28.4080"W	11607.85	327.461	0.14	0.00	0.14	
20123.00	89.880	340.890	7204.25	11377.92	9875.54	-6274.53	1722891.18	14311975.06	39°24'42.1818"N	80°42'28.7998"W	11700.26	327.570	0.08	0.00	-0.08	
20217.00	89.910	341.040	7204.42	11471.92	9964.40	-6305.19	1722860.53	14312063.89	39°24'43.0610"N	80°42'29.1867"W	11791.72	327.676	0.16	0.03	0.16	
20312.00	89.850	341.080	7204.62	11566.92	10054.26	-6336.02	1722829.71	14312153.71	39°24'43.9501"N	80°42'29.5758"W	11884.16	327.782	0.08	-0.06	0.04	
20406.00	89.820	340.800	7204.89	11660.92	10143.11	-6366.72	1722799.03	14312242.52	39°24'44.8292"N	80°42'29.9633"W	11975.71	327.884	0.30	-0.03	-0.30	
20501.00	89.910	340.850	7205.12	11755.92	10232.83	-6397.92	1722767.83	14312332.21	39°24'45.7170"N	80°42'30.3571"W	12068.32	327.985	0.11	0.09	0.05	
20595.00	89.850	341.150	7205.31	11849.92	10321.71	-6428.52	1722737.24	14312421.06	39°24'46.5964"N	80°42'30.7434"W	12159.92	328.085	0.33	-0.06	0.32	
20690.00	89.880	340.720	7205.54	11944.92	10411.50	-6459.55	1722706.22	14312510.81	39°24'47.4848"N	80°42'31.1350"W	12252.56	328.184	0.45	0.03	-0.45	
20783.00	89.940	341.000	7205.68	12037.92	10499.36	-6490.05	1722675.74	14312598.63	39°24'48.3541"N	80°42'31.5199"W	12343.31	328.278	0.31	0.06	0.30	
20878.00	89.850	341.050	7205.86	12132.92	10589.20	-6520.94	1722644.87	14312688.44	39°24'49.2430"N	80°42'31.9098"W	12435.98	328.375	0.11	-0.09	0.05	
20973.00	89.910	341.080	7206.06	12227.92	10679.06	-6551.76	1722614.05	14312778.26	39°24'50.1321"N	80°42'32.2989"W	12528.68	328.470	0.07	0.06	0.03	
21067.00	89.910	340.930	7206.20	12321.92	10767.94	-6582.36	1722583.47	14312867.11	39°24'51.0116"N	80°42'32.6850"W	12620.46	328.563	0.16	0.00	-0.16	
21161.00	89.880	340.570	7206.38	12415.91	10856.68	-6613.35	1722552.49	14312955.82	39°24'51.8897"N	80°42'33.0763"W	12712.35	328.652	0.38	-0.03	-0.38	
21255.00	90.090	341.010	7206.40	12509.91	10945.45	-6644.28	1722521.57	14313044.55	39°24'52.7680"N	80°42'33.4667"W	12804.27	328.741	0.52	0.22	0.47	
21350.00	90.340	341.010	7206.04	12604.91	11035.28	-6675.19	1722490.67	14313134.34	39°24'53.6568"N	80°42'33.8569"W	12897.11	328.830	0.26	0.26	0.00	
21444.00	90.250	341.260	7205.56	12698.91	11124.23	-6705.59	1722460.29	14313223.25	39°24'54.5369"N	80°42'34.2405"W	12988.97	328.919	0.28	-0.10	0.27	
21539.00	90.180	341.860	7205.20	12793.91	11214.35	-6735.63	1722430.25	14313313.34	39°24'55.4285"N	80°42'34.6196"W	13081.68	329.010	0.64	-0.07	0.63	
21633.00	90.030	341.040	7205.03	12887.90	11303.46	-6765.54	1722400.36	14313402.42	39°24'56.3102"N	80°42'34.9970"W	13173.49	329.098	0.89	-0.16	-0.87	
21728.00	90.090	340.970	7204.93	12982.90	11393.29	-6796.46	1722369.45	14313492.21	39°24'57.1990"N	80°42'35.3873"W	13266.46	329.183	0.10	0.06	-0.07	
21822.00	90.180	341.030	7204.71	13076.90	11482.17	-6827.06	1722338.86	14313581.06	39°24'58.0784"N	80°42'35.7736"W	13358.48	329.265	0.12	0.10	0.06	
21917.00	90.150	341.020	7204.44	13171.90	11572.01	-6857.95	1722307.98	14313670.86	39°24'58.9673"N	80°42'36.1635"W	13451.50	329.348	0.03	-0.03	-0.01	

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Actual Wellpath Report

Ralph Unit 1H AWP Proj: 26824'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Ralph Unit 1H
Field	Doddridge	API	47-017-06984-0000
Facility	Crimson Pad	Wellbore	Ralph Unit 1H AWB
Slot	Slot A		

WELLPATH DATA (289 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
22011.00	90.180	341.200	7204.17	13265.90	11660.94	-6888.39	1722277.56	14313759.76	39°24'59.8473"N	80°42'36.5476"W	13543.54	329.429	0.19	0.03	0.19	
22106.00	90.280	341.980	7203.79	13360.90	11751.08	-6918.39	1722247.57	14313849.86	39°25'0.7391"N	80°42'36.9262"W	13636.42	329.513	0.83	0.11	0.82	
22200.00	90.370	340.940	7203.25	13454.89	11840.20	-6948.28	1722217.70	14313938.94	39°25'1.6209"N	80°42'37.3033"W	13728.39	329.594	1.11	0.10	-1.11	
22295.00	90.250	341.160	7202.74	13549.89	11930.05	-6979.13	1722186.86	14314028.76	39°25'2.5099"N	80°42'37.6928"W	13821.51	329.672	0.26	-0.13	0.23	
22389.00	90.150	340.760	7202.41	13643.89	12018.90	-7009.79	1722156.20	14314117.58	39°25'3.3890"N	80°42'38.0798"W	13913.71	329.748	0.44	-0.11	-0.43	
22483.00	90.090	341.280	7202.21	13737.89	12107.79	-7040.36	1722125.64	14314206.44	39°25'4.2685"N	80°42'38.4658"W	14005.90	329.823	0.56	-0.06	0.55	
22577.00	90.090	341.410	7202.07	13831.89	12196.85	-7070.43	1722095.59	14314295.46	39°25'5.1497"N	80°42'38.8452"W	14098.02	329.899	0.14	0.00	0.14	
22672.00	90.150	341.300	7201.87	13926.88	12286.87	-7100.80	1722065.23	14314385.44	39°25'6.0403"N	80°42'39.2285"W	14191.14	329.976	0.13	0.06	-0.12	
22766.00	90.090	341.130	7201.67	14020.88	12375.86	-7131.07	1722034.97	14314474.40	39°25'6.9209"N	80°42'39.6106"W	14283.35	330.049	0.19	-0.06	-0.18	
22861.00	90.310	340.750	7201.34	14115.88	12465.65	-7162.09	1722003.96	14314564.15	39°25'7.8093"N	80°42'40.0022"W	14376.65	330.121	0.46	0.23	-0.40	
22955.00	90.220	341.700	7200.90	14209.88	12554.65	-7192.35	1721973.72	14314653.11	39°25'8.6898"N	80°42'40.3841"W	14468.90	330.192	1.02	-0.10	1.01	
23049.00	90.090	341.030	7200.65	14303.88	12643.72	-7222.38	1721943.69	14314742.15	39°25'9.5711"N	80°42'40.7632"W	14561.13	330.264	0.73	-0.14	-0.71	
23144.00	90.180	341.100	7200.42	14398.88	12733.58	-7253.21	1721912.88	14314831.97	39°25'10.4602"N	80°42'41.1523"W	14654.46	330.334	0.12	0.09	0.07	
23238.00	90.120	341.260	7200.18	14492.88	12822.55	-7283.53	1721882.57	14314920.91	39°25'11.3405"N	80°42'41.5351"W	14746.79	330.402	0.18	-0.06	0.17	
23332.00	90.220	340.820	7199.90	14586.88	12911.45	-7314.08	1721852.04	14315009.78	39°25'12.2201"N	80°42'41.9206"W	14839.18	330.469	0.48	0.11	-0.47	
23427.00	90.030	341.200	7199.69	14681.88	13001.28	-7344.99	1721821.14	14315099.57	39°25'13.1089"N	80°42'42.3109"W	14932.59	330.536	0.45	-0.20	0.40	
23521.00	90.550	341.240	7199.22	14775.87	13090.28	-7375.25	1721790.89	14315188.53	39°25'13.9895"N	80°42'42.6928"W	15024.97	330.602	0.55	0.55	0.04	
23616.00	90.400	340.920	7198.43	14870.87	13180.14	-7406.05	1721760.10	14315278.36	39°25'14.8786"N	80°42'43.0817"W	15118.39	330.668	0.37	-0.16	-0.34	
23710.00	90.370	340.970	7197.80	14964.87	13268.99	-7436.74	1721729.42	14315367.17	39°25'15.7577"N	80°42'43.4691"W	15210.89	330.731	0.06	-0.03	0.05	
23805.00	90.430	341.290	7197.13	15059.87	13358.88	-7467.47	1721698.71	14315457.03	39°25'16.6471"N	80°42'43.8569"W	15304.34	330.795	0.34	0.06	0.34	
23899.00	90.370	340.850	7196.48	15153.86	13447.79	-7497.96	1721668.23	14315545.91	39°25'17.5268"N	80°42'44.2419"W	15396.83	330.858	0.47	-0.06	-0.47	
23993.00	90.310	341.290	7195.92	15247.86	13536.71	-7528.45	1721637.75	14315634.79	39°25'18.4066"N	80°42'44.6268"W	15489.35	330.919	0.47	-0.06	0.47	
24088.00	90.340	341.350	7195.38	15342.86	13626.70	-7558.88	1721607.33	14315724.75	39°25'19.2970"N	80°42'45.0109"W	15582.80	330.982	0.07	0.03	0.06	
24182.00	90.520	342.100	7194.68	15436.85	13715.96	-7588.36	1721577.87	14315813.97	39°25'20.1801"N	80°42'45.3829"W	15675.16	331.046	0.82	0.19	0.80	
24277.00	90.490	341.240	7193.84	15531.84	13806.13	-7618.23	1721548.00	14315904.11	39°25'21.0723"N	80°42'45.7599"W	15768.54	331.110	0.91	-0.03	-0.91	
24371.00	90.490	341.080	7193.03	15625.83	13895.09	-7648.58	1721517.66	14315993.03	39°25'21.9525"N	80°42'46.1431"W	15861.10	331.169	0.17	0.00	-0.17	
24465.00	90.520	341.280	7192.21	15719.83	13984.06	-7678.91	1721487.35	14316081.97	39°25'22.8327"N	80°42'46.5258"W	15953.67	331.228	0.22	0.03	0.21	
24559.00	90.400	341.190	7191.45	15813.83	14073.06	-7709.14	1721457.12	14316170.93	39°25'23.7133"N	80°42'46.9075"W	16046.25	331.286	0.16	-0.13	-0.10	
24654.00	90.860	340.290	7190.41	15908.82	14162.74	-7740.48	1721425.80	14316260.58	39°25'24.6006"N	80°42'47.3032"W	16139.96	331.342	1.06	0.48	-0.95	
24748.00	90.550	341.150	7189.25	16002.81	14251.46	-7771.51	1721394.78	14316349.26	39°25'25.4785"N	80°42'47.6951"W	16232.70	331.396	0.97	-0.33	0.91	

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Actual Wellpath Report

Ralph Unit 1H AWP Proj: 26824'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Ralph Unit 1H
Field	Doddridge	API	47-017-06984-0000
Facility	Crimson Pad	Wellbore	Ralph Unit 1H AWB
Slot	Slot A		

WELLPATH DATA (289 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
24938.00	90.620	341.030	7187.31	16192.80	14431.20	-7833.09	1721333.23	14316528.93	39°25'27.2568"N	80°42'48.4724"W	16420.01	331.507	0.07	0.04	-0.06	
25032.00	90.620	341.320	7186.29	16286.79	14520.16	-7863.42	1721302.91	14316617.86	39°25'28.1371"N	80°42'48.8553"W	16512.68	331.562	0.31	0.00	0.31	
25127.00	90.770	340.900	7185.14	16381.79	14610.04	-7894.17	1721272.17	14316707.70	39°25'29.0263"N	80°42'49.2436"W	16606.36	331.617	0.47	0.16	-0.44	
25222.00	90.950	341.390	7183.72	16476.77	14699.93	-7924.87	1721241.49	14316797.56	39°25'29.9157"N	80°42'49.6311"W	16700.05	331.670	0.55	0.19	0.52	
25411.00	90.550	341.570	7181.24	16665.75	14879.13	-7984.90	1721181.48	14316976.68	39°25'31.6887"N	80°42'50.3888"W	16886.30	331.780	0.23	-0.21	0.10	
25506.00	90.370	341.850	7180.48	16760.74	14969.33	-8014.71	1721151.68	14317066.84	39°25'32.5811"N	80°42'50.7651"W	16979.88	331.835	0.35	-0.19	0.29	
25601.00	90.550	340.990	7179.72	16855.74	15059.37	-8044.98	1721121.42	14317156.85	39°25'33.4720"N	80°42'51.1471"W	17073.56	331.888	0.92	0.19	-0.91	
25695.00	90.370	341.230	7178.96	16949.73	15148.31	-8075.41	1721091.01	14317245.75	39°25'34.3519"N	80°42'51.5313"W	17166.34	331.938	0.32	-0.19	0.26	
25790.00	90.400	341.280	7178.32	17044.73	15238.26	-8105.94	1721060.49	14317335.68	39°25'35.2420"N	80°42'51.9167"W	17260.10	331.989	0.06	0.03	0.05	
25885.00	90.370	341.280	7177.68	17139.73	15328.24	-8136.43	1721030.01	14317425.61	39°25'36.1322"N	80°42'52.3017"W	17353.85	332.040	0.03	-0.03	0.00	
25979.00	90.490	341.090	7176.98	17233.73	15417.21	-8166.74	1720999.71	14317514.55	39°25'37.0125"N	80°42'52.6844"W	17446.66	332.089	0.24	0.13	-0.20	
26263.00	90.340	341.400	7174.92	17517.72	15686.12	-8258.05	1720908.43	14317783.36	39°25'39.6731"N	80°42'53.8371"W	17727.09	332.235	0.12	-0.05	0.11	
26358.00	90.310	341.260	7174.38	17612.71	15776.12	-8288.46	1720878.04	14317873.32	39°25'40.5636"N	80°42'54.2211"W	17820.91	332.283	0.15	-0.03	-0.15	
26452.00	90.400	341.140	7173.80	17706.71	15865.11	-8318.75	1720847.76	14317962.27	39°25'41.4440"N	80°42'54.6035"W	17913.77	332.330	0.16	0.10	-0.13	
26547.00	90.520	340.720	7173.04	17801.71	15954.89	-8349.79	1720816.73	14318052.02	39°25'42.3323"N	80°42'54.9954"W	18007.71	332.375	0.46	0.13	-0.44	
26642.00	90.400	341.290	7172.28	17896.70	16044.71	-8380.71	1720785.82	14318141.81	39°25'43.2211"N	80°42'55.3859"W	18101.63	332.420	0.61	-0.13	0.60	
26736.00	90.460	341.480	7171.57	17990.70	16133.79	-8410.72	1720755.83	14318230.85	39°25'44.1024"N	80°42'55.7646"W	18194.49	332.466	0.21	0.06	0.20	
26798.00	90.400	341.310	7171.10	18052.70	16192.55	-8430.50	1720736.06	14318289.59	39°25'44.6838"N	80°42'56.0144"W	18255.74	332.497	0.29	-0.10	-0.27	
26824.00	90.400	341.310	7170.92	18078.70	16217.18	-8438.83	1720727.73	14318314.21	39°25'44.9274"N	80°42'56.1195"W	18281.43	332.509	0.00	0.00	0.00	Projected MD at TD: 26824'

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Actual Wellpath Report

Ralph Unit 1H AWP Proj: 26824'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Ralph Unit 1H
Field	Doddridge	API	47-017-06984-0000
Facility	Crimson Pad	Wellbore	Ralph Unit 1H AWB
Slot	Slot A		

HOLE & CASING SECTIONS - Ref Wellbore: Ralph Unit 1H AWB Ref Wellpath: Ralph Unit 1H AWP Proj: 26824'									
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	125.50	100.00	25.50	125.50	0.00	0.00	0.12	-0.19
17.5in Open Hole	125.50	1063.00	937.50	125.50	1062.99	0.12	-0.19	-2.62	-0.84
13.375in Casing Surface	25.50	1043.00	1017.50	25.50	1042.99	0.00	0.00	-2.39	-0.74
12.375in Open Hole	1063.00	3362.00	2299.00	1062.99	3162.69	-2.62	-0.84	-567.69	-622.25
9.625in Casing Intermediate	25.50	3332.00	3306.50	25.50	3136.23	0.00	0.00	-556.88	-613.12
8.75in Open Hole	3362.00	6801.00	3439.00	3162.69	6127.97	-567.69	-622.25	-1831.52	-1813.78
8.5in Open Hole	6801.00	26824.00	20023.00	6127.97	7170.92	-1831.52	-1813.78	16217.18	-8438.83
5.5in Casing Production	25.50	26804.00	26778.50	25.50	7171.06	0.00	0.00	16198.24	-8432.42

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Ralph Unit 1H POE Rev-2	7118.00	-1419.69	-2402.99	1726761.19	14300684.27	39°22'50.4188"N	80°41'39.9613"W	point
Ralph Unit 1H BHL Rev-2	7143.00	16114.65	-8422.69	1720743.86	14318211.72	39°25'43.9136"N	80°42'55.9180"W	point
Ralph Unit 1H LP Rev-2	7143.00	-1242.28	-2463.90	1726700.31	14300861.61	39°22'52.1743"N	80°41'40.7293"W	point
Ralph Unit 1H 50' L/R Hard Line	7500.00	7347.48	-5412.84	1723752.53	14309448.00	39°24'17.1681"N	80°42'17.9266"W	rectangle
2D Rectangle 18538.9 x 100.								

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 Ralph Unit 1H AWP Proj: 26824'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Ralph Unit 1H
Field	Doddridge	API	47-017-06984-0000
Facility	Crimson Pad	Wellbore	Ralph Unit 1H AWB
Slot	Slot A		

WELLPATH COMPOSITION - Ref Wellbore: Ralph Unit 1H AWB Ref Wellpath: Ralph Unit 1H AWP Proj: 26824'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
25.50	992.00	Gyrodata 2015 - GC+WIR+DPIPE	01 Gyrodata MS Gyro <17-1/2"> (100'-992')	Ralph Unit 1H AWB	7/22/2024
992.00	3292.00	BH NaviTrak (2019) (Axial Corr+HRGM)	02 APS EM <12-3/8"> (992')(1070'-3292')	Ralph Unit 1H AWB	7/22/2024
3292.00	6724.00	BH NaviTrak (2019) (Axial Corr+HRGM)	03 APS EM <8-3/4"> (3292')(3423'-6724')	Ralph Unit 1H AWB	9/9/2024
6724.00	26824.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	04 BH Lucida <8-1/2"> (6724')(6778'-26798')	Ralph Unit 1H AWB	9/9/2024

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Actual Wellpath Report

Ralph Unit 1H AWP Proj: 26824'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Ralph Unit 1H
Field	Doddridge	API	47-017-06984-0000
Facility	Crimson Pad	Wellbore	Ralph Unit 1H AWB
Slot	Slot A		

COMMENTS

Wellpath general comments

API: 47-017-06984-0000
BH Job #: 112320223
Rig: H&P 317
Duration: 9/12/2024-9/18/2024
Gyrodata MS Gyro <17-1/2"> (100'-992')
APS EM <12-3/8"> (992')(1070'-3292')
APS EM <8-3/4"> (3292')(3423'-6724')
BH Lucida <8-1/2"> (6724')(6778'-26798')
Sycamore: 7492' MD
Middlesex: 7689' MD
Burkett: 7928' MD
Tully: 7989' MD
Marcellus POE: 8191' MD
Projected MD at TD: 26824'

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