



ANTERO RESOURCES CORPORATION



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

Slot: Slot B
Well: Buff Unit 1H
Wellbore: Buff Unit 1H PWB

Plot reference azimuth is Buff Unit 1H H&P Rev-B.0	Grid System: NAD27 / UTM Zone 17 North, US feet
The vertical depths are referenced to H&P 317 (RKB)	North reference: GND north
Reference azimuth measured depths are referenced to H&P 317 (RKB)	Scale: True distance
H&P 317 (RKB) to Mean Sea Level: 1219.5 feet	Coordinates are as best referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot B): -1194 feet	Curves are as best
Other wellbore MDs are referenced to each path detail H&P 317 (RKB)	Created by: wellbore on 2/24/2024, Drawn by: W.A. MRS., EASTTERRAUS, Corp

Location Information						
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude		
Haught Pad	1730640.680	14230353.920	39°11'14.8900"N	80°40'53.8600"W		
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Slot B	3.82	14.06	1730654.710	14230357.440	39°11'14.9253"N	80°40'53.5113"W
Comment: Buff Unit 1H						
H&P 317 (RKB) to Ground level (At Slot: Slot B): 25.5ft						
Mean Sea Level to Ground level (At Slot: Slot B): -1194ft						
H&P 317 (RKB) to Mean Sea Level: 1219.5ft						

Well Profile Data							
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	VS (ft)
Tw On	3298.00	8.420	288.880	3237.37	158.90	-354.91	-255.55
Proj. to Bottom	3334.00	8.420	288.880	3304.83	160.12	-364.33	0.00
Drill Out	3414.00	8.420	288.880	3383.77	163.91	-375.41	0.00
End of 3D Arc	3438.95	8.595	291.751	3406.48	165.09	-378.60	2.00
Curve KOP	6380.57	8.595	291.751	6317.13	328.12	-737.21	0.00
POE	7523.81	74.606	162.665	7180.00	-265.80	-885.20	7.00
Landing Pt.	7711.23	89.500	162.665	7206.00	-442.46	-830.03	8.00
BHL	22214.28	89.500	162.665	7332.56	-14285.52	3693.43	0.00

Gyrodatta MS Gyro <17-1/2"> (100°-380°) : 0.20° Inc, 100.00ft MD, 100.00ft TVD, -0.05ft VS

APS EM <12-1/4"> (380°)(410°-3266°) : 0.44° Inc, 410.00ft MD, 410.00ft TVD, 0.40ft VS

Well Data			
Slot	Well	Wellbore	Wellpath
Slot B	Buff Unit 1H	Buff Unit 1H AWB	Buff Unit 1H AWP Proj. 22228
Slot B	Buff Unit 1H	Buff Unit 1H PWB	Buff Unit 1H PWP Rev-B.0

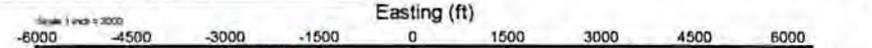
APS EM <8-3/4"> (3266°)(3402°-6525°) : 8.72° Inc, 3402.00ft MD, 3371.85ft TVD, -266.80ft VS



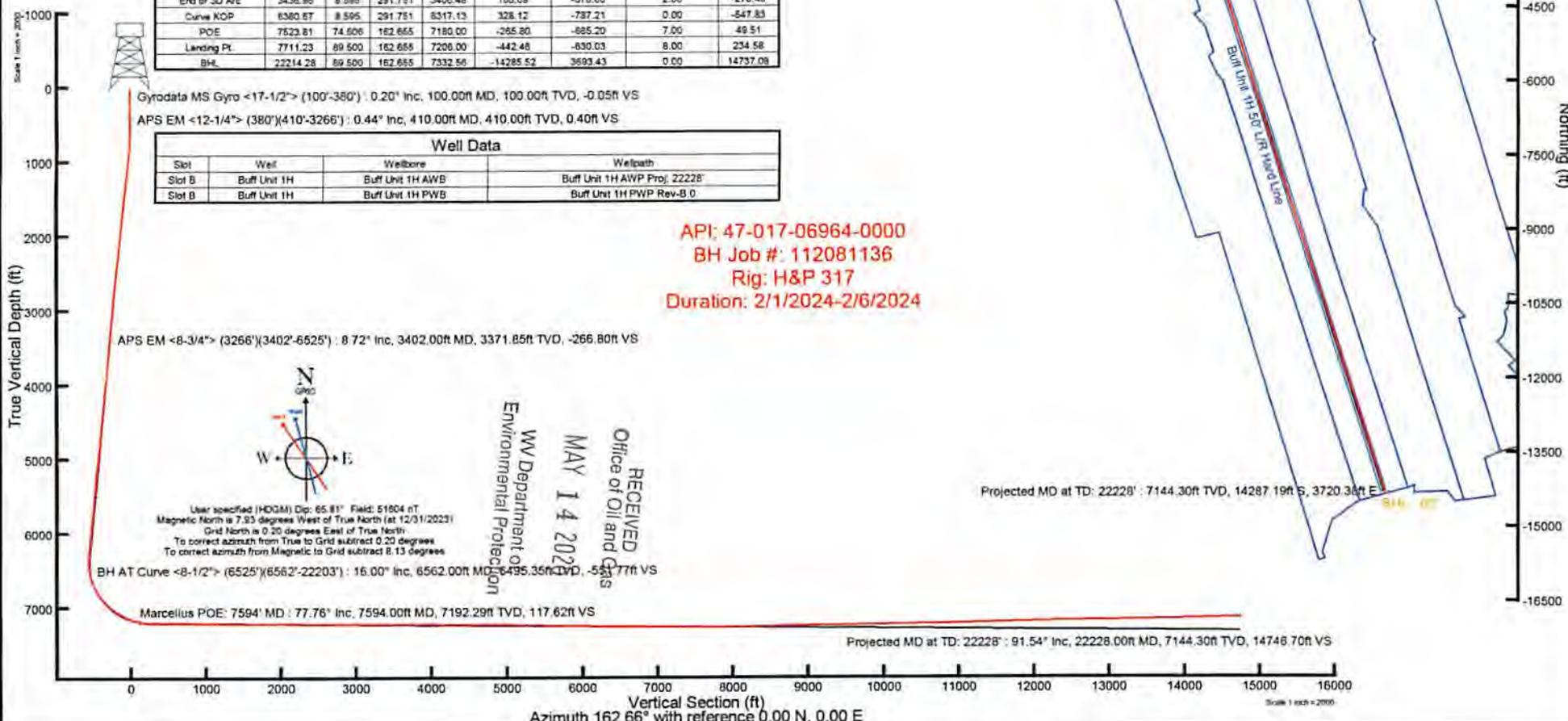
User specified (HDGM) Dip: 65.81° Field: 51804 nT
Magnetic North is 7.93 degrees West of True North (at 12/31/2023)
Grid North is 0.20 degrees East of True North
To correct azimuth from True to Grid subtract 0.20 degrees
To correct azimuth from Magnetic to Grid subtract 8.13 degrees

BH AT Curve <8-1/2"> (6525°)(6562°-22203°) : 16.00° Inc, 6562.00ft MD, 6495.35ft TVD, -587.77ft VS

Marcellus POE: 7594' MD : 77.76° Inc, 7594.00ft MD, 7192.29ft TVD, 117.62ft VS



Gyrodatta MS Gyro <17-1/2"> (100°-380°) : 100.00ft TVD, 0.01ft N, 0.13ft W
APS EM <12-1/4"> (380°)(410°-3266°) : 410.00ft TVD, 0.83ft S, 1.32ft W
APS EM <8-3/4"> (3266°)(3402°-6525°) : 3371.85ft TVD, 162.63ft N, 374.33ft W
BH AT Curve <8-1/2"> (6525°)(6562°-22203°) : 6495.35ft TVD, 326.75ft N, 804.82ft W
Marcellus POE: 7594' MD : 7192.29ft TVD, 329.62ft S, 661.06ft W



API: 47-017-06964-0000
BH Job #: 112081136
Rig: H&P 317
Duration: 2/1/2024-2/6/2024

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Projected MD at TD: 22228' : 91.54° Inc, 22228.00ft MD, 7144.30ft TVD, 14748.70ft VS



Actual Wellpath Report

Buff Unit 1H AWP Proj: 22228'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Buff Unit 1H
Field	Doddridge	API	47-017-06964-0000
Facility	Haught Pad	Wellbore	Buff Unit 1H AWB
Slot	Slot B		

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	2/26/2024 at 4:45:20 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	3.62	14.06	1730654.71	14230357.44	39°11'14.9253"N	80°40'53.5113"W
Facility Reference Pt			1730640.66	14230353.82	39°11'14.8900"N	80°40'53.6900"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	1219.50ft
Horizontal Reference Pt	Slot	H&P 317 (RKB) to Mean Sea Level	1219.50ft
Vertical Reference Pt	H&P 317 (RKB)	H&P 317 (RKB) to Ground Level at Slot (Slot B)	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	162.66°

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Field	Doddridge	API	47-017-06964-0000
Facility	Haught Pad	Wellbore	Buff Unit 1H AWB
Slot	Slot B		

WELLPATH DATA (245 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	275.840	0.00	0.00	0.00	0.00	1730854.71	14230357.44	39°11'14.9253"N	80°40'53.5113"W	0.00	0.000	0.00	0.00	0.00	
25.50	0.000	275.840	25.50	0.00	0.00	0.00	1730654.71	14230357.44	39°11'14.9253"N	80°40'53.5113"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.200	275.840	100.00	-0.05	0.01	-0.13	1730654.58	14230357.45	39°11'14.9254"N	80°40'53.5129"W	0.13	275.840	0.27	0.27	0.00	Gyrodata MS Gyro <17-1/2"> (100'-380')
200.00	0.270	231.740	200.00	-0.04	-0.11	-0.49	1730654.22	14230357.33	39°11'14.9241"N	80°40'53.5175"W	0.50	256.749	0.19	0.07	-44.10	
300.00	0.250	234.790	300.00	0.12	-0.39	-0.85	1730653.86	14230357.05	39°11'14.9215"N	80°40'53.5221"W	0.93	245.574	0.02	-0.02	3.05	
380.00	0.380	220.780	380.00	0.31	-0.69	-1.17	1730653.54	14230356.75	39°11'14.9185"N	80°40'53.5262"W	1.35	239.477	0.19	0.16	-17.51	
410.00	0.440	232.860	410.00	0.40	-0.83	-1.32	1730653.39	14230356.61	39°11'14.9171"N	80°40'53.5282"W	1.56	237.822	0.35	0.20	40.27	APS EM <12-1/4"> (380')(410'-3266')
498.00	1.020	277.470	497.99	0.19	-0.94	-2.37	1730652.34	14230356.51	39°11'14.9161"N	80°40'53.5414"W	2.55	248.486	0.88	0.66	50.66	
589.00	2.210	295.690	588.95	-1.35	-0.07	-4.75	1730649.96	14230357.37	39°11'14.9247"N	80°40'53.5717"W	4.75	269.166	1.41	1.31	20.02	
679.00	3.790	299.120	678.83	4.69	2.13	-8.92	1730645.80	14230359.57	39°11'14.9466"N	80°40'53.6245"W	9.17	283.439	1.77	1.78	3.81	
769.00	5.210	299.940	768.55	-9.85	5.62	-15.06	1730639.66	14230363.06	39°11'14.9813"N	80°40'53.7023"W	16.07	290.461	1.58	1.58	0.91	
860.00	6.550	294.620	859.07	-16.36	9.84	-23.36	1730631.36	14230367.28	39°11'15.0234"N	80°40'53.8075"W	25.34	292.851	1.59	1.47	-5.89	
950.00	7.960	297.180	948.34	-24.16	14.83	-33.57	1730621.16	14230372.28	39°11'15.0730"N	80°40'53.9369"W	36.70	293.833	1.61	1.57	2.84	
1041.00	8.290	297.350	1036.43	-33.19	20.72	-45.00	1730609.73	14230378.15	39°11'15.1316"N	80°40'54.0819"W	49.54	294.724	0.36	0.36	0.19	
1138.00	8.190	295.050	1132.45	-42.57	26.73	-57.21	1730597.52	14230384.16	39°11'15.1915"N	80°40'54.2367"W	63.15	295.044	0.36	-0.11	-2.42	
1231.00	7.720	292.780	1226.54	-51.24	32.07	-69.23	1730585.51	14230389.49	39°11'15.2446"N	80°40'54.3890"W	76.29	294.855	0.59	-0.49	-2.39	
1325.00	8.500	294.450	1319.59	-59.94	37.39	-81.37	1730573.37	14230394.81	39°11'15.2976"N	80°40'54.5430"W	89.55	294.677	0.87	0.83	1.76	
1420.00	8.610	293.970	1413.54	-69.31	43.18	-94.26	1730560.49	14230400.61	39°11'15.3553"N	80°40'54.7065"W	103.68	294.613	0.14	0.12	-0.51	
1514.00	8.610	292.750	1506.48	-78.49	48.78	-107.18	1730547.57	14230406.18	39°11'15.4109"N	80°40'54.8703"W	117.75	294.464	0.19	0.00	-1.30	
1609.00	8.670	291.120	1600.40	-87.52	54.09	-120.42	1730534.34	14230411.51	39°11'15.4641"N	80°40'55.0282"W	132.01	294.190	0.27	0.06	-1.72	
1703.00	8.790	296.470	1693.31	-96.90	59.85	-133.45	1730521.31	14230417.26	39°11'15.5214"N	80°40'55.2035"W	146.26	294.153	0.87	0.13	5.69	
1798.00	8.790	297.090	1787.20	-107.01	66.39	-146.41	1730508.35	14230423.80	39°11'15.5865"N	80°40'55.3678"W	160.76	294.390	0.10	0.00	0.65	
1892.00	8.350	296.230	1880.15	-116.74	72.67	-158.93	1730495.84	14230430.09	39°11'15.6491"N	80°40'55.5265"W	174.76	294.573	0.49	-0.47	-0.91	
1986.00	8.250	294.940	1973.16	-125.98	78.53	-171.17	1730483.61	14230435.94	39°11'15.7074"N	80°40'55.6816"W	188.33	294.646	0.22	-0.11	-1.37	
2081.00	8.970	298.820	2067.09	-135.91	84.98	-183.84	1730470.94	14230442.39	39°11'15.7716"N	80°40'55.8423"W	202.53	294.803	0.97	0.76	4.08	
2175.00	9.000	298.720	2159.94	-146.49	92.04	-196.71	1730458.08	14230449.45	39°11'15.8418"N	80°40'56.0054"W	217.18	295.076	0.04	0.03	-0.11	
2270.00	8.790	297.460	2253.80	-156.95	98.95	-209.86	1730445.13	14230456.36	39°11'15.9107"N	80°40'56.1696"W	231.85	295.268	0.30	-0.22	-1.33	
2364.00	8.870	297.960	2346.68	-167.17	105.67	-222.44	1730432.38	14230463.07	39°11'15.9774"N	80°40'56.3316"W	246.26	295.411	0.12	0.03	0.53	
2459.00	9.160	297.510	2440.51	-177.70	112.60	-235.61	1730419.19	14230469.99	39°11'16.0463"N	80°40'56.4986"W	261.14	295.543	0.31	0.31	-0.47	
2553.00	8.970	295.030	2533.33	-187.92	119.16	-248.89	1730405.92	14230476.55	39°11'16.1116"N	80°40'56.6639"W	275.94	295.583	0.46	-0.20	-2.54	

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Buff Unit 1H AWP Proj: 22228'

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Operator	ANTERO RESOURCES CORPORATION	Well	Buff Unit 1H
Field	Doddridge	API	47-017-06964-0000
Facility	Haught Pad	Wellbore	Buff Unit 1H AWB
Slot	Slot B		

WELLPATH DATA (245 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [ft/100ft]	Build Rate [ft/100ft]	Turn Rate [°/100ft]	Comments
2848.00	9.230	294.710	2627.14	-198.01	125.47	-262.52	1730392.29	14230482.86	39°11'16.1745"N	80°40'56.8397"W	290.97	295.546	0.29	0.27	-0.34	
2742.00	9.150	290.820	2719.93	-207.68	131.28	-276.36	1730378.46	14230488.67	39°11'16.2324"N	80°40'57.0152"W	305.95	295.410	0.67	-0.09	-4.14	
2837.00	9.230	288.650	2813.71	-216.82	136.40	-290.64	1730364.19	14230493.79	39°11'16.2835"N	80°40'57.1963"W	321.05	295.142	0.37	0.08	-2.28	
2931.00	9.100	285.650	2906.51	-225.30	140.82	-304.94	1730349.89	14230498.20	39°11'16.3277"N	80°40'57.3777"W	335.88	294.787	0.53	-0.14	-3.19	
3026.00	9.110	284.190	3000.32	-233.33	144.69	-319.46	1730335.37	14230502.07	39°11'16.3664"N	80°40'57.5620"W	350.70	294.367	0.24	0.01	-1.54	
3120.00	9.040	290.290	3093.14	-241.73	149.07	-333.60	1730321.24	14230506.46	39°11'16.4103"N	80°40'57.7414"W	365.40	294.078	1.03	-0.07	6.49	
3214.00	9.070	290.520	3185.97	-250.78	154.23	-347.47	1730307.38	14230511.51	39°11'16.4617"N	80°40'57.9173"W	380.16	293.935	0.05	0.03	0.24	
3266.00	8.420	288.880	3237.37	-255.55	156.90	-354.91	1730299.94	14230514.28	39°11'16.4883"N	80°40'58.0117"W	388.04	293.850	1.34	-1.25	-3.15	
3402.00	8.720	284.050	3371.85	-266.80	162.63	-374.33	1730280.53	14230520.00	39°11'16.5456"N	80°40'58.2581"W	408.13	293.482	0.57	0.22	-3.55	APS EM <8-3/4"> (3266')(3402'-6525')
3499.00	8.190	283.080	3467.80	-274.13	165.97	-388.20	1730266.57	14230523.35	39°11'16.5792"N	80°40'58.4340"W	422.19	293.149	0.57	-0.55	-1.02	
3594.00	8.320	292.760	3561.82	-281.98	170.16	-401.13	1730253.74	14230527.53	39°11'16.6210"N	80°40'58.5980"W	435.72	292.987	1.47	0.14	10.21	
3688.00	8.030	296.550	3654.86	-290.91	175.73	-413.27	1730241.60	14230533.10	39°11'16.6764"N	80°40'58.7520"W	449.08	293.036	0.65	-0.31	4.03	
3783.00	7.820	295.310	3748.95	-299.89	181.46	-425.05	1730229.83	14230538.82	39°11'16.7335"N	80°40'58.9014"W	462.16	293.118	0.29	-0.22	-1.31	
3877.00	10.120	295.820	3841.80	-309.88	187.80	-438.26	1730216.62	14230545.17	39°11'16.7966"N	80°40'59.0689"W	476.80	293.196	2.45	2.45	0.65	
3972.00	11.030	294.540	3935.18	-321.67	195.22	-454.03	1730200.86	14230552.59	39°11'16.8705"N	80°40'59.2689"W	494.22	293.266	0.99	0.96	1.45	
4067.00	10.570	291.830	4028.50	-333.24	202.24	-470.39	1730184.51	14230559.60	39°11'16.9404"N	80°40'59.4763"W	512.02	293.265	0.72	-0.48	-2.85	
4161.00	10.160	288.430	4120.97	-343.53	208.06	-486.26	1730168.84	14230565.42	39°11'16.9985"N	80°40'59.6775"W	528.90	293.166	0.76	-0.44	-3.62	
4256.00	9.480	286.380	4214.58	-352.77	212.92	-501.71	1730153.19	14230570.28	39°11'17.0471"N	80°40'59.8736"W	545.02	292.996	0.80	-0.72	-2.16	
4350.00	9.850	293.100	4307.24	-362.29	218.26	-516.54	1730138.38	14230575.61	39°11'17.1004"N	80°41'0.0616"W	560.75	292.906	1.26	0.39	7.15	
4445.00	9.170	292.030	4400.94	-372.38	224.28	-531.03	1730123.89	14230581.64	39°11'17.1604"N	80°41'0.2454"W	576.45	292.897	0.74	-0.72	-1.13	
4540.00	8.330	286.190	4494.83	-380.96	229.04	-544.65	1730110.27	14230586.39	39°11'17.2079"N	80°41'0.4182"W	590.85	292.808	1.29	-0.68	-6.15	
4634.00	8.280	299.320	4587.86	-389.85	234.26	-557.09	1730097.83	14230591.60	39°11'17.2599"N	80°41'0.5760"W	604.34	292.807	2.01	-0.05	13.97	
4729.00	7.770	298.240	4681.93	-399.21	240.64	-568.72	1730086.22	14230597.99	39°11'17.3234"N	80°41'0.7233"W	617.53	292.935	0.68	-0.54	-1.14	
4823.00	6.910	295.240	4775.16	-407.57	246.06	-579.43	1730075.51	14230603.41	39°11'17.3774"N	80°41'0.8592"W	629.51	293.009	1.00	-0.91	-3.19	
4917.00	8.760	296.810	4865.28	-416.38	251.70	-590.93	1730064.02	14230609.04	39°11'17.4335"N	80°41'1.0049"W	642.30	293.071	1.87	1.85	1.67	
5012.00	9.170	297.280	4962.12	-426.73	258.43	-604.10	1730050.84	14230615.77	39°11'17.5004"N	80°41'1.1720"W	657.06	293.161	0.45	0.44	0.49	
5106.00	7.930	293.880	5055.07	-436.26	264.48	-616.69	1730038.26	14230621.82	39°11'17.5607"N	80°41'1.3316"W	671.01	293.213	1.43	-1.32	-3.64	
5201.00	9.330	296.480	5148.99	-445.91	270.57	-629.58	1730025.38	14230627.90	39°11'17.6213"N	80°41'1.4950"W	685.26	293.256	1.53	1.47	2.76	
5295.00	8.710	291.900	5241.83	-455.69	276.62	-643.00	1730011.96	14230633.95	39°11'17.6816"N	80°41'1.6652"W	699.98	293.277	1.01	-0.66	-4.87	
5389.00	8.180	289.300	5334.81	-464.17	281.48	-655.90	1729999.07	14230638.81	39°11'17.7301"N	80°41'1.8288"W	713.75	293.227	0.71	-0.59	-2.77	

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Buff Unit 1H AWP Proj: 22228'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Buff Unit 1H
Field	Doddridge	API	47-017-06964-0000
Facility	Haught Pad	Wellbore	Buff Unit 1H AWB
Slot	Slot B		

WELLPATH DATA (245 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
5487.00	8.980	297.930	5431.72	-473.76	287.36	-669.22	1729985.75	14230644.69	39°11'17.7887"N	80°41'1.9977"W	728.31	293.238	1.55	0.84	6.61	
5581.00	8.410	297.860	5524.64	-483.85	294.01	-681.78	1729973.19	14230651.34	39°11'17.8548"N	80°41'2.1569"W	742.48	293.328	0.61	-0.61	-0.07	
5676.00	8.030	294.560	5618.67	-493.21	300.02	-693.96	1729961.02	14230657.34	39°11'17.9146"N	80°41'2.3113"W	756.04	293.380	0.64	-0.40	-3.47	
5770.00	7.720	289.690	5711.78	-501.40	304.87	-705.88	1729949.11	14230662.19	39°11'17.9630"N	80°41'2.4624"W	768.90	293.360	0.78	-0.33	-5.18	
5865.00	8.320	302.290	5805.88	-510.48	310.69	-717.70	1729937.30	14230668.01	39°11'18.0209"N	80°41'2.6123"W	782.06	293.408	1.98	0.63	13.28	
5959.00	7.490	297.250	5898.97	-519.96	317.13	-728.89	1729926.10	14230674.45	39°11'18.0850"N	80°41'2.7542"W	794.89	293.513	1.15	-0.88	-5.36	
6054.00	6.140	301.090	5993.29	-528.11	322.59	-738.75	1729916.25	14230679.90	39°11'18.1392"N	80°41'2.8791"W	806.11	293.590	1.50	-1.42	4.04	
6148.00	8.090	296.780	6086.57	-536.47	328.17	-748.96	1729906.04	14230685.48	39°11'18.1947"N	80°41'3.0086"W	817.70	293.661	2.15	2.07	-4.59	
6242.00	7.320	297.740	6178.72	-545.32	333.84	-760.16	1729894.84	14230691.24	39°11'18.2521"N	80°41'3.1506"W	830.28	293.716	0.83	-0.82	1.03	
6337.00	7.620	290.900	6273.91	-553.51	339.01	-771.40	1729883.61	14230695.31	39°11'18.3026"N	80°41'3.2931"W	842.61	293.724	0.98	0.32	-7.12	
6431.00	7.820	266.490	6367.08	-558.90	340.85	-783.61	1729871.41	14230698.15	39°11'18.3212"N	80°41'3.4480"W	854.53	293.508	3.48	0.21	-26.09	
6525.00	13.320	228.960	6459.55	-556.08	333.33	-798.18	1729856.84	14230690.64	39°11'18.2475"N	80°41'3.6335"W	864.99	292.666	9.09	5.85	-39.93	
6562.00	16.000	222.080	6495.35	-551.77	326.75	-804.82	1729850.21	14230684.06	39°11'18.1826"N	80°41'3.7180"W	868.62	292.097	8.63	7.24	-18.59	SH AT Curve <8-1/2"> (6525)-(6562'-22203')
6641.00	17.450	202.220	6571.07	-537.08	307.69	-816.60	1729838.43	14230665.00	39°11'17.9945"N	80°41'3.8686"W	872.65	290.848	7.43	1.84	-25.14	
6736.00	22.220	186.500	6660.47	-509.64	276.61	-824.03	1729831.00	14230633.94	39°11'17.6877"N	80°41'3.9643"W	880.22	288.556	7.49	5.02	-16.55	
6830.00	28.790	173.110	6745.33	-471.05	236.40	-823.33	1729831.70	14230593.75	39°11'17.2903"N	80°41'3.9571"W	856.60	286.020	9.26	6.99	-14.24	
6836.00†	29.055	172.834	6750.58	-488.19	233.52	-822.97	1729832.06	14230590.87	39°11'17.2618"N	80°41'3.9529"W	855.46	285.842	4.95	4.42	-4.60	Sycamore: 6836' MD
6925.00	33.050	169.220	6826.82	-422.79	188.22	-815.74	1729839.29	14230545.58	39°11'16.8138"N	80°41'3.8628"W	837.17	282.993	4.96	4.49	-4.06	
7019.00	39.940	167.500	6902.34	-367.19	133.51	-804.40	1729850.63	14230490.90	39°11'16.2727"N	80°41'3.7212"W	815.40	279.424	7.41	7.33	-1.83	
7027.00†	40.610	167.431	6908.45	-362.03	129.46	-803.27	1729851.75	14230485.85	39°11'16.2227"N	80°41'3.7072"W	813.48	279.086	8.40	8.38	-0.87	Middlesex: 7027' MD
7114.00	47.900	166.780	6970.72	-301.54	69.33	-789.71	1729865.31	14230426.74	39°11'15.6378"N	80°41'3.5378"W	792.75	275.017	8.40	8.38	-0.78	
7208.00	53.410	164.310	7030.30	-228.98	-1.01	-771.52	1729883.50	14230356.43	39°11'14.9419"N	80°41'3.3096"W	771.52	269.925	6.20	5.86	-2.63	
7258.00†	55.742	163.075	7059.28	-188.24	-40.11	-760.07	1729894.94	14230317.34	39°11'14.5551"N	80°41'3.1680"W	761.13	266.979	5.08	4.66	-2.47	Burkett: 7258' MD
7303.00	57.850	162.020	7083.92	-150.59	-76.03	-748.78	1729906.23	14230281.44	39°11'14.1997"N	80°41'3.0241"W	752.63	264.202	5.08	4.69	-2.34	
7324.00†	59.225	161.704	7094.88	-132.68	-93.05	-743.20	1729911.80	14230264.43	39°11'14.0313"N	80°41'2.9540"W	749.00	262.864	6.67	6.56	-1.51	Tully: 7324' MD
7397.00	64.010	160.870	7129.57	-88.50	-153.82	-722.48	1729932.51	14230203.68	39°11'13.4299"N	80°41'2.6936"W	738.67	257.981	6.67	6.55	-1.42	
7491.00	71.530	159.740	7165.11	18.37	-235.63	-693.02	1729961.96	14230121.91	39°11'12.6203"N	80°41'2.3230"W	731.98	251.222	8.05	8.00	-0.99	
7586.00	77.370	162.450	7190.57	109.81	-322.18	-663.41	1729991.56	14230035.39	39°11'11.7639"N	80°41'1.9509"W	737.50	244.097	6.73	6.15	2.85	
7594.00†	77.756	162.488	7192.29	117.62	-329.62	-661.06	1729993.91	14230027.94	39°11'11.6902"N	80°41'1.9213"W	738.68	243.498	4.85	4.83	0.47	Marcellus PGE: 7594' MD
7680.00	81.910	162.890	7207.47	202.25	-410.42	-635.88	1730018.08	14229947.18	39°11'10.8907"N	80°41'1.8051"W	756.82	237.160	4.85	4.83	0.47	



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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Buff Unit 1H
Field	Doddridge	API	47-017-06964-0000
Facility	Haught Pad	Wellbore	Buff Unit 1H AWB
Slot	Slot B		

WELLPATH DATA (245 stations)																
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [ft/100ft]	Build Rate [ft/100ft]	Turn Rate [ft/100ft]	Comments
7775.00	90.000	163.420	7214.17	296.93	-501.04	-608.44	1730046.51	14229856.59	39°11'9.9941"N	80°41'1.2607"W	788.19	230.529	8.53	8.52	0.56	
7869.00	89.350	160.280	7214.70	390.91	-590.35	-579.16	1730075.78	14229767.32	39°11'9.1103"N	80°41'0.8928"W	827.01	224.452	3.41	-0.69	-3.34	
7963.00	89.600	162.620	7215.56	484.88	-679.46	-549.26	1730105.66	14229678.25	39°11'8.2266"N	80°41'0.5170"W	873.70	218.951	2.50	0.27	2.49	
8059.00	89.830	161.390	7216.21	580.87	-770.76	-519.60	1730135.31	14229586.98	39°11'7.3252"N	80°41'0.1445"W	929.55	213.986	1.28	0.03	-1.28	
8153.00	91.480	162.500	7215.30	674.85	-860.12	-490.47	1730164.43	14229497.65	39°11'6.4409"N	80°40'59.7766"W	990.14	209.693	2.30	1.97	1.18	
8248.00	89.050	160.270	7214.86	769.81	-950.14	-460.15	1730194.74	14229407.67	39°11'5.5502"N	80°40'59.3974"W	1055.70	205.841	3.47	-2.58	-2.35	
8342.00	89.380	161.200	7216.14	863.75	-1038.87	-429.14	1730225.74	14229318.98	39°11'4.6721"N	80°40'59.0075"W	1124.01	202.445	1.05	0.39	0.99	
8437.00	91.020	163.420	7215.81	958.74	-1129.37	-400.28	1730254.59	14229228.52	39°11'3.7767"N	80°40'58.6450"W	1198.20	199.516	2.91	1.73	2.34	
8531.00	89.480	161.400	7215.40	1052.73	-1218.96	-371.87	1730282.98	14229138.96	39°11'2.6901"N	80°40'58.2882"W	1274.42	196.966	2.70	-1.64	-2.15	
8625.00	89.050	162.050	7216.61	1146.71	-1308.21	-342.40	1730312.44	14229049.74	39°11'2.0670"N	80°40'57.9179"W	1352.28	194.667	0.63	-0.48	0.69	
8720.00	89.910	162.140	7217.47	1241.70	-1398.61	-313.19	1730341.64	14228959.38	39°11'1.1125"N	80°40'57.5510"W	1433.25	192.622	0.91	0.91	0.09	
8814.00	89.880	161.970	7217.54	1335.69	-1488.03	-284.23	1730370.59	14228869.99	39°11'0.2276"N	80°40'57.1872"W	1514.94	190.814	0.18	-0.03	-0.18	
8909.00	89.690	161.740	7218.00	1430.68	-1578.31	-254.65	1730400.16	14228779.75	39°10'59.3343"N	80°40'56.8155"W	1598.72	189.165	0.31	-0.20	-0.24	
9003.00	88.250	161.390	7219.69	1524.65	-1667.47	-224.93	1730429.87	14228690.63	39°10'58.4521"N	80°40'56.4421"W	1682.57	187.692	1.58	-1.53	-0.37	
9097.00	89.660	162.720	7221.40	1618.62	-1756.88	-195.97	1730458.81	14228601.25	39°10'57.6674"N	80°40'56.0793"W	1767.77	186.365	2.06	1.50	1.41	
9192.00	89.600	162.950	7222.02	1713.62	-1847.64	-167.94	1730486.84	14228510.52	39°10'56.6693"N	80°40'55.7264"W	1855.26	185.193	0.25	-0.06	0.24	
9286.00	89.320	162.240	7222.90	1807.62	-1937.33	-139.62	1730514.94	14228420.87	39°10'55.7818"N	80°40'55.3733"W	1942.37	184.128	0.81	-0.30	-0.76	
9380.00	90.180	162.820	7223.31	1901.61	-2027.00	-111.60	1730543.15	14228331.24	39°10'54.8946"N	80°40'55.0189"W	2030.07	183.151	1.10	0.91	0.62	
9475.00	89.570	162.520	7223.52	1996.61	-2117.68	-83.30	1730571.44	14228240.59	39°10'53.9973"N	80°40'54.6636"W	2119.32	182.253	0.72	-0.64	-0.32	
9569.00	89.940	162.720	7223.92	2090.61	-2207.39	-55.23	1730599.51	14228150.92	39°10'53.1097"N	80°40'54.3111"W	2208.08	181.433	0.45	0.39	0.21	
9664.00	89.780	162.800	7224.15	2185.61	-2298.12	-27.07	1730627.65	14228060.22	39°10'52.2119"N	80°40'53.9576"W	2298.28	180.675	0.19	-0.17	0.08	
9758.00	90.060	162.880	7224.28	2279.61	-2387.94	0.66	1730655.37	14227970.44	39°10'51.3232"N	80°40'53.6094"W	2387.94	179.984	0.31	0.30	0.05	
9852.00	89.820	162.720	7224.38	2373.61	-2477.73	28.46	1730683.16	14227880.68	39°10'50.4347"N	80°40'53.2804"W	2477.90	179.342	0.31	-0.26	-0.17	
9947.00	89.780	162.500	7224.71	2468.61	-2568.39	56.85	1730711.54	14227790.06	39°10'49.5377"N	80°40'52.9039"W	2569.02	178.732	0.24	-0.04	-0.23	
10041.00	89.750	162.440	7225.10	2562.61	-2658.02	85.17	1730739.84	14227700.46	39°10'48.6508"N	80°40'52.5484"W	2659.39	178.165	0.07	-0.03	-0.06	
10136.00	90.430	162.550	7224.95	2657.61	-2748.62	113.74	1730768.41	14227609.89	39°10'47.7543"N	80°40'52.1895"W	2750.98	177.630	0.73	0.72	0.12	
10231.00	89.660	162.730	7224.88	2752.61	-2839.30	142.09	1730796.74	14227519.26	39°10'46.8572"N	80°40'51.8336"W	2842.85	177.135	0.83	-0.81	0.19	
10325.00	90.030	162.810	7225.13	2846.61	-2929.08	169.93	1730824.57	14227429.51	39°10'45.9688"N	80°40'51.4841"W	2934.00	176.680	0.40	0.39	0.09	
10420.00	89.850	162.700	7225.23	2941.61	-3019.81	198.09	1730852.73	14227338.82	39°10'45.0711"N	80°40'51.1305"W	3026.30	176.247	0.22	-0.19	-0.12	
10514.00	90.090	162.470	7225.28	3035.61	-3109.50	226.23	1730880.85	14227249.16	39°10'44.1836"N	80°40'50.7773"W	3117.72	175.839	0.35	0.26	-0.24	



Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Buff Unit 1H
Field	Doddridge	API	47-017-06964-0000
Facility	Haught Pad	Wellbore	Buff Unit 1H AWB
Slot	Slot B		

WELLPATH DATA (245 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
10609.00	90.000	162.680	7225.20	3130.61	-3200.14	254.67	1730903.28	14227158.56	39°10'43.2867°N	80°40'50.4201°W	3210.26	175.450	0.24	-0.09	0.22	
10703.00	89.480	162.370	7225.63	3224.60	-3289.80	282.90	1730937.50	14227068.93	39°10'42.3996°N	80°40'50.0856°W	3301.94	175.085	0.64	-0.55	-0.33	
10798.00	89.820	162.440	7226.21	3319.60	-3380.35	311.62	1730966.21	14226978.41	39°10'41.5036°N	80°40'49.7050°W	3394.69	174.733	0.37	0.36	0.07	
10892.00	90.030	162.790	7226.33	3413.60	-3470.06	339.70	1730994.28	14226888.74	39°10'40.6159°N	80°40'49.3524°W	3486.65	174.409	0.43	0.22	0.37	
10987.00	89.630	161.860	7226.62	3508.60	-3560.57	368.55	1731023.11	14226798.27	39°10'39.7203°N	80°40'48.9902°W	3579.60	174.090	1.07	-0.42	-0.98	
11081.00	89.420	164.030	7227.40	3602.59	-3650.43	396.11	1731050.67	14226708.44	39°10'38.8312°N	80°40'48.6442°W	3671.86	173.807	2.32	-0.22	2.31	
11176.00	90.370	161.270	7227.57	3697.58	-3741.10	424.44	1731078.98	14226617.81	39°10'37.9341°N	80°40'48.2885°W	3765.10	173.527	3.07	1.00	-2.91	
11270.00	88.800	162.080	7228.25	3791.56	-3830.32	453.99	1731108.52	14226528.62	39°10'37.0511°N	80°40'47.9173°W	3857.14	173.240	1.88	-1.67	0.86	
11365.00	89.230	165.590	7229.88	3886.51	-3921.54	480.43	1731134.95	14226437.44	39°10'36.1486°N	80°40'47.5856°W	3950.86	173.015	3.72	0.45	3.69	
11459.00	90.460	165.450	7230.14	3980.39	-4012.55	503.94	1731158.45	14226346.46	39°10'35.2483°N	80°40'47.2912°W	4044.07	172.842	1.32	1.31	-0.15	
11553.00	89.110	162.880	7230.49	4074.34	-4102.98	529.58	1731184.09	14226256.08	39°10'34.3537°N	80°40'46.9696°W	4137.01	172.645	3.09	-1.44	-2.73	
11648.00	90.150	163.240	7231.11	4169.34	-4193.85	557.26	1731211.75	14226165.24	39°10'33.4545°N	80°40'46.6222°W	4230.71	172.431	1.16	1.09	0.38	
11742.00	89.020	163.870	7231.79	4263.32	-4284.00	583.87	1731238.35	14226075.12	39°10'32.5625°N	80°40'46.2884°W	4323.61	172.239	1.38	-1.20	0.67	
11837.00	89.450	162.640	7233.05	4358.31	-4374.96	611.24	1731265.71	14225984.20	39°10'31.6625°N	80°40'45.9450°W	4417.45	172.047	1.37	0.45	-1.29	
11931.00	89.910	165.500	7233.58	4452.27	-4465.34	637.04	1731291.50	14225893.85	39°10'30.7683°N	80°40'45.6215°W	4510.55	171.881	3.08	0.49	3.04	
12026.00	90.370	162.110	7233.35	4547.23	-4556.56	663.53	1731317.98	14225802.67	39°10'29.8658°N	80°40'45.2892°W	4604.62	171.715	3.60	0.48	-3.57	
12121.00	89.850	164.010	7233.17	4642.23	-4647.43	691.21	1731345.65	14225711.83	39°10'28.9667°N	80°40'44.9418°W	4698.55	171.540	2.07	-0.55	2.00	
12215.00	89.290	163.440	7233.87	4736.21	-4737.66	717.55	1731371.98	14225621.64	39°10'28.0739°N	80°40'44.6114°W	4791.69	171.388	0.85	-0.60	-0.81	
12310.00	89.660	163.290	7234.74	4831.20	-4828.68	744.74	1731399.16	14225530.66	39°10'27.1734°N	80°40'44.2702°W	4885.78	171.232	0.42	0.39	-0.16	
12404.00	89.630	163.580	7235.32	4925.19	-4918.78	771.54	1731425.95	14225440.59	39°10'26.2819°N	80°40'43.9339°W	4978.92	171.085	0.31	-0.03	0.31	
12499.00	89.380	163.610	7236.14	5020.17	-5009.91	798.37	1731452.77	14225349.50	39°10'25.3803°N	80°40'43.5973°W	5073.12	170.946	0.27	-0.26	0.03	
12593.00	89.200	163.490	7237.31	5114.15	-5100.05	824.99	1731479.38	14225259.39	39°10'24.4884°N	80°40'43.2634°W	5166.35	170.811	0.23	-0.19	-0.13	
12688.00	89.140	163.540	7238.69	5209.13	-5191.14	851.94	1731506.32	14225168.34	39°10'23.5971°N	80°40'42.9253°W	5260.58	170.680	0.08	-0.06	0.05	
12782.00	89.480	163.660	7239.82	5303.11	-5281.31	878.48	1731532.85	14225078.21	39°10'22.6950°N	80°40'42.5924°W	5353.87	170.556	0.38	0.36	0.13	
12877.00	89.050	163.440	7241.04	5398.09	-5372.41	905.38	1731559.74	14224987.14	39°10'21.7936°N	80°40'42.2549°W	5448.17	170.434	0.51	-0.45	-0.23	
12971.00	87.140	162.560	7244.16	5492.03	-5462.25	932.85	1731587.19	14224897.34	39°10'20.9047°N	80°40'41.9102°W	5541.33	170.308	2.24	-2.03	-0.94	
13065.00	89.570	163.520	7246.86	5585.98	-5552.12	960.25	1731614.59	14224807.51	39°10'20.0155°N	80°40'41.5663°W	5634.54	170.188	2.78	2.59	1.02	
13160.00	88.770	163.720	7248.23	5680.96	-5643.25	987.04	1731641.36	14224716.41	39°10'19.1138°N	80°40'41.2303°W	5728.92	170.079	0.87	-0.84	0.21	
13254.00	88.620	162.890	7250.38	5774.93	-5733.29	1014.04	1731668.35	14224626.43	39°10'18.2232°N	80°40'40.8915°W	5822.25	169.970	0.90	-0.16	-0.88	
13349.00	88.770	163.240	7252.54	5869.90	-5824.12	1041.70	1731696.00	14224535.61	39°10'17.3242°N	80°40'40.5444°W	5916.55	169.859	0.40	0.16	0.37	



Actual Wellpath Report

Buff Unit 1H AWP Proj: 22228'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Buff Unit 1H
Field	Doddridge		API	47-017-06964-0000
Facility	Haught Pad		Wellbore	Buff Unit 1H AWB
Slot	Slot B			

WELLPATH DATA (245 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
13443.00	88.680	163.320	7254.63	5963.87	-5914.12	1068.74	1731723.03	14224445.64	39°10'16.4337"N	80°40'40.2051"W	6009.91	169.757	0.13	-0.10	0.09	
13537.00	88.520	163.390	7256.93	6057.84	-6004.16	1095.66	1731749.94	14224356.64	39°10'15.5428"N	80°40'39.8674"W	6103.31	169.658	0.19	-0.17	0.07	
13632.00	88.550	163.620	7259.36	6152.80	-6095.22	1122.62	1731776.89	14224264.62	39°10'14.6418"N	80°40'39.5292"W	6197.74	169.564	0.24	0.03	0.24	
13727.00	88.460	163.600	7261.83	6247.75	-6186.33	1149.42	1731803.68	14224173.54	39°10'13.7404"N	80°40'39.1930"W	6292.20	169.474	0.10	-0.09	-0.02	
13821.00	88.710	162.920	7264.16	6341.72	-6276.31	1176.49	1731830.73	14224083.59	39°10'12.8500"N	80°40'38.8534"W	6385.63	169.383	0.77	0.27	-0.72	
13915.00	90.000	163.620	7265.21	6435.70	-6366.33	1203.54	1731857.78	14223993.61	39°10'11.9594"N	80°40'38.5140"W	6479.09	169.295	1.56	1.37	0.74	
14010.00	89.540	163.560	7265.60	6530.69	-6457.46	1230.38	1731884.61	14223902.52	39°10'11.0577"N	80°40'38.1773"W	6573.63	169.212	0.49	-0.48	-0.06	
14104.00	89.380	163.880	7266.48	6624.67	-6547.68	1256.73	1731910.95	14223812.33	39°10'10.1650"N	80°40'37.8468"W	6667.20	169.135	0.38	-0.17	0.34	
14198.00	89.690	163.890	7267.24	6718.64	-6637.99	1282.82	1731937.03	14223722.06	39°10'9.2716"N	80°40'37.5197"W	6760.81	169.062	0.33	0.33	0.01	
14293.00	89.320	163.280	7268.07	6813.63	-6729.11	1309.67	1731963.56	14223630.97	39°10'8.3700"N	80°40'37.1829"W	6855.37	168.986	0.75	-0.39	-0.64	
14387.00	89.750	163.730	7268.83	6907.61	-6819.24	1336.35	1731990.54	14223540.88	39°10'7.4782"N	80°40'36.8482"W	6948.95	168.912	0.66	0.46	0.48	
14482.00	89.600	163.990	7269.37	7002.59	-6910.47	1362.84	1732017.02	14223449.68	39°10'6.5756"N	80°40'36.5160"W	7043.57	168.844	0.23	-0.16	0.17	
14576.00	89.750	163.640	7269.90	7096.57	-7000.72	1389.12	1732043.29	14223359.47	39°10'5.6826"N	80°40'36.1864"W	7137.21	168.777	0.31	0.16	-0.27	
14671.00	89.880	163.330	7270.21	7191.56	-7091.80	1416.13	1732070.26	14223268.43	39°10'4.7814"N	80°40'35.8477"W	7231.81	168.707	0.35	0.14	-0.33	
14765.00	89.380	161.190	7270.81	7285.55	-7181.32	1444.77	1732096.91	14223178.94	39°10'3.8956"N	80°40'35.4881"W	7325.21	168.625	2.34	-0.53	-2.28	
14860.00	89.050	161.410	7272.12	7380.52	-7271.30	1475.22	1732129.35	14223089.00	39°10'3.0052"N	80°40'35.1055"W	7419.44	168.531	0.42	-0.35	0.23	
14954.00	90.310	161.510	7272.64	7474.49	-7360.42	1505.11	1732159.23	14222999.91	39°10'2.1233"N	80°40'34.7301"W	7512.73	168.443	1.34	1.34	0.11	
15049.00	90.180	162.170	7272.23	7569.48	-7450.68	1534.72	1732188.82	14222909.68	39°10'1.2301"N	80°40'34.3582"W	7607.10	168.361	0.71	-0.14	0.69	
15144.00	90.280	161.720	7271.85	7664.47	-7541.00	1564.16	1732218.26	14222819.40	39°10'0.3383"N	80°40'33.9885"W	7701.52	168.282	0.49	0.11	-0.47	
15230.00	89.970	161.590	7271.65	7759.46	-7631.18	1594.06	1732248.14	14222729.26	39°09'59.4440"N	80°40'33.6130"W	7795.80	168.201	0.35	-0.33	-0.14	
15333.00	90.150	162.010	7271.55	7853.45	-7720.47	1623.42	1732277.49	14222640.00	39°09'58.5604"N	80°40'33.2443"W	7889.31	168.125	0.49	0.19	0.45	
15427.00	90.580	161.740	7270.95	7947.44	-7809.81	1652.66	1732306.72	14222550.70	39°09'57.6764"N	80°40'32.8771"W	7982.76	168.052	0.54	0.46	-0.29	
15522.00	91.230	161.860	7269.45	8042.41	-7900.04	1682.33	1732336.38	14222460.50	39°09'56.7835"N	80°40'32.5045"W	8077.18	167.978	0.70	0.68	0.13	
15616.00	91.350	161.840	7267.33	8136.38	-7989.34	1711.60	1732365.64	14222371.23	39°09'55.8998"N	80°40'32.1369"W	8170.63	167.908	0.13	0.13	-0.02	
15711.00	91.230	161.800	7265.19	8231.35	-8079.58	1741.24	1732395.26	14222281.03	39°09'55.0069"N	80°40'31.7648"W	8265.08	167.838	0.13	-0.13	-0.04	
15806.00	90.890	161.450	7263.44	8326.31	-8169.72	1771.18	1732425.19	14222190.93	39°09'54.1149"N	80°40'31.3887"W	8359.51	167.768	0.51	-0.36	-0.37	
15900.00	91.110	161.850	7261.79	8420.28	-8258.92	1800.77	1732454.77	14222101.78	39°09'53.2321"N	80°40'31.0171"W	8452.96	167.700	0.49	0.23	0.43	
15995.00	91.050	161.750	7260.00	8515.26	-8349.16	1830.43	1732484.43	14222011.56	39°09'52.3393"N	80°40'30.6446"W	8547.45	167.634	0.12	-0.06	-0.11	
16090.00	91.110	161.850	7258.21	8610.23	-8439.39	1860.10	1732514.08	14221921.37	39°09'51.4464"N	80°40'30.2720"W	8641.95	167.570	0.12	0.00	0.11	
16184.00	91.110	161.700	7256.39	8704.20	-8528.66	1889.49	1732543.46	14221832.13	39°09'50.5630"N	80°40'29.9029"W	8735.45	167.508	0.16	0.00	-0.16	



Actual Wellpath Report

Buff Unit 1H AWP Proj: 22228'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Buff Unit 1H
Field	Doddridge		API	47-017-06964-0000
Facility	Haught Pad		Wellbore	Buff Unit 1H AWB
Slot	Slot B			

WELLPATH DATA (245 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
16279.00	91.390	161.690	7254.32	8799.16	-8618.83	1919.32	1732573.28	14221742.00	39°09'49.6707"N	80°40'29.5283"W	8829.95	167.446	0.29	0.29	-0.01	
16374.00	90.860	161.810	7252.46	8894.13	-8709.03	1949.07	1732603.01	14221651.83	39°09'48.7781"N	80°40'28.1548"W	8924.46	167.385	0.57	-0.56	0.13	
16468.00	90.890	161.710	7251.02	8988.11	-8798.30	1978.49	1732632.42	14221562.60	39°09'47.8948"N	80°40'28.7854"W	9018.01	167.327	0.11	0.03	-0.11	
16563.00	90.340	161.520	7250.00	9083.09	-8888.44	2008.45	1732662.37	14221472.49	39°09'47.0027"N	80°40'28.4091"W	9112.53	167.287	0.61	-0.58	-0.20	
16658.00	90.150	161.090	7249.50	9178.08	-8978.43	2038.90	1732692.81	14221382.54	39°09'46.1122"N	80°40'28.0266"W	9207.02	167.206	0.49	-0.20	-0.45	
16753.00	90.830	162.300	7248.78	9273.04	-9068.82	2068.73	1732722.63	14221292.39	39°09'45.2198"N	80°40'27.6519"W	9301.58	167.150	1.46	0.72	1.27	
16848.00	91.420	161.710	7246.92	9368.02	-9158.95	2098.08	1732751.86	14221202.09	39°09'44.3258"N	80°40'27.2835"W	9396.19	167.098	0.88	0.62	-0.62	
16942.00	90.550	161.370	7245.30	9461.98	-9248.10	2127.84	1732781.71	14221112.97	39°09'43.4437"N	80°40'26.9098"W	9489.73	167.043	0.99	-0.93	-0.36	
17037.00	90.180	161.760	7244.69	9558.96	-9338.22	2157.88	1732811.74	14221022.88	39°09'42.5518"N	80°40'26.5325"W	9584.30	166.988	0.57	-0.39	0.41	
17131.00	90.740	161.650	7243.94	9650.95	-9427.47	2187.38	1732841.23	14220933.67	39°09'41.6687"N	80°40'26.1620"W	9677.90	166.937	0.61	0.60	-0.12	
17226.00	91.320	161.710	7242.23	9745.92	-9517.64	2217.24	1732871.08	14220843.54	39°09'40.7764"N	80°40'25.7871"W	9772.49	166.886	0.61	0.61	0.06	
17320.00	90.890	162.190	7240.42	9839.89	-9606.99	2246.36	1732900.19	14220754.22	39°09'39.8922"N	80°40'25.4215"W	9866.13	166.839	0.69	-0.46	0.51	
17415.00	90.800	161.230	7239.02	9934.87	-9697.18	2276.17	1732929.98	14220664.06	39°09'38.9997"N	80°40'25.0472"W	9960.74	166.790	1.01	-0.09	-1.01	
17510.00	90.890	162.010	7237.62	10029.84	-9787.33	2306.12	1732959.92	14220573.96	39°09'38.1077"N	80°40'24.6710"W	10055.35	166.742	0.83	0.09	0.82	
17604.00	91.050	161.820	7236.03	10123.82	-9876.67	2335.30	1732989.09	14220484.65	39°09'37.2236"N	80°40'24.3047"W	10149.00	166.697	0.26	0.17	-0.20	
17698.00	90.710	161.520	7234.58	10217.79	-9965.89	2364.85	1733018.64	14220395.46	39°09'36.3407"N	80°40'23.9336"W	10242.63	166.651	0.48	-0.36	-0.32	
17793.00	91.170	161.710	7233.02	10312.77	-10056.03	2394.81	1733048.58	14220305.38	39°09'35.4487"N	80°40'23.5573"W	10337.28	166.605	0.52	0.48	0.20	
17887.00	91.080	161.770	7231.18	10406.74	-10145.28	2424.26	1733078.02	14220216.15	39°09'34.5655"N	80°40'23.1876"W	10430.90	166.561	0.12	-0.10	0.06	
17982.00	90.180	161.040	7230.13	10501.71	-10235.31	2454.55	1733108.30	14220126.15	39°09'33.6746"N	80°40'22.8072"W	10525.51	166.514	1.22	-0.95	-0.77	
18076.00	91.110	161.670	7229.08	10596.67	-10324.37	2484.60	1733138.34	14220037.12	39°09'32.7932"N	80°40'22.4298"W	10619.13	166.469	1.19	0.99	0.67	
18170.00	91.050	162.720	7227.30	10689.65	-10413.85	2513.34	1733167.06	14219947.68	39°09'31.9078"N	80°40'22.0690"W	10712.85	166.431	1.12	-0.06	1.12	
18264.00	90.950	162.650	7225.66	10783.64	-10503.58	2541.31	1733195.02	14219857.99	39°09'31.0200"N	80°40'21.7180"W	10806.64	166.399	0.13	-0.11	-0.07	
18359.00	91.050	162.590	7224.01	10878.62	-10594.23	2569.68	1733223.39	14219767.37	39°09'30.1230"N	80°40'21.3620"W	10901.42	166.366	0.12	0.11	-0.06	
18453.00	91.480	162.760	7221.93	10972.60	-10683.95	2597.65	1733251.34	14219677.69	39°09'29.2352"N	80°40'21.0110"W	10995.20	166.334	0.50	0.46	0.20	
18547.00	91.170	162.540	7219.76	11066.58	-10773.65	2625.65	1733279.34	14219588.02	39°09'28.3478"N	80°40'20.6596"W	11088.99	166.303	0.42	-0.33	-0.26	
18641.00	91.290	162.680	7217.74	11160.55	-10863.33	2653.74	1733307.41	14219498.37	39°09'27.4602"N	80°40'20.3073"W	11182.77	166.272	0.20	0.13	0.16	
18735.00	91.420	162.760	7215.52	11254.53	-10953.07	2681.65	1733335.31	14219408.67	39°09'26.5722"N	80°40'19.9571"W	11276.57	166.243	0.16	0.14	0.07	
18830.00	91.350	162.800	7213.22	11349.50	-11043.78	2709.76	1733363.41	14219317.99	39°09'25.6746"N	80°40'19.6044"W	11371.37	166.214	0.08	-0.07	0.04	
18924.00	91.450	162.480	7210.92	11443.47	-11133.48	2737.80	1733391.44	14219228.34	39°09'24.7871"N	80°40'19.2525"W	11465.16	166.185	0.38	0.11	-0.34	
19019.00	91.750	162.760	7208.27	11538.43	-11224.10	2766.17	1733419.79	14219137.74	39°09'23.8904"N	80°40'18.8966"W	11559.94	166.155	0.43	0.32	0.29	



Actual Wellpath Report

Buff Unit 1H AWP Proj: 22228*
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Buff Unit 1H
Field	Doddridge	API	47-017-06964-0000
Facility	Haught Pad	Wellbore	Buff Unit 1H AWB
Slot	Slot B		

WELLPATH DATA (245 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
19113.00	91.110	162.500	7205.92	11832.40	-11313.79	2794.22	1733447.84	14219048.09	39°09'23.0029"N	80°40'18.5446"W	11653.73	166.127	0.73	-0.66	-0.26	
19207.00	91.480	162.640	7203.80	11728.38	-11403.45	2822.37	1733475.98	14218958.47	39°09'22.1157"N	80°40'18.1914"W	11747.53	166.099	0.42	0.39	0.15	
19302.00	91.420	162.740	7201.40	11821.35	-11494.12	2850.63	1733504.22	14218867.84	39°09'21.2186"N	80°40'17.8368"W	11842.33	166.071	0.12	-0.06	0.11	
19396.00	91.630	162.780	7198.90	11915.32	-11583.86	2878.48	1733532.06	14218778.13	39°09'20.3305"N	80°40'17.4874"W	11936.14	166.045	0.23	0.23	0.04	
19490.00	91.510	162.660	7196.32	12009.28	-11673.59	2906.39	1733559.96	14218688.44	39°09'19.4427"N	80°40'17.1372"W	12029.95	166.019	0.18	-0.13	-0.13	
19585.00	91.510	162.720	7193.82	12104.25	-11764.25	2934.65	1733588.21	14218597.81	39°09'18.5456"N	80°40'16.7827"W	12124.76	165.993	0.06	0.00	0.06	
19679.00	91.420	162.660	7191.41	12198.22	-11853.96	2962.61	1733616.15	14218508.13	39°09'17.6579"N	80°40'16.4319"W	12218.57	165.968	0.12	-0.10	-0.06	
19774.00	91.020	162.300	7189.39	12293.19	-11944.54	2991.20	1733644.74	14218417.59	39°09'16.7616"N	80°40'16.0731"W	12313.38	165.941	0.57	-0.42	-0.38	
19868.00	90.490	161.570	7188.15	12387.18	-12033.89	3020.35	1733673.87	14218328.27	39°09'15.8774"N	80°40'15.7072"W	12407.14	165.911	0.96	-0.56	-0.78	
19963.00	91.060	162.960	7186.85	12482.18	-12124.37	3049.28	1733702.79	14218237.83	39°09'14.9821"N	80°40'15.3441"W	12501.94	165.883	1.59	0.62	1.46	
20057.00	90.680	162.570	7185.41	12576.15	-12214.14	3077.13	1733730.63	14218148.10	39°09'14.0939"N	80°40'14.9947"W	12595.79	165.860	0.59	-0.43	-0.41	
20151.00	91.020	162.610	7184.01	12670.14	-12303.82	3105.25	1733758.74	14218058.45	39°09'13.2064"N	80°40'14.6419"W	12689.62	165.835	0.38	0.36	0.04	
20246.00	90.950	162.660	7182.38	12765.13	-12394.48	3133.60	1733787.08	14217967.83	39°09'12.3094"N	80°40'14.2862"W	12784.46	165.812	0.09	-0.07	0.05	
20341.00	90.770	162.650	7180.95	12860.12	-12485.15	3161.92	1733815.39	14217877.20	39°09'11.4122"N	80°40'13.9309"W	12879.31	165.788	0.19	-0.19	-0.01	
20435.00	90.770	162.690	7179.69	12954.11	-12574.87	3189.92	1733843.37	14217787.51	39°09'10.5243"N	80°40'13.5798"W	12973.16	165.766	0.04	0.00	0.04	
20530.00	90.550	162.660	7178.60	13049.10	-12665.56	3218.21	1733871.65	14217696.86	39°09'9.6270"N	80°40'13.2247"W	13068.02	165.743	0.23	-0.23	-0.03	
20624.00	90.860	162.840	7177.44	13143.09	-12755.32	3246.08	1733899.51	14217607.13	39°09'8.7388"N	80°40'12.8751"W	13161.89	165.722	0.38	0.33	0.19	
20719.00	90.830	163.000	7176.04	13238.08	-12846.12	3273.98	1733927.40	14217516.36	39°09'7.8403"N	80°40'12.5251"W	13256.76	165.702	0.17	-0.03	0.17	
20813.00	91.290	162.840	7174.30	13332.07	-12935.96	3301.58	1733955.99	14217426.56	39°09'6.9514"N	80°40'12.1789"W	13350.64	165.682	0.52	0.49	-0.17	
20908.00	90.490	162.750	7172.82	13427.05	-13026.70	3329.68	1733983.08	14217336.86	39°09'6.0535"N	80°40'11.8264"W	13445.50	165.662	0.85	-0.84	-0.09	
21002.00	90.770	162.630	7171.79	13521.05	-13116.43	3357.64	1734011.04	14217246.16	39°09'5.1658"N	80°40'11.4756"W	13539.37	165.641	0.32	0.30	-0.13	
21097.00	90.920	163.060	7170.39	13616.04	-13207.20	3385.65	1734039.03	14217155.42	39°09'4.2674"N	80°40'11.1243"W	13634.25	165.622	0.50	0.16	0.47	
21192.00	91.350	163.760	7168.51	13711.01	-13298.23	3412.75	1734066.12	14217064.43	39°09'3.3667"N	80°40'10.7845"W	13729.16	165.607	0.85	0.45	0.72	
21286.00	91.260	163.080	7166.37	13804.98	-13388.30	3439.57	1734092.93	14216974.40	39°09'2.4755"N	80°40'10.4483"W	13823.07	165.592	0.73	-0.10	-0.72	
21381.00	90.400	163.480	7164.99	13899.96	-13479.03	3467.69	1734121.03	14216883.70	39°09'1.5777"N	80°40'10.0955"W	13917.94	165.573	1.10	-0.91	-0.63	
21475.00	91.420	162.340	7163.50	13993.95	-13568.82	3496.09	1734149.43	14216794.14	39°09'0.6912"N	80°40'9.7391"W	14011.79	165.551	1.10	1.09	-0.15	
21570.00	91.410	162.540	7161.15	14088.92	-13659.17	3524.74	1734178.07	14216703.63	39°08'59.7952"N	80°40'9.3796"W	14106.62	165.531	0.21	-0.01	0.21	
21665.00	91.420	162.550	7158.81	14183.89	-13749.77	3553.23	1734206.54	14216613.07	39°08'58.8987"N	80°40'9.0222"W	14201.46	165.511	0.01	0.01	0.01	
21759.00	91.540	162.800	7156.38	14277.86	-13839.47	3581.21	1734234.52	14216523.40	39°08'58.0111"N	80°40'8.6712"W	14295.32	165.492	0.29	0.13	0.27	
21854.00	91.480	162.990	7153.87	14372.83	-13930.14	3609.46	1734262.75	14216432.77	39°08'57.1139"N	80°40'8.3186"W	14390.17	165.473	0.23	-0.06	-0.23	



Actual Wellpath Report

Buff Unit 1H AWP Proj: 22228'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Buff Unit 1H
Field	Doddridge		API	47-017-06964-0000
Facility	Haught Pad		Wellbore	Buff Unit 1H AWB
Slot	Slot B			

WELLPATH DATA (245 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
21948.00	91.510	162.600	7151.42	14466.79	-14019.81	3637.57	1734290.85	14216343.14	39°08'56.2267"N	80°40'7.9642"W	14484.02	165.455	0.03	0.03	0.01	
22043.00	91.410	162.790	7149.00	14561.76	-14110.48	3665.82	1734319.09	14216252.50	39°08'55.3295"N	80°40'7.6098"W	14578.88	165.437	0.23	-0.11	0.20	
22138.00	91.420	162.830	7146.66	14656.73	-14201.21	3693.89	1734347.15	14216161.81	39°08'54.4317"N	80°40'7.2577"W	14673.75	165.420	0.04	0.01	0.04	
22203.00	91.540	162.900	7144.98	14721.71	-14263.30	3713.03	1734366.28	14216099.74	39°08'53.8173"N	80°40'7.0176"W	14738.67	165.409	0.21	0.18	0.11	
22228.00†	91.540	162.900	7144.30	14746.70	-14287.19	3720.38	1734373.63	14216075.86	39°08'53.5809"N	80°40'6.9255"W	14763.63	165.404	0.00	0.00	0.00	Projected MD at TD: 22228'

HOLE & CASING SECTIONS - Ref Wellbore: Buff Unit 1H AWB Ref Wellpath: Buff Unit 1H AWP Proj: 22228'									
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	0.01	-0.22
17.5in Open Hole	125.50	381.00	255.50	125.50	381.00	0.01	-0.22	-0.69	-1.17
13.375in Casing Surface	25.50	361.00	335.50	25.50	361.00	0.00	0.00	-0.60	-1.09
12.25in Open Hole	381.00	3334.00	2953.00	381.00	3304.62	-0.69	-1.17	159.94	-364.48
9.625in Casing Intermediate	25.50	3304.00	3278.50	25.50	3274.95	0.00	0.00	158.65	-360.22
8.75in Open Hole	3334.00	6595.00	3261.00	3304.62	6527.05	159.94	-364.48	319.49	-810.43
8.5in Open Hole	6595.00	22228.00	15633.00	6527.05	7144.30	319.49	-810.43	-14287.19	3720.38
5.5in Casing Production	25.50	22208.00	22182.50	25.50	7144.84	0.00	0.00	-14268.08	3714.50



Actual Wellpath Report

Buff Unit 1H AWP Proj: 22228'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Buff Unit 1H
Field	Doddridge	API	47-017-06964-0000
Facility	Haught Pad	Wellbore	Buff Unit 1H AWB
Slot	Slot B		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Buff Unit 1H POE Rev-3	7180.00	-265.80	-685.20	1729969.78	14230091.74	39°11'12.3218"N	80°41'2.2251"W	point
Buff Unit 1H LP Rev-3	7206.00	-442.46	-630.03	1730024.93	14229915.15	39°11'10.5738"N	80°41'1.5322"W	point
Buff Unit 1H BHL Rev-3	7332.56	-14285.52	3693.43	1734346.69	14216077.53	39°08'53.5984"N	80°40'7.2674"W	point
Buff Unit 1H 50' L/R Hard Line	7500.00	-7275.66	1504.12	1732158.24	14223084.64	39°10'2.9611"N	80°40'34.7388"W	rectangle
2D Rectangle 14687.6 x 100.								

WELLPATH COMPOSITION - Ref Wellbore: Buff Unit 1H AWB Ref Wellpath: Buff Unit 1H AWP Proj: 22228'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
25.50	380.00	Gyrodata 2015 - GC+WIR+DPIPE	01 Gyrodata MS Gyro <17-1/2"> (100'-380')	Buff Unit 1H AWB	12/25/2023
380.00	3266.00	BH NaviTrak (2019) (Axial Corr+HRGM)	02 APS EM <12-1/4"> (380')(410'-3266')	Buff Unit 1H AWB	12/25/2023
3266.00	6525.00	BH NaviTrak (2019) (Axial Corr+HRGM)	03 APS EM <8-3/4"> (3266')(3402'-6525')	Buff Unit 1H AWB	1/28/2024
6525.00	22228.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	04 BH AT Curve <8-1/2"> (6525')(6562'-22203')	Buff Unit 1H AWB	1/28/2024



Actual Wellpath Report

Buff Unit 1H AWP Proj: 22228'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Buff Unit 1H
Field	Doddridge	API	47-017-06964-0000
Facility	Haught Pad	Wellbore	Buff Unit 1H AWB
Slot	Slot B		

COMMENTS

Wellpath general comments

API: 47-017-06964-0000

BH Job #: 112081136

Rig: H&P 317

Duration: 2/1/2024-2/6/2024

Gyrodata MS Gyro <17-1/2"> (100'-380')

APS EM <12-1/4"> (380')(410'-3266')

APS EM <8-3/4"> (3266')(3402'-6525')

BH AT Curve <8-1/2"> (6525')(6562'-22203')

Sycamore: 6836' MD

Middlesex: 7027' MD

Burkett: 7258' MD

Tully: 7324' MD

Marcellus POE: 7594' MD

Projected MD at TD: 22228'