



ANTERO RESOURCES CORPORATION

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

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



Plot reference wellpath is Mule Unit 1H PWP Rev-B.0	Grid System: NAD2011 UTM Zone 17 North, US Feet
True vertical depths are referenced to H&P 531 (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to H&P 531 (RKB)	Scale: True distance
H&P 531 (RKB) to Mean Sea Level: 1210 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot A) : -189 feet	Depths are in feet
Official wellpath MDs are referenced to each path's default MD datum	Created by: vdsaynor on 2022-01-21; Database: WA_MPL_EASTERNUS.Dbx

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude		
Gaspar Pad	1707468.590	14276538.450	39°18'52.2500"N	80°45'46.5558"W		
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Slot A	0.00	-0.01	1707468.580	14276538.450	39°18'52.2500"N	80°45'46.5560"W

Comment: Mule Unit 1H
H&P 531 (RKB) to Ground level (At Slot: Slot A) : 30ft
Mean Sea Level to Ground level (At Slot: Slot A) : -1189ft
H&P 531 (RKB) to Mean Sea Level : 1210ft

Well Data

Slot	Well	Wellbore	Wellpath
Slot A	Mule Unit 1H	Mule Unit 1H AWB	Mule Unit 1H AWP Proj: 16654'
Slot A	Mule Unit 1H	Mule Unit 1H PWB	Mule Unit 1H PWP Rev-B.0

Gyrodata MS Gyro <13-1/2"> (100'-300') : 0.27° Inc, 100.00ft MD, 100.00ft TVD, 0.14ft VS

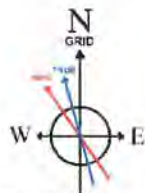
APS EM <9-7/8"> (300')(411'-2733') : 1.10° Inc, 411.00ft MD, 410.98ft TVD, 2.95ft VS

Well Profile Data

Design Comment	MD (ft)	Inc (")	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	2733.00	30.070	216.030	2515.07	-545.26	-699.46	1.22	303.94
Proj. to Bottom	2811.00	30.070	216.030	2582.57	-576.87	-719.45	0.00	326.91
Drill Out	2891.00	30.070	216.030	2651.80	-600.28	-743.03	0.00	350.48
End of 3D Arc	3216.52	30.321	235.510	2933.83	-722.04	-859.00	3.00	421.08
Curve KOP	6981.37	30.321	235.510	6183.89	-1798.32	-2425.80	0.00	662.75
Build/Turn	7533.60	45.000	185.000	6629.77	-2079.63	-2581.31	6.00	1186.51
POE	7926.41	70.045	162.041	6841.00	-2401.71	-2515.34	8.00	1609.07
Landing Pt.	8175.85	80.000	162.041	6884.00	-2634.23	-2439.97	8.00	1753.50
BHL	10654.15	80.000	162.041	6884.00	-10899.48	174.13	0.00	10231.81

APS EM <6-3/4"> (2733')(2855'-6836') : 27.31° Inc, 2855.00ft MD, 2622.12ft TVD, 341.62ft VS

API: 47-017-06916-0000
BH Job #: 111277258
Rig: H&P 531
Duration: 6/25/2022-7/1/2022

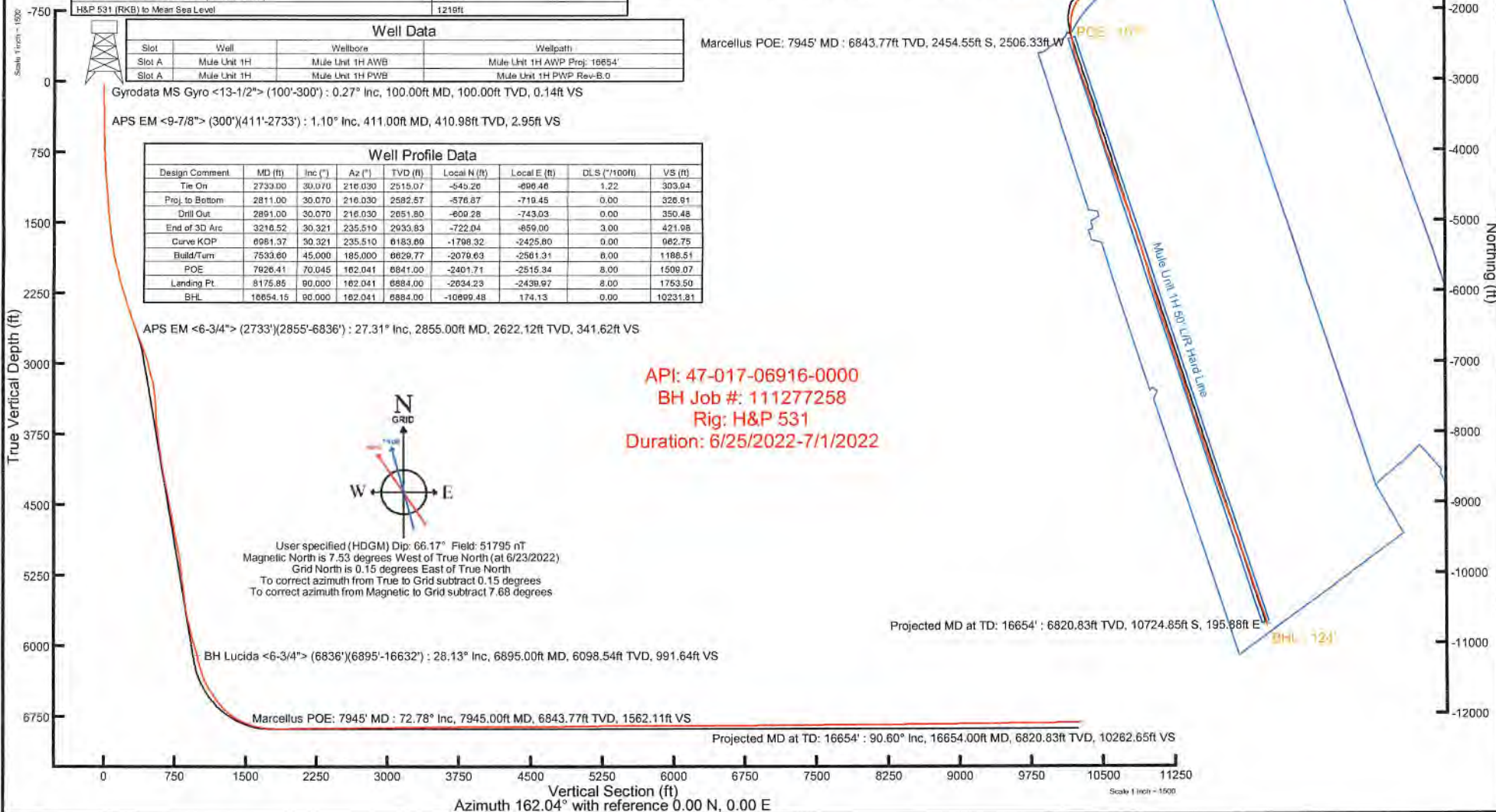


User specified (HDGM) Dip: 66.17° Field: 51795 nT
Magnetic North is 7.53 degrees West of True North (at 6/23/2022)
Grid North is 0.15 degrees East of True North
To correct azimuth from True to Grid subtract 0.15 degrees
To correct azimuth from Magnetic to Grid subtract 7.68 degrees

BH Lucida <6-3/4"> (6836')(6895'-16632') : 28.13° Inc, 6895.00ft MD, 6098.54ft TVD, 991.64ft VS

Marcellus POE: 7945' MD : 72.78° Inc, 7945.00ft MD, 6843.77ft TVD, 1562.11ft VS

Projected MD at TD: 16654' : 90.60° Inc, 16654.00ft MD, 6820.83ft TVD, 10262.65ft VS



Gyrodata MS Gyro <13-1/2"> (100'-300') : 100.00ft TVD, 0.16ft S, 0.05ft W
APS EM <9-7/8"> (300')(411'-2733') : 410.98ft TVD, 3.28ft S, 0.57ft W

APS EM <6-3/4"> (2733')(2855'-6836') : 2622.12ft TVD, 594.88ft S, 727.30ft W

BH Lucida <6-3/4"> (6836')(6895'-16632') : 6098.54ft TVD, 1804.87ft S, 2352.12ft W

Marcellus POE: 7945' MD : 6843.77ft TVD, 2454.55ft S, 2506.33ft W

Projected MD at TD: 16654' : 6820.83ft TVD, 10724.85ft S, 195.88ft E

BHL: 124'



Actual Wellpath Report

Mule Unit 1H AWP Proj: 16654'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Mule Unit 1H
Field	Doddridge	API	47-017-06916-0000
Facility	Gaspar Pad	Wellbore	Mule 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	0.999605	Report Generated	7/21/2022 at 10:40:36 PM
Convergence at slot	0.15° 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	0.00	-0.01	1707468.58	14276538.45	39°18'52.2500"N	80°45'46.5560"W
Facility Reference Pt			1707468.59	14276538.45	39°18'52.2500"N	80°45'46.5558"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 531 (RKB) to Facility Vertical Datum	1219.00ft
Horizontal Reference Pt	Slot	H&P 531 (RKB) to Mean Sea Level	1219.00ft
Vertical Reference Pt	H&P 531 (RKB)	H&P 531 (RKB) to Ground Level at Slot (Slot A)	30.00ft
MD Reference Pt	H&P 531 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	162.04°



Actual Wellpath Report

Mule Unit 1H AWP Proj: 16654'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Mule Unit 1H
Field	Doddridge	API	47-017-06916-0000
Facility	Gaspar Pad	Wellbore	Mule Unit 1H AWB
Slot	Slot A		

WELLPATH DATA (182 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	0.00	196.200	0.00	0.00	0.00	0.00	1707468.58	14276538.45	39°18'52.2500"N	80°45'46.5560"W	0.00	0.000	0.00	0.00	0.00	
30.00	0.000	196.200	30.00	0.00	0.00	0.00	1707468.58	14276538.45	39°18'52.2500"N	80°45'46.5560"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.270	196.200	100.00	0.14	-0.16	-0.05	1707468.53	14276538.29	39°18'52.2485"N	80°45'46.5566"W	0.16	196.200	0.39	0.39	0.00	Gyrodata MS Gyro <13-1/2"> (100'-300')
200.00	0.420	174.010	200.00	0.69	-0.75	-0.07	1707468.51	14276537.70	39°18'52.2426"N	80°45'46.5569"W	0.75	185.604	0.20	0.15	-22.19	
300.00	0.650	185.150	299.99	1.57	-1.68	-0.09	1707468.49	14276536.77	39°18'52.2335"N	80°45'46.5571"W	1.68	182.939	0.25	0.23	11.14	
411.00	1.100	203.550	410.98	2.95	-3.28	-0.57	1707468.01	14276535.17	39°18'52.2176"N	80°45'46.5633"W	3.33	189.824	0.47	0.41	16.58	APS EM <9-7/8"> (300')(411'-2733')
503.00	2.120	226.370	502.94	4.35	-5.27	-2.15	1707466.43	14276533.19	39°18'52.1980"N	80°45'46.5835"W	5.69	202.236	1.29	1.11	24.80	
593.00	4.420	232.040	592.79	6.25	-8.55	-6.09	1707462.49	14276529.90	39°18'52.1657"N	80°45'46.6338"W	10.50	215.479	2.58	2.56	6.30	
683.00	7.300	235.650	682.31	9.05	-13.91	-13.55	1707455.04	14276524.55	39°18'52.1129"N	80°45'46.7288"W	19.42	224.249	3.22	3.20	4.01	
773.00	9.960	236.880	771.29	12.70	-21.39	-24.79	1707443.80	14276517.07	39°18'52.0393"N	80°45'46.8721"W	32.74	229.212	2.96	2.96	1.37	
863.00	12.160	241.240	859.61	16.52	-30.20	-39.62	1707428.97	14276508.26	39°18'51.9525"N	80°45'47.0611"W	49.82	232.681	2.61	2.44	4.84	
954.00	13.730	239.920	948.29	20.58	-40.23	-57.37	1707411.23	14276498.24	39°18'51.8539"N	80°45'47.2872"W	70.07	234.961	1.76	1.73	-1.45	
1044.00	15.770	235.640	1035.33	26.27	-52.49	-76.71	1707391.90	14276485.98	39°18'51.7333"N	80°45'47.5337"W	92.95	235.619	2.57	2.27	-4.76	
1138.00	17.730	233.690	1125.33	34.39	-68.17	-98.79	1707369.83	14276470.30	39°18'51.5788"N	80°45'47.8152"W	120.03	235.392	2.17	2.09	-2.07	
1233.00	22.160	239.420	1214.62	42.86	-85.86	-125.89	1707342.74	14276452.62	39°18'51.4047"N	80°45'48.1605"W	152.38	235.704	5.09	4.66	6.03	
1328.00	25.500	243.910	1301.52	49.67	-103.98	-159.69	1707308.95	14276434.51	39°18'51.2265"N	80°45'48.5912"W	190.56	236.931	4.00	3.52	4.73	
1422.00	27.050	243.910	1385.80	55.56	-122.28	-197.06	1707271.60	14276416.22	39°18'51.0466"N	80°45'49.0672"W	231.92	238.180	1.65	1.65	0.00	
1517.00	23.370	240.500	1471.75	62.38	-141.06	-232.88	1707235.80	14276397.44	39°18'50.8618"N	80°45'49.5235"W	272.27	238.795	4.16	-3.87	-3.59	
1612.00	22.120	239.340	1559.36	70.08	-159.46	-264.66	1707204.02	14276379.05	39°18'50.6808"N	80°45'49.9285"W	308.99	238.930	1.40	-1.32	-1.22	
1706.00	24.750	237.660	1645.60	78.86	-179.02	-296.52	1707172.18	14276359.50	39°18'50.4884"N	80°45'50.3345"W	346.37	238.879	2.89	2.80	-1.79	
1801.00	29.330	235.770	1730.19	90.33	-202.76	-332.57	1707136.14	14276335.77	39°18'50.2547"N	80°45'50.7940"W	389.51	238.631	4.90	4.82	-1.99	
1896.00	32.050	233.430	1811.88	104.89	-230.87	-372.06	1707096.66	14276307.67	39°18'49.9778"N	80°45'51.2974"W	437.87	238.180	3.13	2.86	-2.46	
1990.00	32.770	231.170	1891.24	121.92	-261.68	-411.92	1707056.83	14276276.87	39°18'49.6743"N	80°45'51.8054"W	488.01	237.573	1.50	0.77	-2.40	
2085.00	31.580	226.670	1971.66	141.74	-294.88	-450.05	1707018.71	14276243.69	39°18'49.3472"N	80°45'52.2916"W	538.05	236.766	2.82	-1.25	-4.74	
2179.00	30.910	227.110	2052.03	162.46	-328.20	-485.64	1706983.13	14276210.38	39°18'49.0188"N	80°45'52.7456"W	586.14	235.949	0.75	-0.71	0.47	
2274.00	32.570	226.970	2132.82	183.58	-362.26	-522.21	1706946.58	14276176.34	39°18'48.6831"N	80°45'53.2120"W	635.56	235.251	1.75	1.75	-0.15	
2368.00	36.140	227.860	2210.41	205.66	-398.13	-561.27	1706907.53	14276140.47	39°18'48.3295"N	80°45'53.7102"W	688.14	234.650	3.84	3.80	0.95	
2463.00	36.840	226.600	2286.78	229.37	-436.50	-602.74	1706866.08	14276102.13	39°18'47.9514"N	80°45'54.2390"W	744.19	234.088	1.08	0.74	-1.33	
2558.00	32.980	221.730	2364.69	254.67	-475.39	-640.66	1706828.17	14276063.25	39°18'47.5680"N	80°45'54.7228"W	797.77	233.424	5.01	-4.06	-5.13	
2653.00	29.860	217.940	2445.76	280.99	-513.35	-672.43	1706796.42	14276025.31	39°18'47.1936"N	80°45'55.1282"W	845.98	232.641	3.89	-3.28	-3.99	



Actual Wellpath Report

Mule Unit 1H AWP Proj: 16654'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Mule Unit 1H
Field	Doddridge	API	47-017-06916-0000
Facility	Gaspar Pad	Wellbore	Mule Unit 1H AWB
Slot	Slot A		

WELLPATH DATA (182 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
2733.00	30.070	216.030	2515.07	303.94	-545.26	-696.46	1706772.40	14275993.40	39°18'46.8788"N	80°45'55.4350"W	884.52	231.942	1.22	0.26	-2.39	
2855.00	27.310	207.320	2622.12	341.62	-594.88	-727.30	1706741.57	14275943.81	39°18'46.3892"N	80°45'55.8290"W	939.60	230.720	4.10	-2.26	-7.14	APS EM <6-3/4"> (2733')(2855'-6836')
2949.00	28.900	213.530	2705.06	370.95	-632.98	-749.75	1706719.12	14275905.72	39°18'46.0132"N	80°45'56.1159"W	981.22	229.827	3.54	1.69	6.61	
3048.00	30.980	211.890	2790.84	402.28	-674.56	-776.43	1706692.46	14275864.16	39°18'45.6029"N	80°45'56.4567"W	1028.53	229.016	2.26	2.10	-1.66	
3143.00	31.600	214.440	2872.03	433.23	-715.85	-803.43	1706665.47	14275822.88	39°18'45.1955"N	80°45'56.8015"W	1076.07	228.299	1.54	0.65	2.68	
3238.00	34.650	226.860	2951.67	459.94	-754.90	-837.26	1706631.66	14275783.85	39°18'44.8105"N	80°45'57.2332"W	1127.33	227.961	7.82	3.21	13.07	
3332.00	36.270	234.710	3028.27	479.61	-789.25	-879.47	1706589.45	14275749.51	39°18'44.4720"N	80°45'57.7715"W	1181.69	228.095	5.14	1.72	8.35	
3427.00	36.740	227.580	3104.67	499.75	-824.67	-923.41	1706545.54	14275714.11	39°18'44.1230"N	80°45'58.3316"W	1238.05	228.233	4.49	0.49	-7.51	
3521.00	33.340	231.170	3181.63	520.60	-859.85	-964.30	1706504.66	14275678.94	39°18'43.7764"N	80°45'58.8530"W	1291.98	228.277	4.23	-3.62	3.82	
3616.00	28.270	239.400	3263.24	534.84	-887.70	-1004.05	1706464.93	14275651.10	39°18'43.5022"N	80°45'59.3596"W	1340.19	228.519	6.93	-5.34	8.66	
3710.00	27.540	241.200	3346.31	543.80	-909.50	-1042.25	1706426.74	14275629.31	39°18'43.2877"N	80°45'59.4864"W	1383.29	228.891	1.19	-0.78	1.91	
3805.00	25.860	244.630	3431.18	550.60	-928.96	-1080.22	1706388.79	14275609.86	39°18'43.0963"N	80°46'0.3301"W	1424.73	229.305	2.40	-1.77	3.61	
3900.00	28.490	247.010	3515.69	555.26	-946.69	-1119.81	1706349.22	14275592.14	39°18'42.9221"N	80°46'0.8343"W	1466.35	229.789	3.00	2.77	2.51	
3994.00	31.870	245.090	3596.94	560.23	-965.90	-1162.97	1706306.07	14275572.93	39°18'42.7333"N	80°46'1.3840"W	1511.78	230.289	3.74	3.60	-2.04	
4089.00	32.790	240.100	3677.22	568.59	-989.30	-1208.02	1706261.04	14275549.55	39°18'42.5032"N	80°46'1.9580"W	1561.42	230.685	2.97	0.97	-5.25	
4184.00	32.200	242.970	3757.35	577.90	-1013.62	-1252.87	1706216.20	14275525.23	39°18'42.2639"N	80°46'2.5294"W	1611.56	231.026	1.74	-0.62	3.02	
4278.00	32.700	244.190	3836.68	585.32	-1036.06	-1298.04	1706171.05	14275502.80	39°18'42.0433"N	80°46'3.1048"W	1660.82	231.404	0.88	0.53	1.30	
4373.00	32.090	235.040	3916.94	596.21	-1061.71	-1341.85	1706127.26	14275477.16	39°18'41.7909"N	80°46'3.6630"W	1711.08	231.648	5.20	-0.64	-9.63	
4467.00	29.810	238.130	3997.64	609.10	-1088.28	-1382.05	1706087.08	14275450.60	39°18'41.5293"N	80°46'4.1752"W	1759.09	231.782	3.13	-2.64	3.29	
4562.00	28.460	235.030	4080.70	621.36	-1113.65	-1420.53	1706048.61	14275425.24	39°18'41.2795"N	80°46'4.6657"W	1805.03	231.905	1.99	-1.21	-3.26	
4656.00	30.650	235.430	4162.47	634.76	-1140.09	-1458.62	1706010.54	14275398.82	39°18'41.0192"N	80°46'5.1511"W	1851.31	231.988	2.34	2.33	0.43	
4751.00	28.670	229.500	4245.04	650.43	-1168.64	-1495.90	1705973.28	14275370.28	39°18'40.7380"N	80°46'5.6263"W	1898.27	232.002	3.72	-2.08	-6.24	
4845.00	28.730	232.060	4327.49	666.79	-1197.17	-1530.86	1705938.32	14275341.75	39°18'40.4568"N	80°46'6.0721"W	1943.39	231.974	1.31	0.06	2.72	
4940.00	28.840	230.470	4410.75	683.02	-1225.79	-1566.54	1705902.66	14275313.14	39°18'40.1748"N	80°46'6.5270"W	1989.13	231.957	0.81	0.12	-1.67	
5035.00	28.110	232.540	4494.26	698.91	-1253.99	-1601.98	1705867.23	14275284.96	39°18'39.8971"N	80°46'6.9787"W	2034.41	231.947	1.29	-0.77	2.18	
5134.00	29.480	232.250	4581.02	714.94	-1283.09	-1639.76	1705829.47	14275255.87	39°18'39.6104"N	80°46'7.4603"W	2082.10	231.957	1.39	1.38	-0.29	
5229.00	29.550	234.180	4663.69	730.04	-1311.11	-1677.24	1705792.01	14275227.86	39°18'39.3344"N	80°46'7.9380"W	2128.88	231.985	1.00	0.07	2.03	
5324.00	30.930	233.610	4745.76	744.95	-1339.31	-1715.89	1705753.37	14275199.67	39°18'39.0567"N	80°46'8.4307"W	2176.70	232.027	1.48	1.45	-0.60	
5418.00	29.060	230.960	4827.17	760.80	-1368.02	-1753.07	1705716.21	14275170.97	39°18'38.7738"N	80°46'8.9046"W	2223.68	232.033	2.44	-1.99	-2.82	
5512.00	26.660	231.860	4910.27	776.29	-1395.43	-1787.39	1705681.90	14275143.57	39°18'38.5038"N	80°46'9.3422"W	2267.60	232.021	2.59	-2.55	0.96	



Actual Wellpath Report

Mule Unit 1H AWP Proj: 16654'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Mule Unit 1H
Field	Doddridge	API	47-017-06916-0000
Facility	Gaspar Pad	Wellbore	Mule Unit 1H AWB
Slot	Slot A		

WELLPATH DATA (182 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
5607.00	27.430	230.390	4994.88	791.71	-1422.54	-1821.01	1705648.29	14275116.47	39°18'38.2366"N	80°46'9.7708"W	2310.78	232.004	1.07	0.81	-1.55	
5701.00	31.770	235.440	5076.61	806.78	-1450.40	-1858.10	1705611.22	14275088.62	39°18'37.9622"N	80°46'10.2435"W	2357.16	232.025	5.32	4.62	5.37	
5796.00	35.450	244.140	5155.76	817.72	-1476.63	-1903.53	1705565.81	14275062.40	39°18'37.7041"N	80°46'10.8223"W	2409.12	232.198	6.37	3.87	9.16	
5891.00	35.250	242.760	5233.25	825.93	-1501.20	-1952.69	1705516.66	14275037.85	39°18'37.4626"N	80°46'11.4486"W	2463.05	232.448	0.87	-0.21	-1.45	
5986.00	33.200	240.260	5311.80	836.66	-1526.65	-1999.66	1705469.72	14275012.41	39°18'37.2122"N	80°46'12.0469"W	2515.81	232.640	2.82	-2.16	-2.63	
6080.00	31.510	241.100	5391.20	845.58	-1551.29	-2043.51	1705425.88	14274987.78	39°18'36.9698"N	80°46'12.6057"W	2565.63	232.797	1.86	-1.80	0.89	
6175.00	33.760	242.880	5471.20	854.49	-1575.32	-2088.75	1705380.66	14274963.75	39°18'36.7333"N	80°46'13.1819"W	2616.20	232.977	2.57	2.37	1.87	
6269.00	32.290	239.470	5550.02	864.11	-1599.99	-2133.63	1705335.80	14274939.10	39°18'36.4907"N	80°46'13.7537"W	2666.90	233.134	2.52	-1.56	-3.63	
6364.00	30.380	234.820	5631.17	876.75	-1626.73	-2175.13	1705294.31	14274912.37	39°18'36.2275"N	80°46'14.2825"W	2716.14	233.208	3.24	-2.01	-4.89	
6458.00	27.860	229.930	5713.29	892.06	-1654.57	-2211.38	1705258.08	14274884.54	39°18'35.9532"N	80°46'14.7446"W	2761.84	233.196	3.69	-2.68	-5.20	
6553.00	28.560	225.330	5797.02	910.62	-1684.83	-2244.52	1705224.95	14274854.29	39°18'35.6550"N	80°46'15.1672"W	2806.51	233.107	2.40	0.74	-4.84	
6647.00	28.070	223.140	5879.77	931.41	-1716.76	-2275.62	1705193.86	14274822.37	39°18'35.3401"N	80°46'15.5639"W	2850.56	232.969	1.22	-0.52	-2.33	
6742.00	26.510	217.670	5964.21	954.19	-1749.86	-2303.87	1705165.63	14274789.28	39°18'35.0137"N	80°46'15.9243"W	2893.06	232.782	3.11	-1.64	-5.76	
6836.00	30.060	223.020	6046.99	977.46	-1783.69	-2332.76	1705136.74	14274755.46	39°18'34.6800"N	80°46'16.2930"W	2936.55	232.597	4.64	3.78	5.69	
6895.00	28.130	221.800	6098.54	991.64	-1804.87	-2352.12	1705117.40	14274734.30	39°18'34.4712"N	80°46'16.5399"W	2964.79	232.500	3.42	-3.27	-2.07	BH Lucida <6-3/4"> (6836')(6895'-16632')
6989.00	28.610	224.730	6181.25	1013.13	-1837.38	-2382.73	1705086.80	14274701.80	39°18'34.1507"N	80°46'16.9304"W	3008.88	232.363	1.57	0.51	3.12	
7084.00	28.930	223.690	6264.53	1034.47	-1870.15	-2414.61	1705054.93	14274669.04	39°18'33.8275"N	80°46'17.3370"W	3054.14	232.242	0.63	0.34	-1.09	
7178.00	34.220	213.440	6344.64	1061.80	-1908.70	-2444.92	1705024.63	14274630.50	39°18'33.4473"N	80°46'17.7239"W	3101.74	232.022	8.00	5.63	-10.90	
7273.00	37.080	205.970	6421.87	1099.11	-1956.77	-2472.20	1704997.36	14274582.45	39°18'32.9728"N	80°46'18.0725"W	3152.89	231.638	5.48	3.01	-7.86	
7299.00†	37.261	203.625	6442.58	1110.65	-1971.03	-2478.79	1704990.78	14274568.20	39°18'32.8321"N	80°46'18.1568"W	3166.92	231.510	5.49	0.69	-9.02	Sycamore: 7299' MD
7368.00	37.960	197.520	6497.26	1143.56	-2010.42	-2493.55	1704976.02	14274528.83	39°18'32.4431"N	80°46'18.3459"W	3203.06	231.123	5.49	1.01	-8.85	
7462.00	38.950	192.350	6570.89	1192.63	-2066.87	-2508.58	1704961.00	14274472.40	39°18'31.8856"N	80°46'18.5389"W	3250.37	230.514	3.58	1.05	-5.50	
7556.00	44.330	184.340	6641.17	1248.60	-2128.57	-2517.40	1704952.18	14274410.72	39°18'31.2760"N	80°46'18.6530"W	3296.68	229.784	8.04	5.72	-8.52	
7557.00†	44.391	184.321	6641.88	1249.25	-2129.27	-2517.45	1704952.13	14274410.03	39°18'31.2691"N	80°46'18.6537"W	3297.17	229.775	6.22	6.08	-1.89	Middlesex: 7557' MD
7651.00	50.120	182.710	6705.66	1313.47	-2198.14	-2521.64	1704947.95	14274341.18	39°18'30.5885"N	80°46'18.7092"W	3345.21	228.921	6.22	6.09	-1.71	
7745.00	57.300	178.850	6761.27	1385.19	-2273.83	-2522.55	1704947.03	14274265.53	39°18'29.8404"N	80°46'18.7232"W	3396.11	227.968	8.32	7.64	-4.11	
7766.00†	59.169	177.818	6772.33	1402.33	-2291.67	-2522.03	1704947.55	14274247.69	39°18'29.6641"N	80°46'18.7172"W	3407.69	227.740	9.83	8.90	-4.91	Burkett: 7766' MD
7823.00†	64.277	175.205	6799.33	1450.92	-2341.75	-2518.95	1704950.63	14274197.63	39°18'29.1690"N	80°46'18.6796"W	3439.32	227.088	9.83	8.96	-4.59	Tully: 7823' MD
7840.00	65.810	174.470	6806.50	1465.95	-2357.10	-2517.56	1704952.02	14274182.28	39°18'29.0173"N	80°46'18.6624"W	3448.77	226.885	9.83	9.02	-4.32	
7934.00	71.850	172.650	6840.43	1551.80	-2444.16	-2507.70	1704961.87	14274095.26	39°18'28.1566"N	80°46'18.5399"W	3501.78	225.735	6.67	6.43	-1.94	



Actual Wellpath Report

Mule Unit 1H AWP Proj: 16654'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Mule Unit 1H
Field	Doddridge	API	47-017-06916-0000
Facility	Gaspar Pad	Wellbore	Mule Unit 1H AWB
Slot	Slot A		

WELLPATH DATA (182 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
7945.00†	72.776	172.289	6843.77	1562.11	-2454.55	-2506.33	1704963.24	14274084.88	39°18'28.0539"N	80°46'18.5227"W	3508.06	225.598	8.98	8.42	-3.29	Marcellus POE: 7945' MD
7981.00	75.810	171.130	6853.52	1596.27	-2488.84	-2501.33	1704968.24	14274050.60	39°18'27.7148"N	80°46'18.4602"W	3528.59	225.143	8.98	8.43	-3.22	
8028.00	78.930	169.800	6863.79	1641.63	-2534.06	-2493.73	1704975.84	14274005.40	39°18'27.2677"N	80°46'18.3650"W	3555.30	224.540	7.19	6.64	-2.83	
8123.00	84.310	166.710	6877.64	1735.02	-2626.03	-2474.59	1704994.97	14273913.47	39°18'26.3582"N	80°46'18.1245"W	3608.27	223.299	6.51	5.66	-3.25	
8218.00	87.550	163.060	6884.38	1829.63	-2717.48	-2449.89	1705019.67	14273822.05	39°18'25.4537"N	80°46'17.8131"W	3658.77	222.036	5.13	3.41	-3.84	
8313.00	91.650	162.480	6885.04	1924.60	-2808.19	-2421.75	1705047.79	14273731.37	39°18'24.5564"N	80°46'17.4581"W	3708.21	220.774	4.36	4.32	-0.61	
8407.00	91.180	161.350	6882.72	2018.57	-2897.52	-2392.58	1705076.95	14273642.08	39°18'23.6728"N	80°46'17.0899"W	3757.67	219.548	1.30	-0.50	-1.20	
8502.00	91.400	161.470	6880.58	2113.54	-2987.54	-2362.30	1705107.21	14273552.09	39°18'22.7823"N	80°46'16.7076"W	3808.66	218.334	0.26	0.23	0.13	
8596.00	90.600	160.500	6878.94	2207.51	-3076.40	-2331.68	1705137.82	14273463.27	39°18'21.9033"N	80°46'16.3209"W	3860.18	217.159	1.34	-0.85	-1.03	
8691.00	90.850	160.330	6877.74	2302.46	-3165.89	-2299.84	1705169.65	14273373.81	39°18'21.0180"N	80°46'15.9187"W	3913.07	215.996	0.32	0.26	-0.18	
8785.00	90.350	160.230	6876.76	2396.41	-3254.37	-2268.12	1705201.36	14273285.37	39°18'20.1427"N	80°46'15.5181"W	3966.78	214.874	0.54	-0.53	-0.11	
8880.00	90.540	162.310	6876.02	2491.40	-3344.34	-2237.62	1705231.85	14273195.44	39°18'19.2528"N	80°46'15.1329"W	4023.87	213.786	2.20	0.20	2.19	
8974.00	90.720	163.880	6874.99	2585.37	-3434.27	-2210.29	1705259.17	14273105.55	39°18'18.3632"N	80°46'14.7882"W	4084.06	212.765	1.68	0.19	1.67	
9068.00	90.970	164.270	6873.60	2679.30	-3524.65	-2184.50	1705284.95	14273015.20	39°18'17.4693"N	80°46'14.4630"W	4146.71	211.790	0.49	0.27	0.41	
9163.00	90.540	163.680	6872.35	2774.24	-3615.95	-2158.28	1705311.16	14272923.94	39°18'16.5663"N	80°46'14.1324"W	4211.09	210.832	0.77	-0.45	-0.62	
9257.00	90.660	163.310	6871.36	2868.20	-3706.07	-2131.57	1705337.85	14272833.85	39°18'15.6749"N	80°46'13.7956"W	4275.34	209.906	0.41	0.13	-0.39	
9351.00	90.690	162.310	6870.26	2962.19	-3795.86	-2103.80	1705365.62	14272744.09	39°18'14.7867"N	80°46'13.4451"W	4339.88	208.997	1.06	0.03	-1.06	
9445.00	90.690	162.200	6869.12	3056.18	-3885.38	-2075.15	1705394.25	14272654.61	39°18'13.9012"N	80°46'13.0836"W	4404.82	208.106	0.12	0.00	-0.12	
9539.00	90.110	160.330	6868.47	3150.16	-3974.40	-2044.96	1705424.43	14272565.63	39°18'13.0206"N	80°46'12.7024"W	4469.64	207.227	2.08	-0.62	-1.99	
9634.00	90.350	159.490	6868.09	3245.10	-4063.62	-2012.33	1705457.05	14272476.45	39°18'12.1380"N	80°46'12.2902"W	4534.58	206.345	0.92	0.25	-0.88	
9728.00	90.480	158.950	6867.41	3338.98	-4151.50	-1978.98	1705490.39	14272388.60	39°18'11.2686"N	80°46'11.8688"W	4599.05	205.487	0.59	0.14	-0.57	
9823.00	90.480	159.290	6866.61	3433.85	-4240.26	-1945.12	1705524.23	14272299.88	39°18'10.3905"N	80°46'11.4410"W	4665.11	204.642	0.36	0.00	0.36	
9918.00	90.720	160.450	6865.61	3528.78	-4329.45	-1912.43	1705556.91	14272210.72	39°18'9.5081"N	80°46'11.0280"W	4733.02	203.832	1.25	0.25	1.22	
10107.00	90.350	159.860	6863.85	3717.67	-4507.21	-1848.27	1705621.04	14272033.02	39°18'7.7495"N	80°46'10.2176"W	4871.46	202.297	0.37	-0.20	-0.31	
10202.00	90.260	159.750	6863.34	3812.59	-4596.37	-1815.48	1705653.82	14271943.90	39°18'6.8675"N	80°46'9.8033"W	4941.92	201.553	0.15	-0.09	-0.12	
10297.00	90.320	158.780	6862.86	3907.48	-4685.22	-1781.84	1705687.44	14271855.09	39°18'5.9885"N	80°46'9.3784"W	5012.61	200.822	1.02	0.06	-1.02	
10391.00	90.660	160.410	6862.06	4001.39	-4773.31	-1749.07	1705720.20	14271767.03	39°18'5.1170"N	80°46'8.9643"W	5083.68	200.124	1.77	0.36	1.73	
10486.00	90.380	160.100	6861.20	4096.34	-4862.72	-1716.98	1705752.28	14271677.66	39°18'4.2324"N	80°46'8.5590"W	5156.95	199.448	0.44	-0.29	-0.33	
10581.00	90.230	161.720	6860.69	4191.31	-4952.49	-1685.91	1705783.34	14271587.92	39°18'3.3444"N	80°46'8.1667"W	5231.59	198.799	1.71	-0.16	1.71	
10676.00	90.630	161.520	6859.98	4286.31	-5042.64	-1655.96	1705813.28	14271497.81	39°18'2.4526"N	80°46'7.7886"W	5307.58	198.180	0.47	0.42	-0.21	



Actual Wellpath Report

Mule Unit 1H AWP Proj: 16654'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Mule Unit 1H
Field	Doddridge	API	47-017-06916-0000
Facility	Gaspar Pad	Wellbore	Mule Unit 1H AWB
Slot	Slot A		

WELLPATH DATA (182 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
10770.00	89.830	162.130	6859.60	4380.31	-5131.95	-1626.64	1705842.59	14271408.53	39°18'1.5692"N	80°46'7.4186"W	5383.58	197.587	1.07	-0.85	0.65	
10865.00	89.920	161.900	6859.81	4475.31	-5222.31	-1597.30	1705871.91	14271318.21	39°18'0.6754"N	80°46'7.0484"W	5461.13	197.007	0.26	0.09	-0.24	
10959.00	90.230	162.920	6859.69	4569.30	-5311.91	-1568.90	1705900.31	14271228.64	39°17'59.7890"N	80°46'6.6899"W	5538.76	196.455	1.13	0.33	1.09	
11053.00	90.290	163.190	6859.26	4663.29	-5401.83	-1541.50	1705927.69	14271138.76	39°17'58.8996"N	80°46'6.3444"W	5617.47	195.927	0.29	0.06	0.29	
11148.00	89.950	161.550	6859.06	4758.28	-5492.37	-1512.73	1705956.45	14271048.26	39°17'58.0041"N	80°46'5.9813"W	5696.88	195.399	1.76	-0.36	-1.73	
11242.00	90.350	162.950	6858.81	4852.28	-5581.89	-1484.07	1705985.10	14270958.78	39°17'57.1186"N	80°46'5.6197"W	5775.81	194.889	1.55	0.43	1.49	
11337.00	91.710	166.070	6857.11	4947.16	-5673.41	-1458.71	1706010.45	14270867.29	39°17'56.2133"N	80°46'5.3001"W	5857.94	194.419	3.58	1.43	3.28	
11431.00	90.480	162.790	6855.31	5041.05	-5763.93	-1433.48	1706035.66	14270776.81	39°17'55.3180"N	80°46'4.9822"W	5939.51	193.966	3.73	-1.31	-3.49	
11526.00	89.830	162.680	6855.05	5136.04	-5854.65	-1405.29	1706063.85	14270686.12	39°17'54.4207"N	80°46'4.6265"W	6020.94	193.497	0.69	-0.68	-0.12	
11621.00	92.200	167.270	6853.37	5230.87	-5946.36	-1380.67	1706088.46	14270594.45	39°17'53.5137"N	80°46'4.3164"W	6104.54	193.072	5.44	2.49	4.83	
11715.00	90.510	162.810	6851.14	5324.68	-6037.12	-1356.42	1706112.70	14270503.73	39°17'52.6160"N	80°46'4.0108"W	6187.62	192.663	5.07	-1.80	-4.74	
11810.00	90.080	162.810	6850.66	5419.67	-6127.87	-1328.34	1706140.76	14270413.01	39°17'51.7183"N	80°46'3.6567"W	6270.19	192.231	0.45	-0.45	0.00	
11904.00	90.020	162.620	6850.57	5513.67	-6217.63	-1300.41	1706168.68	14270323.29	39°17'50.8305"N	80°46'3.3044"W	6352.16	191.813	0.21	-0.06	-0.20	
11999.00	90.170	162.160	6850.42	5608.67	-6308.17	-1271.67	1706197.41	14270232.78	39°17'49.9348"N	80°46'2.9417"W	6435.08	191.398	0.51	0.16	-0.48	
12093.00	89.770	161.410	6850.47	5702.66	-6397.46	-1242.29	1706226.78	14270143.53	39°17'49.0515"N	80°46'2.5709"W	6516.96	190.989	0.90	-0.43	-0.80	
12188.00	89.980	162.100	6850.67	5797.66	-6487.69	-1212.55	1706256.51	14270053.34	39°17'48.1591"N	80°46'2.1956"W	6600.03	190.586	0.76	0.22	0.73	
12282.00	89.220	160.500	6851.33	5891.65	-6576.72	-1182.41	1706286.64	14269964.34	39°17'47.2783"N	80°46'1.8152"W	6682.17	190.192	1.88	-0.81	-1.70	
12377.00	90.380	162.910	6851.66	5986.64	-6666.91	-1152.59	1706316.44	14269874.19	39°17'46.3862"N	80°46'1.4388"W	6765.81	189.809	2.82	1.22	2.54	
12472.00	90.320	163.770	6851.08	6081.61	-6757.92	-1125.36	1706343.67	14269783.21	39°17'45.4860"N	80°46'1.0954"W	6850.98	189.454	0.91	-0.06	0.91	
12567.00	90.380	162.980	6850.50	6176.58	-6848.94	-1098.18	1706370.84	14269692.22	39°17'44.5856"N	80°46'0.7527"W	6936.43	189.109	0.83	0.06	-0.83	
12662.00	90.230	161.890	6849.99	6271.58	-6939.51	-1069.51	1706399.49	14269601.69	39°17'43.6897"N	80°46'0.3910"W	7021.44	188.761	1.16	-0.16	-1.15	
12756.00	89.860	161.550	6849.92	6365.58	-7028.77	-1040.03	1706428.97	14269512.47	39°17'42.8068"N	80°46'0.0189"W	7105.30	188.417	0.53	-0.39	-0.36	
12851.00	90.170	161.980	6849.90	6460.57	-7119.00	-1010.30	1706458.68	14269422.28	39°17'41.9142"N	80°45'59.6437"W	7190.33	188.077	0.56	0.33	0.45	
12946.00	89.860	161.760	6849.87	6555.57	-7209.28	-980.74	1706488.23	14269332.03	39°17'41.0211"N	80°45'59.2707"W	7275.68	187.747	0.40	-0.33	-0.23	
13041.00	90.880	162.190	6849.26	6650.57	-7299.61	-951.34	1706517.61	14269241.73	39°17'40.1276"N	80°45'58.8998"W	7361.35	187.425	1.17	1.07	0.45	
13136.00	89.650	163.700	6848.82	6745.55	-7390.43	-923.48	1706545.46	14269150.95	39°17'39.2292"N	80°45'58.5484"W	7447.91	187.123	2.05	-1.29	1.59	
13226.00	90.260	166.660	6848.89	6835.41	-7477.43	-900.46	1706568.47	14269063.99	39°17'38.3688"N	80°45'58.2585"W	7531.45	186.867	3.36	0.68	3.29	
13321.00	90.110	162.900	6848.58	6930.28	-7569.08	-875.53	1706593.40	14268972.38	39°17'37.4623"N	80°45'57.9443"W	7619.55	186.598	3.96	-0.16	-3.96	
13416.00	90.140	161.930	6848.37	7025.28	-7659.64	-846.83	1706622.09	14268881.85	39°17'36.5665"N	80°45'57.5823"W	7706.31	186.309	1.02	0.03	-1.02	
13511.00	89.920	161.290	6848.32	7120.27	-7749.79	-816.86	1706652.05	14268791.74	39°17'35.6748"N	80°45'57.2040"W	7792.72	186.017	0.71	-0.23	-0.67	



Actual Wellpath Report

Mule Unit 1H AWP Proj: 16654'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Mule Unit 1H
Field	Doddridge	API	47-017-06916-0000
Facility	Gaspar Pad	Wellbore	Mule Unit 1H AWB
Slot	Slot A		

WELLPATH DATA (182 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
13605.00	89.950	160.500	6848.43	7214.25	-7838.61	-786.09	1706682.80	14268702.95	39°17'34.7961"N	80°45'56.8156"W	7877.93	185.727	0.84	0.03	-0.84	
13700.00	90.600	160.820	6847.98	7309.22	-7928.24	-754.63	1706714.25	14268613.35	39°17'33.9094"N	80°45'56.4184"W	7964.08	185.437	0.76	0.68	0.34	
13795.00	90.910	161.130	6846.72	7404.20	-8018.05	-723.67	1706745.20	14268523.58	39°17'33.0210"N	80°45'56.0275"W	8050.64	185.157	0.46	0.33	0.33	
13889.00	90.970	161.540	6845.18	7498.18	-8107.09	-693.59	1706775.27	14268434.58	39°17'32.1401"N	80°45'55.6479"W	8136.71	184.890	0.44	0.06	0.44	
13984.00	90.970	162.210	6843.57	7593.17	-8197.36	-664.04	1706804.81	14268344.34	39°17'31.2471"N	80°45'55.2750"W	8224.22	184.631	0.71	0.00	0.71	
14078.00	90.110	160.490	6842.69	7687.15	-8286.42	-633.98	1706834.85	14268255.32	39°17'30.3662"N	80°45'54.8957"W	8310.64	184.375	2.05	-0.91	-1.83	
14173.00	90.910	160.690	6841.84	7782.12	-8376.02	-602.41	1706866.41	14268165.76	39°17'29.4798"N	80°45'54.4971"W	8397.65	184.114	0.87	0.84	0.21	
14268.00	89.950	160.440	6841.13	7877.08	-8465.60	-570.80	1706898.00	14268076.21	39°17'28.5936"N	80°45'54.0980"W	8484.82	183.857	1.04	-1.01	-0.26	
14362.00	89.030	161.960	6841.97	7971.06	-8554.58	-540.51	1706928.28	14267987.27	39°17'27.7134"N	80°45'53.7157"W	8571.64	183.615	1.89	-0.98	1.62	
14457.00	90.570	160.510	6842.30	8066.05	-8644.52	-509.95	1706958.83	14267897.36	39°17'26.8236"N	80°45'53.3300"W	8659.55	183.376	2.23	1.62	-1.53	
14552.00	90.540	160.710	6841.38	8161.01	-8734.13	-478.41	1706990.36	14267807.79	39°17'25.9372"N	80°45'52.9319"W	8747.22	183.135	0.21	-0.03	0.21	
14647.00	90.570	160.700	6840.46	8255.98	-8823.79	-447.02	1707021.73	14267718.16	39°17'25.0502"N	80°45'52.5356"W	8835.11	182.900	0.03	0.03	-0.01	
14741.00	90.510	160.540	6839.57	8349.95	-8912.46	-415.83	1707052.91	14267629.53	39°17'24.1730"N	80°45'52.1418"W	8922.15	182.671	0.18	-0.06	-0.17	
14836.00	90.540	160.460	6838.70	8444.91	-9002.01	-384.12	1707084.61	14267540.02	39°17'23.2871"N	80°45'51.7415"W	9010.20	182.443	0.09	0.03	-0.08	
14931.00	90.540	160.850	6837.80	8539.88	-9091.64	-352.66	1707116.06	14267450.42	39°17'22.4004"N	80°45'51.3443"W	9098.48	182.221	0.41	0.00	0.41	
15025.00	90.510	160.410	6836.94	8633.85	-9180.31	-321.48	1707147.23	14267361.78	39°17'21.5232"N	80°45'50.9507"W	9185.94	182.006	0.47	-0.03	-0.47	
15120.00	90.510	160.540	6836.10	8728.81	-9269.85	-289.73	1707178.96	14267272.28	39°17'20.6374"N	80°45'50.5499"W	9274.37	181.790	0.14	0.00	0.14	
15215.00	90.510	160.720	6835.25	8823.77	-9359.47	-258.22	1707210.46	14267182.70	39°17'19.7508"N	80°45'50.1521"W	9363.03	181.580	0.19	0.00	0.19	
15309.00	90.540	161.420	6834.39	8917.76	-9448.38	-227.73	1707240.94	14267093.82	39°17'18.8713"N	80°45'49.7672"W	9451.12	181.381	0.75	0.03	0.74	
15404.00	90.510	161.450	6833.52	9012.75	-9538.43	-197.49	1707271.17	14267003.80	39°17'17.9805"N	80°45'49.3856"W	9540.48	181.186	0.04	-0.03	0.03	
15498.00	90.540	161.550	6832.66	9106.74	-9627.57	-167.66	1707300.99	14266914.70	39°17'17.0987"N	80°45'49.0092"W	9629.03	180.998	0.11	0.03	0.11	
15593.00	90.540	161.580	6831.76	9201.73	-9717.69	-137.62	1707331.01	14266824.62	39°17'16.2072"N	80°45'48.6301"W	9718.66	180.811	0.03	0.00	0.03	
15688.00	90.540	161.700	6830.87	9296.73	-9807.85	-107.70	1707360.93	14266734.49	39°17'15.3153"N	80°45'48.2526"W	9808.44	180.629	0.13	0.00	0.13	
15782.00	90.570	161.660	6829.96	9390.72	-9897.08	-78.15	1707390.46	14266645.30	39°17'14.4326"N	80°45'47.8798"W	9897.39	180.452	0.05	0.03	-0.04	
15972.00	90.660	161.720	6827.92	9580.70	-10077.45	-18.47	1707450.12	14266465.00	39°17'12.6483"N	80°45'47.1267"W	10077.47	180.105	0.06	0.05	0.03	
16066.00	90.510	161.810	6826.96	9674.70	-10166.73	10.95	1707479.52	14266375.76	39°17'11.7652"N	80°45'46.7556"W	10166.73	179.938	0.19	-0.16	0.10	
16161.00	90.540	161.590	6826.09	9769.69	-10256.92	40.77	1707509.34	14266285.60	39°17'10.8730"N	80°45'46.3793"W	10257.00	179.772	0.23	0.03	-0.23	
16255.00	90.720	161.760	6825.05	9863.68	-10346.15	70.33	1707538.88	14266196.41	39°17'9.9903"N	80°45'46.0064"W	10346.39	179.611	0.26	0.19	0.18	
16350.00	90.480	161.680	6824.06	9958.68	-10436.35	100.12	1707568.66	14266106.24	39°17'9.0980"N	80°45'45.6305"W	10436.83	179.450	0.27	-0.25	-0.08	
16444.00	90.660	161.600	6823.12	10052.67	-10525.56	129.73	1707598.26	14266017.07	39°17'8.2155"N	80°45'45.2569"W	10526.36	179.294	0.21	0.19	-0.09	



Actual Wellpath Report

Mule Unit 1H AWP Proj: 16654'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Mule Unit 1H
Field	Doddridge	API	47-017-06916-0000
Facility	Gaspar Pad	Wellbore	Mule Unit 1H AWB
Slot	Slot A		

WELLPATH DATA (182 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
16632.00	90.600	161.670	6821.06	10240.65	-10703.97	188.96	1707657.46	14265838.73	39°17'6.4506"N	80°45'44.5096"W	10705.64	178.989	0.05	-0.03	0.04	
16654.00‡	90.600	161.670	6820.83	10262.65	-10724.85	195.88	1707664.38	14265817.85	39°17'6.2440"N	80°45'44.4223"W	10726.64	178.954	0.00	0.00	0.00	Projected MD at TD: 16654'

HOLE & CASING SECTIONS - Ref Wellbore: Mule Unit 1H AWB Ref Wellpath: Mule Unit 1H AWP Proj: 16654'									
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]
16in Conductor	30.00	130.00	100.00	30.00	130.00	0.00	0.00	-0.31	-0.08
13.5in Open Hole	130.00	355.00	225.00	130.00	354.99	-0.31	-0.08	-2.39	-0.23
10.75in Casing Surface	30.00	335.00	305.00	30.00	334.99	0.00	0.00	-2.11	-0.16
9.875in Open Hole	355.00	2811.00	2456.00	354.99	2583.19	-2.39	-0.23	-576.95	-717.36
7.625in Casing Intermediate	30.00	2791.00	2761.00	30.00	2565.61	0.00	0.00	-568.81	-712.40
6.75in Open Hole	2811.00	16654.00	13843.00	2583.19	6820.83	-576.95	-717.36	-10724.85	195.88
5in Casing Production	30.00	16634.00	16604.00	30.00	6821.04	0.00	0.00	-10705.87	189.59



Actual Wellpath Report

Mule Unit 1H AWP Proj: 16654'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Mule Unit 1H
Field	Doddridge	API	47-017-06916-0000
Facility	Gaspar Pad	Wellbore	Mule Unit 1H AWB
Slot	Slot A		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Mule Unit 1H POE Rev-3	6841.00	-2401.71	-2515.34	1704954.24	14274137.69	39°18'28.5763"N	80°46'18.6356"W	point
Mule Unit 1H BHL Rev-3	6884.00	-10699.48	174.13	1707642.64	14265843.22	39°17'6.4954"N	80°45'44.6981"W	point
Mule Unit 1H LP Rev-3	6884.00	-2634.23	-2439.98	1705029.57	14273905.27	39°18'26.2763"N	80°46'17.6843"W	point
Mule Unit 1H 50' L/R Hard Line	7250.00	-6550.59	-1170.60	1706298.44	14269990.45	39°17'47.5362"N	80°46'1.6641"W	rectangle
2D Rectangle 8722.74 x 100.								

WELLPATH COMPOSITION - Ref Wellbore: Mule Unit 1H AWB Ref Wellpath: Mule Unit 1H AWP Proj: 16654'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
30.00	300.00	Gyrodatta 2015 - GC+WIR+DPIPE	01 Gyrodatta MS Gyro <13-1/2"> (100'-300')	Mule Unit 1H AWB	3/23/2022
300.00	2733.00	BH NaviTrak (2019) (Axial Corr+HRGM)	02 APS EM <9-7/8"> (300')(411'-2733')	Mule Unit 1H AWB	3/23/2022
2733.00	6836.00	BH NaviTrak (2019) (Axial Corr+HRGM)	03 APS EM <6-3/4"> (2733')(2855'-6836')	Mule Unit 1H AWB	6/24/2022
6836.00	16654.00	BH OnTrak (2019) (HRGM, Short spacing)	04 BH Lucida <6-3/4"> (6836')(6895'-16632')	Mule Unit 1H AWB	6/24/2022



Actual Wellpath Report

Mule Unit 1H AWP Proj: 16654'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Mule Unit 1H
Field	Doddridge	API	47-017-06916-0000
Facility	Gaspar Pad	Wellbore	Mule Unit 1H AWB
Slot	Slot A		

COMMENTS
<p>Wellpath general comments API: 47-017-06916-0000 BH Job #: 111277258 Rig: H&P 531 Duration: 6/25/2022-7/1/2022 Gyrodatta MS Gyro <13-1/2"> (100'-300') APS EM <9-7/8"> (300')(411'-2733') APS EM <6-3/4"> (2733')(2855'-6836') BH Lucida <6-3/4"> (6836')(6895'-16632') Sycamore: 7299' MD Middlesex: 7557' MD Burkett: 7766' MD Tully: 7823' MD Marcellus POE: 7945' MD Projected MD at TD: 16654'</p>