



ANTERO RESOURCES CORPORATION



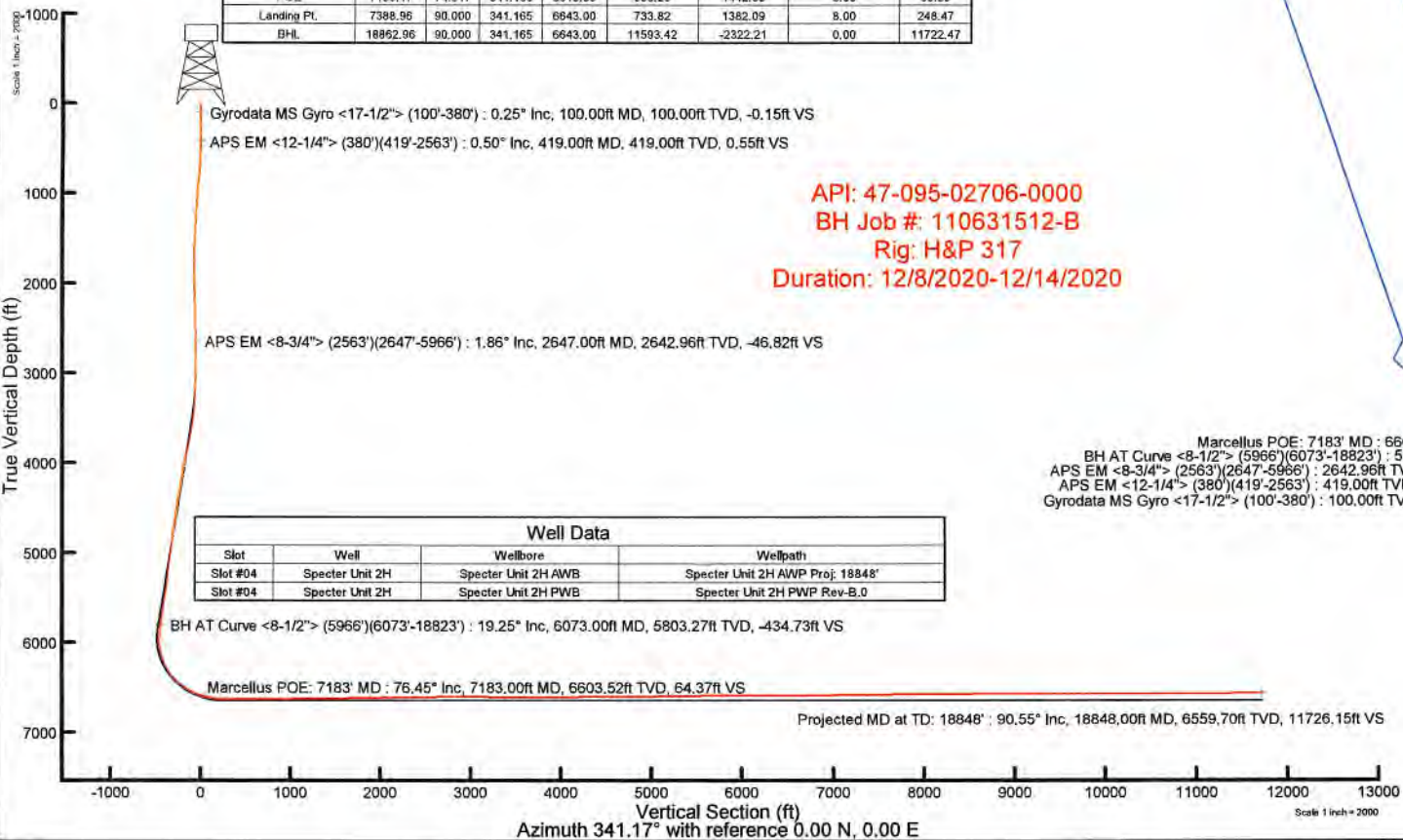
Location: Tyler County, WV
 Field: Tyler
 Facility: Margery Pad

Slot: Slot #04
 Well: Specter Unit 2H
 Wellbore: Specter Unit 2H PWB

PKI reference wellpath is Specter Unit 2H 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: 1066.5 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot #04): -1041 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: edstaylor on 2020-12-17; Database: WA_MPL_EASTERMUS_Deln

Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Margery Pad	1688470.750	14350316.150	39°31'2.1450"N	80°49'46.5880"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Longitude
Slot #04	-15.23	-25.83	1688444.930	14350300.930	39°31'1.9950"N
Comment: Specter Unit 2H					
H&P 317 (RKB) to Ground level (At Slot: Slot #04)					25.5ft
Mean Sea Level to Ground level (At Slot: Slot #04)					-1041ft
H&P 317 (RKB) to Mean Sea Level					1066.5ft

Well Profile Data							
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	VS (ft)
Tie On	2563.00	1.490	326.740	2658.99	-24.76	79.90	-49.22
Proj. to Bottom	2637.00	1.490	326.740	2632.97	-23.15	78.84	-47.35
KOP 1	2717.00	1.490	326.740	2712.94	-21.41	77.70	-45.34
End of 3D Arc	3599.34	25.605	90.979	3567.05	-14.96	265.39	-99.82
Curve KOP	8142.17	25.605	90.979	5860.16	-33.74	1364.15	-472.23
POE	7199.17	74.817	341.165	6618.00	556.29	1442.65	60.89
Landing Pt.	7388.96	90.000	341.165	6643.00	733.82	1382.09	248.47
BHL	18952.96	90.000	341.165	6643.00	11593.42	-2322.21	11722.47



Gyrodata MS Gyro <17-1/2"> (100'-380') : 0.25° Inc, 100.00ft MD, 100.00ft TVD, -0.15ft VS
 APS EM <12-1/4"> (380')(419'-2563') : 0.50° Inc, 419.00ft MD, 419.00ft TVD, 0.55ft VS

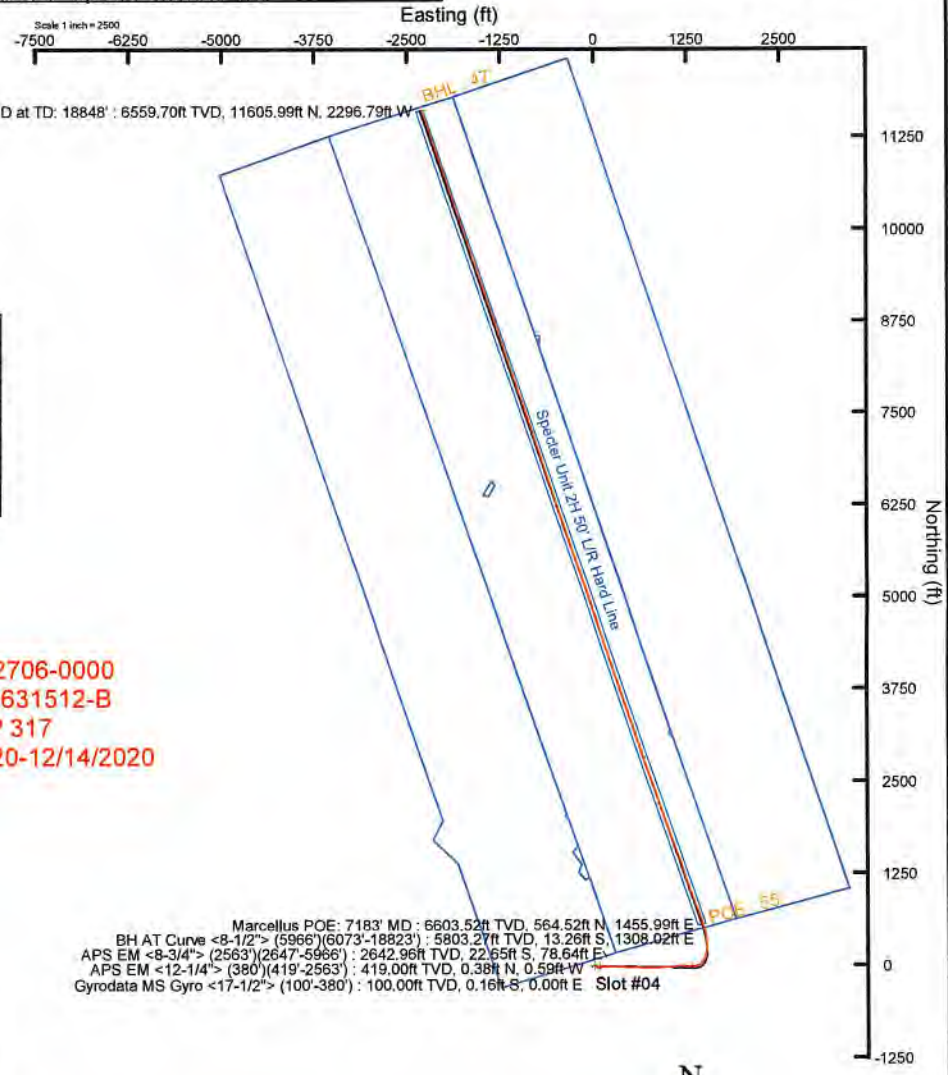
API: 47-095-02706-0000
 BH Job #: 110631512-B
 Rig: H&P 317
 Duration: 12/8/2020-12/14/2020

APS EM <8-3/4"> (2563')(2647'-5966') : 1.86° Inc, 2647.00ft MD, 2642.96ft TVD, -46.82ft VS

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #04	Specter Unit 2H	Specter Unit 2H AWB	Specter Unit 2H AWP Proj: 18848'
Slot #04	Specter Unit 2H	Specter Unit 2H PWB	Specter Unit 2H PWP Rev-B.0

BH AT Curve <8-1/2"> (5966')(6073'-18823') : 19.25° Inc, 6073.00ft MD, 5803.27ft TVD, -434.73ft VS

Marcellus POE: 7183' MD : 76.45° Inc, 7183.00ft MD, 6603.52ft TVD, 64.37ft VS



Marcellus POE: 7183' MD : 6603.52ft TVD, 564.52ft N, 1455.99ft E
 BH AT Curve <8-1/2"> (5966')(6073'-18823') : 5803.27ft TVD, 13.26ft S, 1308.02ft E
 APS EM <8-3/4"> (2563')(2647'-5966') : 2642.96ft TVD, 22.65ft S, 78.64ft E
 APS EM <12-1/4"> (380')(419'-2563') : 419.00ft TVD, 0.38ft N, 0.59ft W
 Gyrodata MS Gyro <17-1/2"> (100'-380') : 100.00ft TVD, 0.16ft S, 0.00ft E Slot #04



User specified (HDGM) Dip: 66.46° Field: 51784 nT
 Magnetic North is 7.57 degrees West of True North (at 07/Decr/2020)
 Grid North is 0.11 degrees East of True North
 To correct azimuth from True to Grid subtract 0.11 degrees
 To correct azimuth from Magnetic to Grid subtract 7.68 degrees



Actual Wellpath Report

Specter Unit 2H AWP Proj: 18848'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Specter Unit 2H
Field	Tyler	API	47-095-02706-0000
Facility	Margery Pad	Wellbore	Specter Unit 2H AWB
Slot	Slot #04		

REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Edsaryar
Scale	0.999603	Report Generated	17/Dec/2020 at 10:27
Convergence at slot	0.11° 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	-15.23	-25.83	1688444.93	14350300.93	39°31'1.9950"N	80°49'46.9180"W
Facility Reference Pt			1688470.75	14350316.15	39°31'2.1450"N	80°49'46.5880"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	1066.50ft
Horizontal Reference Pt	Slot	H&P 317 (RKB) to Mean Sea Level	1066.50ft
Vertical Reference Pt	H&P 317 (RKB)	H&P 317 (RKB) to Ground Level at Slot (Slot #04)	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	341.17°



Actual Wellpath Report

Specter Unit 2H AWP Proj: 18848'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Specter Unit 2H
Field	Tyler	API	47-095-02706-0000
Facility	Margery Pad	Wellbore	Specter Unit 2H AWB
Slot	Slot #04		

WELLPATH DATA (205 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]
0.00†	0.000	178.860	0.00	0.00	0.00	0.00	1688444.93	14350300.93	39°31'1.9950"N	80°49'46.9180"W	0.00	0.000	0.00	0.00	0.00
25.50	0.000	178.860	25.50	0.00	0.00	0.00	1688444.93	14350300.93	39°31'1.9950"N	80°49'46.9180"W	0.00	0.000	0.00	0.00	0.00
100.00	0.250	178.860	100.00	-0.15	-0.16	0.00	1688444.93	14350300.77	39°31'1.9934"N	80°49'46.9180"W	0.16	178.860	0.34	0.34	0.00
200.00	0.110	214.800	200.00	-0.42	-0.46	-0.05	1688444.88	14350300.47	39°31'1.9905"N	80°49'46.9186"W	0.46	185.867	0.17	-0.14	35.94
300.00	0.290	328.810	300.00	-0.23	-0.32	-0.23	1688444.70	14350300.61	39°31'1.9919"N	80°49'46.9210"W	0.40	215.915	0.35	0.18	114.01
380.00	0.400	333.690	380.00	0.25	0.10	-0.46	1688444.47	14350301.03	39°31'1.9961"N	80°49'46.9239"W	0.47	282.427	0.14	0.14	6.10
419.00	0.500	335.310	419.00	0.55	0.38	-0.59	1688444.34	14350301.31	39°31'1.9988"N	80°49'46.9256"W	0.70	302.537	0.26	0.26	4.15
510.00	1.340	77.130	509.99	0.83	0.98	0.28	1688445.21	14350301.91	39°31'2.0047"N	80°49'46.9144"W	1.02	15.918	1.67	0.92	111.89
602.00	2.670	104.580	601.93	-0.46	0.68	3.40	1688448.33	14350301.61	39°31'2.0017"N	80°49'46.8746"W	3.47	78.753	1.74	1.45	29.84
690.00	4.450	123.620	689.76	-4.29	-1.73	8.23	1688453.15	14350299.20	39°31'1.9778"N	80°49'46.8131"W	8.41	101.874	2.40	2.02	21.64
781.00	5.070	126.510	780.45	-10.40	-6.08	14.40	1688459.32	14350294.86	39°31'1.9347"N	80°49'46.7344"W	15.63	112.881	0.73	0.68	3.18
871.00	5.160	126.520	870.09	-17.00	-10.85	20.85	1688465.77	14350290.08	39°31'1.8874"N	80°49'46.6522"W	23.50	117.497	0.10	0.10	0.01
962.00	5.300	124.580	960.71	-23.74	-15.67	27.60	1688472.52	14350285.26	39°31'1.8396"N	80°49'46.5662"W	31.74	119.591	0.25	0.15	-2.13
1052.00	4.900	126.100	1050.35	-30.22	-20.30	34.13	1688479.04	14350280.64	39°31'1.7938"N	80°49'46.4830"W	39.71	120.742	0.47	-0.44	1.69
1147.00	4.890	124.420	1145.01	-36.79	-24.98	40.74	1688485.66	14350275.96	39°31'1.7474"N	80°49'46.3987"W	47.79	121.508	0.15	-0.01	-1.77
1242.00	4.980	121.170	1239.65	-43.19	-29.40	47.61	1688492.52	14350271.54	39°31'1.7036"N	80°49'46.3112"W	55.96	121.693	0.31	0.09	-3.42
1336.00	4.820	118.930	1333.31	-49.24	-33.42	54.56	1688499.47	14350267.52	39°31'1.6637"N	80°49'46.2226"W	63.98	121.489	0.27	-0.17	-2.38
1431.00	4.430	118.310	1428.00	-54.89	-37.09	61.28	1688506.19	14350263.85	39°31'1.6273"N	80°49'46.1369"W	71.63	121.184	0.41	-0.41	-0.65
1526.00	4.360	118.190	1522.72	-60.22	-40.54	67.70	1688512.60	14350260.41	39°31'1.5931"N	80°49'46.0552"W	78.91	120.914	0.07	-0.07	-0.13
1621.00	3.030	104.590	1617.52	-64.24	-42.88	73.31	1688518.21	14350258.07	39°31'1.5699"N	80°49'45.9836"W	84.93	120.322	1.67	-1.40	-14.32
1716.00	2.330	89.520	1712.42	-66.23	-43.49	77.67	1688522.57	14350257.46	39°31'1.5637"N	80°49'45.9280"W	89.02	119.247	1.04	-0.74	-15.86
1811.00	2.250	85.640	1807.34	-67.31	-43.33	81.46	1688526.36	14350257.61	39°31'1.5652"N	80°49'45.8796"W	92.27	118.011	0.18	-0.08	-4.08
1905.00	1.980	35.740	1901.29	-66.83	-41.88	84.25	1688529.15	14350259.07	39°31'1.5796"N	80°49'45.8440"W	94.08	116.429	1.92	-0.29	-53.09
2000.00	2.950	3.430	1996.20	-63.61	-38.10	85.35	1688530.25	14350262.84	39°31'1.6169"N	80°49'45.8298"W	93.47	114.056	1.75	1.02	-34.01
2095.00	1.720	346.710	2091.12	-59.93	-34.28	85.17	1688530.07	14350266.67	39°31'1.6547"N	80°49'45.8320"W	91.81	111.921	1.47	-1.29	-17.60
2190.00	1.070	331.000	2186.10	-57.64	-32.11	84.41	1688529.31	14350268.83	39°31'1.6761"N	80°49'45.8417"W	90.32	110.827	0.79	-0.68	-16.54
2284.00	1.300	328.340	2280.08	-55.74	-30.44	83.43	1688528.33	14350270.51	39°31'1.6927"N	80°49'45.8542"W	88.81	110.043	0.25	0.24	-2.83
2379.00	1.490	331.120	2375.05	-53.47	-28.44	82.27	1688527.16	14350272.50	39°31'1.7124"N	80°49'45.8690"W	87.04	109.069	0.21	0.20	2.93
2474.00	1.240	325.110	2470.02	-51.26	-26.51	81.08	1688525.98	14350274.43	39°31'1.7315"N	80°49'45.8840"W	85.31	108.107	0.30	-0.26	-6.33
2563.00	1.490	326.740	2558.99	-49.22	-24.76	79.90	1688524.80	14350276.18	39°31'1.7489"N	80°49'45.8991"W	83.64	107.215	0.28	0.28	1.83



Actual Wellpath Report

Specter Unit 2H AWP Proj: 18848'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Specter Unit 2H
Field	Tyler	API	47-095-02706-0000
Facility	Margery Pad	Wellbore	Specter Unit 2H AWB
Slot	Slot #04		

WELLPATH DATA (205 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]
2647.00	1.860	331.000	2642.96	-46.82	-22.65	78.64	1688523.54	14350278.29	39°31'1.7697"N	80°49'45.9151"W	81.83	106.068	0.46	0.44	5.07
2741.00	0.450	59.580	2736.94	-45.24	-21.13	78.22	1688523.12	14350279.81	39°31'1.7848"N	80°49'45.9205"W	81.02	105.117	2.02	-1.50	94.23
2835.00	2.990	87.840	2830.89	-45.87	-20.85	80.98	1688525.88	14350280.09	39°31'1.7875"N	80°49'45.8851"W	83.63	104.437	2.77	2.70	30.06
2932.00	5.030	80.440	2927.65	-47.28	-20.05	87.71	1688532.60	14350280.89	39°31'1.7953"N	80°49'45.7994"W	89.97	102.875	2.17	2.10	-7.63
3027.00	6.680	76.940	3022.15	-48.51	-18.11	97.20	1688542.09	14350282.83	39°31'1.8143"N	80°49'45.6782"W	98.87	100.553	1.78	1.74	-3.68
3121.00	8.820	82.520	3115.29	-50.48	-15.93	109.67	1688554.56	14350285.00	39°31'1.8355"N	80°49'45.5190"W	110.82	98.266	2.41	2.28	5.94
3216.00	12.270	86.490	3208.67	-54.58	-14.37	126.97	1688571.85	14350286.57	39°31'1.8507"N	80°49'45.2982"W	127.78	96.456	3.71	3.63	4.18
3311.00	13.320	84.550	3301.31	-59.78	-12.71	147.94	1688592.81	14350288.23	39°31'1.8667"N	80°49'45.0306"W	148.49	94.910	1.19	1.11	-2.04
3406.00	16.750	90.160	3393.05	-66.77	-11.71	172.53	1688617.40	14350289.23	39°31'1.8761"N	80°49'44.7168"W	172.93	93.882	3.92	3.61	5.91
3501.00	21.500	92.180	3482.78	-77.47	-12.41	203.64	1688648.49	14350288.53	39°31'1.8686"N	80°49'44.3199"W	204.02	93.487	5.05	5.00	2.13
3595.00	23.310	91.290	3569.68	-90.05	-13.48	239.45	1688684.28	14350287.45	39°31'1.8573"N	80°49'43.8630"W	239.83	93.223	1.96	1.93	-0.95
3690.00	24.760	89.630	3656.45	-102.81	-13.78	278.13	1688722.95	14350287.16	39°31'1.8537"N	80°49'43.3694"W	278.48	92.836	1.68	1.53	-1.75
3785.00	26.320	94.180	3742.17	-117.35	-15.18	319.04	1688763.84	14350285.75	39°31'1.8390"N	80°49'42.8475"W	319.40	92.725	2.64	1.64	4.79
3880.00	29.980	93.850	3825.92	-134.74	-18.31	363.74	1688808.53	14350282.62	39°31'1.8072"N	80°49'42.2771"W	364.20	92.882	3.86	3.85	-0.35
3974.00	30.260	96.970	3907.23	-154.10	-22.77	410.69	1688855.45	14350278.17	39°31'1.7623"N	80°49'41.6782"W	411.32	93.173	1.69	0.30	3.32
4069.00	27.920	93.460	3990.25	-172.96	-27.01	456.66	1688901.40	14350273.93	39°31'1.7195"N	80°49'41.0918"W	457.46	93.385	3.05	-2.46	-3.69
4164.00	26.140	87.820	4074.88	-187.39	-27.56	499.78	1688944.51	14350273.38	39°31'1.7133"N	80°49'40.5415"W	500.54	93.156	3.28	-1.87	-5.94
4259.00	25.770	90.850	4160.30	-200.35	-27.07	541.34	1688986.06	14350273.87	39°31'1.7173"N	80°49'40.0112"W	542.02	92.863	1.45	-0.39	3.19
4354.00	26.600	90.860	4245.55	-214.47	-27.70	583.26	1689027.96	14350273.25	39°31'1.7103"N	80°49'39.4764"W	583.92	92.719	0.87	0.87	0.01
4449.00	27.340	94.130	4330.22	-230.14	-29.59	626.29	1689070.97	14350271.36	39°31'1.6909"N	80°49'38.9274"W	626.98	92.705	1.74	0.78	3.44
4544.00	24.890	90.260	4415.53	-245.20	-31.25	668.05	1689112.71	14350269.69	39°31'1.6736"N	80°49'38.3946"W	668.78	92.678	3.14	-2.58	-4.07
4638.00	25.090	88.100	4500.73	-257.47	-30.68	707.75	1689152.39	14350270.26	39°31'1.6785"N	80°49'37.8880"W	708.41	92.482	0.99	0.21	-2.30
4733.00	25.210	88.730	4586.72	-269.44	-29.56	748.10	1689192.74	14350271.38	39°31'1.6888"N	80°49'37.3730"W	748.69	92.263	0.31	0.13	0.66
4828.00	25.410	89.430	4672.60	-281.93	-28.91	788.71	1689233.33	14350272.03	39°31'1.6945"N	80°49'36.8548"W	789.24	92.099	0.38	0.21	0.74
4923.00	27.240	91.480	4757.75	-295.86	-29.27	830.83	1689275.43	14350271.67	39°31'1.6901"N	80°49'36.3174"W	831.35	92.018	2.15	1.93	2.16
5018.00	23.800	87.070	4843.47	-308.67	-28.85	871.73	1689316.31	14350272.09	39°31'1.6935"N	80°49'35.7956"W	872.20	91.896	4.13	-3.62	-4.64
5113.00	23.810	87.660	4930.39	-319.36	-27.09	910.03	1689354.60	14350273.85	39°31'1.7102"N	80°49'35.3068"W	910.43	91.705	0.25	0.01	0.62
5208.00	25.110	88.510	5016.86	-330.81	-25.78	949.34	1689393.89	14350275.16	39°31'1.7223"N	80°49'34.8052"W	949.69	91.556	1.42	1.37	0.89
5303.00	26.550	88.080	5102.37	-343.00	-24.54	990.71	1689435.25	14350276.39	39°31'1.7337"N	80°49'34.2772"W	991.02	91.419	1.53	1.52	-0.45
5397.00	25.710	85.570	5186.77	-354.18	-22.27	1032.04	1689476.56	14350278.67	39°31'1.7555"N	80°49'33.7498"W	1032.28	91.236	1.48	-0.89	-2.67



Actual Wellpath Report

Specter Unit 2H AWP Proj: 18848'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Specter Unit 2H
Field	Tyler	API	47-095-02706-0000
Facility	Margery Pad	Wellbore	Specter Unit 2H AWB
Slot	Slot #04		

WELLPATH DATA (205 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)	
5492.00	25.210	81.990	5272.54	-363.10	-17.85	1072.62	1689517.12	14350283.08	39°31'1.7983"N	80°49'33.2319"W	1072.77	90.954	1.70	-0.53	-3.77	
5587.00	24.840	84.950	5358.63	-371.65	-13.28	1112.54	1689557.02	14350287.66	39°31'1.8428"N	80°49'32.7225"W	1112.61	90.684	1.37	-0.39	3.12	
5682.00	24.690	88.390	5444.90	-382.28	-10.96	1152.25	1689596.72	14350289.97	39°31'1.8649"N	80°49'32.2157"W	1152.30	90.545	1.52	-0.16	3.62	
5777.00	24.920	92.210	5531.14	-395.34	-11.18	1192.08	1689636.54	14350289.76	39°31'1.8620"N	80°49'31.7075"W	1192.14	90.537	1.70	0.24	4.02	
5871.00	24.870	94.900	5616.41	-410.40	-13.63	1231.57	1689676.01	14350287.30	39°31'1.8370"N	80°49'31.2037"W	1231.64	90.634	1.21	-0.05	2.86	
5966.00	22.670	87.570	5703.36	-423.62	-14.56	1269.77	1689714.20	14350286.37	39°31'1.8271"N	80°49'30.7162"W	1269.86	90.657	3.87	-2.32	-7.72	
6073.00	19.250	88.610	5803.27	-434.73	-13.26	1308.02	1689752.43	14350287.68	39°31'1.8392"N	80°49'30.2281"W	1308.09	90.581	3.21	-3.20	0.97	
6168.00	23.920	89.650	5891.58	-445.53	-12.76	1342.96	1689787.35	14350288.17	39°31'1.8435"N	80°49'29.7824"W	1343.02	90.544	4.93	4.92	1.09	
6263.00	26.710	73.790	5977.55	-452.62	-6.68	1382.77	1689827.15	14350294.26	39°31'1.9028"N	80°49'29.2742"W	1382.79	90.277	7.69	2.94	-16.69	
6357.00	26.040	52.050	6061.96	-446.82	11.95	1419.41	1689863.77	14350312.88	39°31'2.0863"N	80°49'28.8062"W	1419.46	89.517	10.25	-0.71	-23.13	
6452.00	27.980	38.690	6146.67	-428.00	42.20	1449.82	1689894.17	14350343.12	39°31'2.3846"N	80°49'28.4175"W	1450.43	88.333	6.69	2.04	-14.06	
6547.00	32.610	28.810	6228.73	-398.75	82.07	1476.11	1689920.45	14350382.97	39°31'2.7782"N	80°49'28.0809"W	1478.39	86.818	7.15	4.87	-10.40	
6642.00	36.680	15.120	6306.99	-357.89	131.99	1495.89	1689940.22	14350432.87	39°31'3.2712"N	80°49'27.8274"W	1501.70	84.957	9.22	4.28	-14.41	
6737.00	42.180	5.260	6380.41	-305.14	191.25	1506.23	1689950.56	14350492.10	39°31'3.8566"N	80°49'27.6939"W	1518.33	82.764	8.76	5.79	-10.38	
6832.00	50.610	359.480	6445.90	-241.03	259.87	1508.83	1689953.16	14350560.70	39°31'4.5348"N	80°49'27.6591"W	1531.05	80.228	9.90	8.87	-6.08	
6927.00	57.500	354.590	6501.66	-167.09	336.59	1504.71	1689949.04	14350637.38	39°31'5.2931"N	80°49'27.7097"W	1541.90	77.391	8.36	7.25	-5.15	
7022.00	63.530	349.760	6548.41	-85.97	418.42	1493.36	1689937.69	14350719.19	39°31'6.1021"N	80°49'27.8525"W	1550.87	74.348	7.74	6.35	-5.08	
7069.00	66.860	346.640	6568.13	-43.64	460.17	1484.62	1689928.96	14350760.92	39°31'6.5149"N	80°49'27.9629"W	1554.31	72.779	9.30	7.09	-6.64	
7116.00	70.910	344.090	6585.06	0.08	502.58	1473.54	1689917.88	14350803.31	39°31'6.9342"N	80°49'28.1034"W	1556.89	71.167	9.99	8.62	-5.43	
7160.00	75.200	344.260	6597.88	42.10	543.06	1462.06	1689906.41	14350843.77	39°31'7.3345"N	80°49'28.2488"W	1559.66	69.623	9.76	9.75	0.39	
7211.00	77.980	344.010	6609.71	91.64	590.78	1448.50	1689892.85	14350891.47	39°31'7.8064"N	80°49'28.4206"W	1564.34	67.812	5.47	5.45	-0.49	
7306.00	85.220	339.720	6623.59	185.53	680.00	1419.24	1689863.61	14350980.66	39°31'8.6887"N	80°49'28.7917"W	1573.74	64.400	8.83	7.62	-4.52	
7401.00	89.970	337.490	6627.57	280.32	768.34	1384.63	1689829.01	14351068.96	39°31'9.5625"N	80°49'29.2312"W	1583.52	60.974	5.52	5.00	-2.35	
7496.00	89.750	339.640	6627.80	375.21	856.76	1349.91	1689794.30	14351157.35	39°31'10.4371"N	80°49'29.6720"W	1598.85	57.597	2.27	-0.23	2.26	
7591.00	89.880	340.770	6628.11	470.20	946.15	1317.74	1689762.15	14351246.70	39°31'11.3212"N	80°49'30.0803"W	1622.23	54.321	1.20	0.14	1.19	
7686.00	90.430	341.420	6627.85	565.19	1036.02	1286.96	1689731.38	14351336.54	39°31'12.2100"N	80°49'30.4709"W	1652.16	51.165	0.90	0.58	0.68	
7780.00	90.650	342.150	6626.97	659.18	1125.31	1257.58	1689702.01	14351425.79	39°31'13.0930"N	80°49'30.8436"W	1687.55	48.177	0.81	0.23	0.78	
7875.00	90.800	341.350	6625.77	754.17	1215.52	1227.83	1689672.27	14351515.97	39°31'13.9852"N	80°49'31.2209"W	1727.73	45.289	0.86	0.16	-0.84	
7970.00	90.490	340.950	6624.70	849.16	1305.42	1197.14	1689641.59	14351605.83	39°31'14.8743"N	80°49'31.6103"W	1771.23	42.523	0.53	-0.33	-0.42	
8065.00	90.580	340.790	6623.81	944.16	1395.17	1166.01	1689610.47	14351695.54	39°31'15.7619"N	80°49'32.0054"W	1818.26	39.887	0.19	0.09	-0.17	



Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Specter Unit 2H
Field	Tyler	API	47-095-02706-0000
Facility	Margery Pad	Wellbore	Specter Unit 2H AWB
Slot	Slot #04		

WELLPATH DATA (205 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]	
8159.00	90.400	340.980	6623.01	1038.15	1483.98	1135.23	1689579.71	14351784.32	39°31'16.6402"N	80°49'32.3960"W	1868.41	37.416	0.28	-0.19	0.20	
8254.00	90.710	339.960	6622.09	1133.14	1573.51	1103.47	1689547.96	14351873.81	39°31'17.5257"N	80°49'32.7990"W	1921.87	35.041	1.12	0.33	-1.07	
8349.00	90.520	340.130	6621.07	1228.12	1662.80	1071.05	1689515.56	14351963.07	39°31'18.4088"N	80°49'33.2105"W	1977.90	32.787	0.27	-0.20	0.18	
8444.00	90.920	340.260	6619.87	1323.10	1752.18	1038.87	1689483.38	14352052.41	39°31'19.2927"N	80°49'33.6190"W	2037.00	30.664	0.44	0.42	0.14	
8539.00	90.680	340.810	6618.55	1418.08	1841.74	1007.21	1689451.74	14352141.93	39°31'20.1785"N	80°49'34.0207"W	2099.16	28.673	0.63	-0.25	0.58	
8634.00	90.520	340.980	6617.55	1513.07	1931.50	976.12	1689420.66	14352231.66	39°31'21.0662"N	80°49'34.4152"W	2164.14	26.811	0.25	-0.17	0.18	
8729.00	90.460	340.840	6616.74	1608.07	2021.27	945.05	1689389.61	14352321.40	39°31'21.9541"N	80°49'34.8095"W	2231.29	25.059	0.16	-0.06	-0.15	
8824.00	91.050	340.520	6615.49	1703.06	2110.92	913.63	1689358.19	14352411.00	39°31'22.8406"N	80°49'35.2083"W	2300.15	23.403	0.71	0.62	-0.34	
8918.00	91.660	342.350	6613.26	1797.03	2200.00	883.71	1689328.28	14352500.05	39°31'23.7216"N	80°49'35.5879"W	2370.85	21.885	2.05	0.65	1.95	
9013.00	90.680	341.550	6611.32	1891.99	2290.30	854.28	1689298.87	14352590.31	39°31'24.6147"N	80°49'35.9612"W	2444.44	20.455	1.33	-1.03	-0.84	
9108.00	90.680	341.110	6610.20	1986.99	2380.29	823.87	1689268.47	14352680.27	39°31'25.5047"N	80°49'36.3471"W	2518.84	19.092	0.46	0.00	-0.46	
9203.00	89.720	340.590	6609.86	2081.98	2470.03	792.71	1689237.32	14352769.98	39°31'26.3922"N	80°49'36.7426"W	2594.12	17.793	1.15	-1.01	-0.55	
9298.00	90.890	339.630	6609.36	2176.96	2559.36	760.39	1689205.01	14352859.27	39°31'27.2757"N	80°49'37.1528"W	2669.93	16.547	1.59	1.23	-1.01	
9393.00	90.090	340.530	6608.55	2271.94	2648.67	728.02	1689172.66	14352948.55	39°31'28.1590"N	80°49'37.5636"W	2746.91	15.369	1.27	-0.84	0.95	
9488.00	90.920	340.650	6607.71	2366.93	2738.27	696.45	1689141.10	14353038.11	39°31'29.0451"N	80°49'37.9643"W	2825.45	14.270	0.88	0.87	0.13	
9582.00	90.990	341.210	6606.14	2460.92	2827.10	665.75	1689110.41	14353126.90	39°31'29.9236"N	80°49'38.3540"W	2904.43	13.251	0.60	0.07	0.60	
9677.00	90.740	340.860	6604.71	2555.91	2916.93	634.87	1689079.55	14353216.70	39°31'30.8120"N	80°49'38.7457"W	2985.22	12.279	0.45	-0.26	-0.37	
9772.00	91.350	342.270	6602.98	2650.89	3007.04	604.84	1689049.53	14353306.77	39°31'31.7032"N	80°49'39.1268"W	3067.27	11.373	1.62	0.64	1.48	
9867.00	92.930	340.520	6599.43	2745.81	3097.01	574.55	1689019.25	14353396.70	39°31'32.5929"N	80°49'39.5111"W	3149.85	10.510	2.48	1.66	-1.84	
9962.00	90.060	341.490	6596.95	2840.77	3186.79	543.65	1688988.36	14353486.45	39°31'33.4809"N	80°49'39.9033"W	3232.83	9.681	3.19	-3.02	1.02	
10057.00	89.720	341.240	6597.13	2935.77	3276.81	513.29	1688958.02	14353576.43	39°31'34.3711"N	80°49'40.2885"W	3316.77	8.903	0.44	-0.36	-0.26	
10151.00	88.490	341.560	6598.60	3029.75	3365.89	483.31	1688928.05	14353665.47	39°31'35.2521"N	80°49'40.6689"W	3400.41	8.171	1.35	-1.31	0.34	
10246.00	88.520	341.250	6601.08	3124.72	3455.90	453.03	1688897.78	14353755.45	39°31'36.1422"N	80°49'41.0532"W	3485.47	7.468	0.33	0.03	-0.33	
10341.00	88.710	341.560	6603.38	3219.69	3545.91	422.75	1688867.51	14353845.43	39°31'37.0324"N	80°49'41.4375"W	3571.02	6.799	0.38	0.20	0.33	
10436.00	88.400	341.390	6605.77	3314.66	3635.96	392.57	1688837.35	14353935.44	39°31'37.9230"N	80°49'41.8203"W	3657.09	6.162	0.37	-0.33	-0.18	
10531.00	90.580	341.160	6606.62	3409.65	3725.92	362.08	1688806.86	14354025.37	39°31'38.8127"N	80°49'42.2073"W	3743.48	5.550	2.31	2.29	-0.24	
10626.00	89.290	340.340	6606.72	3504.64	3815.61	330.76	1688775.56	14354115.02	39°31'39.6997"N	80°49'42.6048"W	3829.92	4.954	1.61	-1.36	-0.86	
10720.00	89.850	340.700	6607.43	3598.63	3904.23	299.41	1688744.22	14354203.60	39°31'40.5761"N	80°49'43.0027"W	3915.69	4.385	0.71	0.60	0.38	
10815.00	91.110	341.530	6606.63	3693.63	3994.11	268.67	1688713.49	14354293.44	39°31'41.4650"N	80°49'43.3929"W	4003.13	3.848	1.59	1.33	0.87	
10910.00	90.120	341.320	6605.61	3788.62	4084.15	238.41	1688683.24	14354383.45	39°31'42.3555"N	80°49'43.7769"W	4091.10	3.341	1.07	-1.04	-0.22	



Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Specter Unit 2H
Field	Tyler	API	47-095-02706-0000
Facility	Margery Pad	Wellbore	Specter Unit 2H AWB
Slot	Slot #04		

WELLPATH DATA (205 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]	
11004.00	89.940	341.250	6605.56	3882.62	4173.18	208.25	1688653.09	14354472.44	39°31'43.2360"N	80°49'44.1596"W	4178.37	2.857	0.21	-0.19	-0.07	
11099.00	90.490	340.700	6605.21	3977.62	4262.99	177.28	1688622.14	14354562.22	39°31'44.1242"N	80°49'44.5527"W	4266.68	2.381	0.82	0.58	-0.58	
11194.00	89.910	341.080	6604.88	4072.62	4352.75	146.18	1688591.05	14354651.95	39°31'45.0119"N	80°49'44.9474"W	4355.21	1.923	0.73	-0.61	0.40	
11289.00	91.390	341.460	6603.80	4167.61	4442.72	115.67	1688560.56	14354741.87	39°31'45.9016"N	80°49'45.3345"W	4444.22	1.491	1.61	1.56	0.40	
11384.00	89.820	340.840	6602.80	4262.60	4532.61	84.98	1688529.88	14354831.73	39°31'46.7906"N	80°49'45.7240"W	4533.41	1.074	1.78	-1.65	-0.65	
11478.00	90.030	340.740	6602.92	4356.60	4621.38	54.05	1688498.96	14354920.46	39°31'47.6685"N	80°49'46.1166"W	4621.69	0.670	0.25	0.22	-0.11	
11573.00	90.680	341.440	6602.33	4451.59	4711.25	23.27	1688468.19	14355010.30	39°31'48.5573"N	80°49'46.5073"W	4711.30	0.283	1.01	0.68	0.74	
11668.00	90.250	340.260	6601.56	4546.59	4800.99	-7.90	1688437.04	14355100.00	39°31'49.4448"N	80°49'46.9029"W	4800.99	359.906	1.32	-0.45	-1.24	
11763.00	90.280	341.630	6601.12	4641.58	4890.78	-38.91	1688406.04	14355189.75	39°31'50.3328"N	80°49'47.2965"W	4890.93	359.544	1.44	0.03	1.44	
11858.00	90.740	341.970	6600.27	4736.57	4981.02	-68.58	1688376.38	14355279.96	39°31'51.2253"N	80°49'47.6730"W	4981.49	359.211	0.60	0.48	0.36	
11952.00	91.880	342.030	6598.13	4830.54	5070.39	-97.62	1688347.35	14355369.30	39°31'52.1091"N	80°49'48.0415"W	5071.33	358.897	1.21	1.21	0.06	
12047.00	89.570	341.680	6596.92	4925.52	5160.66	-127.20	1688317.78	14355459.53	39°31'53.0017"N	80°49'48.4168"W	5162.22	358.588	2.46	-2.43	-0.37	
12142.00	90.310	340.910	6597.02	5020.51	5250.64	-157.67	1688287.33	14355549.47	39°31'53.8916"N	80°49'48.8035"W	5253.00	358.280	1.12	0.78	-0.81	
12237.00	91.230	341.120	6595.75	5115.50	5340.46	-188.57	1688256.44	14355639.26	39°31'54.7799"N	80°49'49.1957"W	5343.79	357.978	0.99	0.97	0.22	
12332.00	90.800	341.770	6594.06	5210.49	5430.51	-218.79	1688226.22	14355729.27	39°31'55.6705"N	80°49'49.5793"W	5434.91	357.693	0.82	-0.45	0.68	
12427.00	90.680	341.290	6592.84	5305.48	5520.61	-248.89	1688196.14	14355819.33	39°31'56.5615"N	80°49'49.9612"W	5526.21	357.419	0.52	-0.13	-0.51	
12521.00	90.950	341.640	6591.50	5399.47	5609.72	-278.77	1688166.28	14355908.41	39°31'57.4428"N	80°49'50.3404"W	5616.64	357.155	0.47	0.29	0.37	
12616.00	90.550	341.870	6590.26	5494.45	5699.94	-308.51	1688136.55	14355998.59	39°31'58.3350"N	80°49'50.7178"W	5708.28	356.902	0.49	-0.42	0.24	
12711.00	90.090	341.070	6589.73	5589.45	5790.01	-338.70	1688106.37	14356088.63	39°31'59.2258"N	80°49'51.1009"W	5799.91	356.652	0.97	-0.48	-0.84	
12806.00	90.550	340.970	6589.19	5684.45	5879.84	-369.59	1688075.48	14356178.43	39°32'0.1142"N	80°49'51.4931"W	5891.45	356.403	0.50	0.48	-0.11	
12901.00	90.180	341.330	6588.59	5779.45	5969.75	-400.29	1688044.80	14356268.29	39°32'1.0033"N	80°49'51.8827"W	5983.15	356.164	0.54	-0.39	0.38	
12996.00	90.400	341.000	6588.11	5874.44	6059.66	-430.96	1688014.15	14356358.17	39°32'1.8925"N	80°49'52.2720"W	6074.96	355.932	0.42	0.23	-0.35	
13091.00	90.030	342.550	6587.75	5969.43	6149.89	-460.67	1687984.45	14356448.36	39°32'2.7848"N	80°49'52.6490"W	6167.12	355.716	1.68	-0.39	1.63	
13185.00	89.910	341.470	6587.80	6063.42	6239.29	-489.70	1687955.43	14356537.73	39°32'3.6689"N	80°49'53.0174"W	6258.48	355.512	1.16	-0.13	-1.15	
13280.00	89.880	340.890	6587.98	6158.42	6329.21	-520.34	1687924.79	14356627.62	39°32'4.5582"N	80°49'53.4064"W	6350.57	355.300	0.61	-0.03	-0.61	
13375.00	90.620	341.820	6587.56	6253.42	6419.22	-550.71	1687894.44	14356717.59	39°32'5.4484"N	80°49'53.7918"W	6442.80	355.097	1.25	0.78	0.98	
13470.00	89.940	341.830	6587.10	6348.41	6509.48	-580.35	1687864.81	14356807.81	39°32'6.3410"N	80°49'54.1679"W	6535.30	354.905	0.72	-0.72	0.01	
13565.00	90.220	342.260	6586.96	6443.40	6599.86	-609.63	1687835.54	14356898.15	39°32'7.2347"N	80°49'54.5395"W	6627.95	354.723	0.54	0.29	0.45	
13659.00	90.370	341.200	6586.48	6537.39	6689.12	-639.10	1687806.09	14356987.37	39°32'8.1174"N	80°49'54.9135"W	6719.58	354.542	1.14	0.16	-1.13	
13754.00	90.550	341.710	6585.72	6632.39	6779.18	-669.31	1687775.88	14357077.40	39°32'9.0081"N	80°49'55.2970"W	6812.14	354.361	0.57	0.19	0.54	



Actual Wellpath Report

Specter Unit 2H AWP Proj: 18848'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Specter Unit 2H
Field	Tyler	API	47-095-02706-0000
Facility	Margery Pad	Wellbore	Specter Unit 2H AWB
Slot	Slot #04		

WELLPATH DATA (205 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]	
13849.00	90.150	341.750	6585.14	6727.38	6869.39	-699.10	1687746.11	14357167.57	39°32'9.9002"N	80°49'55.6749"W	6904.87	354.189	0.42	-0.42	0.04	
13944.00	90.490	341.280	6584.61	6822.38	6959.49	-729.21	1687716.01	14357257.64	39°32'10.7912"N	80°49'56.0572"W	6997.58	354.018	0.61	0.36	-0.49	
14039.00	90.280	341.680	6583.97	6917.37	7049.56	-759.39	1687685.84	14357347.68	39°32'11.6821"N	80°49'56.4402"W	7090.35	353.852	0.48	-0.22	0.42	
14133.00	90.770	341.380	6583.11	7011.37	7138.72	-789.17	1687656.08	14357436.80	39°32'12.5637"N	80°49'56.8182"W	7182.20	353.692	0.61	0.52	-0.32	
14228.00	90.710	341.680	6581.88	7106.36	7228.82	-819.26	1687625.99	14357526.86	39°32'13.4548"N	80°49'57.2001"W	7275.09	353.534	0.32	-0.06	0.32	
14323.00	90.800	341.750	6580.63	7201.35	7319.01	-849.07	1687596.20	14357617.02	39°32'14.3467"N	80°49'57.5784"W	7368.10	353.383	0.12	0.09	0.07	
14418.00	90.520	341.020	6579.53	7296.34	7409.03	-879.39	1687565.89	14357707.01	39°32'15.2370"N	80°49'57.9633"W	7461.04	353.231	0.82	-0.29	-0.77	
14513.00	90.180	341.690	6578.95	7391.34	7499.05	-909.76	1687535.53	14357796.98	39°32'16.1272"N	80°49'58.3488"W	7554.03	353.083	0.79	-0.36	0.71	
14608.00	90.770	341.670	6578.17	7486.33	7589.23	-939.62	1687505.69	14357887.13	39°32'17.0190"N	80°49'58.7278"W	7647.17	352.942	0.62	0.62	-0.02	
14703.00	90.430	341.430	6577.17	7581.32	7679.34	-969.68	1687475.64	14357977.20	39°32'17.9102"N	80°49'59.1093"W	7740.32	352.803	0.44	-0.36	-0.25	
14798.00	90.710	340.980	6576.23	7676.32	7769.27	-1000.29	1687445.04	14358067.10	39°32'18.7995"N	80°49'59.4979"W	7833.40	352.664	0.56	0.29	-0.47	
14893.00	90.280	340.790	6575.41	7771.31	7859.03	-1031.40	1687413.95	14358156.82	39°32'19.6872"N	80°49'59.8928"W	7926.42	352.523	0.49	-0.45	-0.20	
14987.00	90.220	341.450	6575.00	7865.31	7947.97	-1061.81	1687383.54	14358245.72	39°32'20.5668"N	80°50'0.2789"W	8018.58	352.391	0.71	-0.06	0.70	
15082.00	90.520	341.400	6574.38	7960.31	8038.02	-1092.07	1687353.29	14358335.74	39°32'21.4573"N	80°50'0.6631"W	8111.87	352.263	0.32	0.32	-0.05	
15177.00	90.310	341.610	6573.69	8055.30	8128.11	-1122.21	1687323.17	14358425.79	39°32'22.3483"N	80°50'1.0456"W	8205.21	352.139	0.31	-0.22	0.22	
15272.00	90.310	341.430	6573.18	8150.30	8218.21	-1152.32	1687293.07	14358515.86	39°32'23.2393"N	80°50'1.4278"W	8298.60	352.018	0.19	0.00	-0.19	
15367.00	90.550	341.400	6572.47	8245.29	8308.25	-1182.60	1687262.80	14358605.86	39°32'24.1298"N	80°50'1.8121"W	8392.00	351.899	0.25	0.25	-0.03	
15462.00	90.460	341.630	6571.63	8340.29	8398.35	-1212.72	1687232.70	14358695.92	39°32'25.0208"N	80°50'2.1944"W	8485.45	351.783	0.26	-0.09	0.24	
15556.00	90.490	341.820	6570.85	8434.28	8487.60	-1242.19	1687203.23	14358785.14	39°32'25.9035"N	80°50'2.5686"W	8578.02	351.674	0.20	0.03	0.20	
15651.00	90.490	342.010	6570.04	8529.27	8577.91	-1271.68	1687173.76	14358875.41	39°32'26.7965"N	80°50'2.9429"W	8671.66	351.567	0.20	0.00	0.20	
15746.00	90.580	341.280	6569.15	8624.26	8668.07	-1301.60	1687143.85	14358965.54	39°32'27.6881"N	80°50'3.3226"W	8765.25	351.460	0.77	0.09	-0.77	
15841.00	90.620	341.370	6568.16	8719.26	8758.06	-1332.01	1687113.45	14359055.49	39°32'28.5781"N	80°50'3.7087"W	8858.78	351.352	0.10	0.04	0.09	
15936.00	90.280	340.820	6567.41	8814.25	8847.93	-1362.79	1687082.68	14359145.33	39°32'29.4669"N	80°50'4.0995"W	8952.27	351.244	0.68	-0.36	-0.58	
16030.00	90.460	340.870	6566.80	8908.25	8936.73	-1393.64	1687051.85	14359234.09	39°32'30.3450"N	80°50'4.4911"W	9044.74	351.136	0.20	0.19	0.05	
16125.00	90.120	341.390	6566.32	9003.25	9026.62	-1424.36	1687021.14	14359323.95	39°32'31.2340"N	80°50'4.8811"W	9138.31	351.033	0.65	-0.36	0.55	
16220.00	90.220	341.510	6566.04	9098.25	9116.68	-1454.58	1686990.93	14359413.97	39°32'32.1247"N	80°50'5.2648"W	9232.00	350.935	0.16	0.11	0.13	
16315.00	90.220	340.950	6565.67	9193.25	9206.63	-1485.15	1686960.37	14359503.88	39°32'33.0142"N	80°50'5.6529"W	9325.65	350.836	0.59	0.00	-0.59	
16410.00	90.090	341.660	6565.42	9288.24	9296.62	-1515.60	1686929.94	14359593.84	39°32'33.9041"N	80°50'6.0395"W	9419.35	350.741	0.76	-0.14	0.75	
16505.00	89.880	340.940	6565.44	9383.24	9386.60	-1546.06	1686899.49	14359683.78	39°32'34.7940"N	80°50'6.4261"W	9513.08	350.647	0.79	-0.22	-0.76	
16599.00	90.000	340.850	6565.54	9477.24	9475.42	-1576.82	1686868.74	14359772.57	39°32'35.6724"N	80°50'6.8168"W	9605.73	350.552	0.16	0.13	-0.10	



Actual Wellpath Report

Specter Unit 2H AWP Proj: 18848'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Specter Unit 2H
Field	Tyler	API	47-095-02706-0000
Facility	Margery Pad	Wellbore	Specter Unit 2H AWB
Slot	Slot #04		

WELLPATH DATA (205 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]
16694.00	90.150	340.830	6565.42	9572.24	9565.16	-1608.00	1686837.57	14359862.27	39°32'36.5599"N	80°50'7.2127"W	9699.38	350.457	0.16	0.16	-0.02
16789.00	89.820	341.650	6565.44	9667.24	9655.11	-1638.56	1686807.03	14359952.19	39°32'37.4495"N	80°50'7.6006"W	9793.17	350.368	0.93	-0.35	0.86
16884.00	89.880	341.420	6565.69	9762.24	9745.22	-1668.64	1686776.95	14360042.26	39°32'38.3406"N	80°50'7.9825"W	9887.05	350.284	0.25	0.06	-0.24
16979.00	89.880	341.260	6565.89	9857.24	9835.23	-1699.04	1686746.57	14360132.23	39°32'39.2307"N	80°50'8.3684"W	9980.91	350.199	0.17	0.00	-0.17
17073.00	90.000	341.380	6565.99	9951.24	9924.28	-1729.15	1686716.47	14360221.24	39°32'40.1113"N	80°50'8.7507"W	10073.79	350.116	0.18	0.13	0.13
17168.00	90.090	341.700	6565.91	10046.23	10014.39	-1759.23	1686686.40	14360311.32	39°32'41.0025"N	80°50'9.1325"W	10167.74	350.037	0.35	0.09	0.34
17263.00	89.880	341.560	6565.94	10141.23	10104.55	-1789.17	1686656.48	14360401.44	39°32'41.8941"N	80°50'9.5126"W	10261.73	349.959	0.27	-0.22	-0.15
17357.00	90.150	341.450	6565.91	10235.23	10193.69	-1818.99	1686626.67	14360490.55	39°32'42.7756"N	80°50'9.8912"W	10354.71	349.882	0.31	0.29	-0.12
17452.00	89.910	341.180	6565.86	10330.23	10283.69	-1849.42	1686596.25	14360580.51	39°32'43.6656"N	80°50'10.2776"W	10448.66	349.805	0.38	-0.25	-0.28
17547.00	90.150	341.690	6565.81	10425.23	10373.74	-1879.67	1686566.01	14360670.53	39°32'44.5562"N	80°50'10.6616"W	10542.66	349.730	0.59	0.25	0.54
17642.00	89.600	341.310	6566.02	10520.22	10463.83	-1909.81	1686535.88	14360760.58	39°32'45.4471"N	80°50'11.0443"W	10636.69	349.656	0.70	-0.58	-0.40
17737.00	90.000	341.700	6566.35	10615.22	10553.92	-1939.95	1686505.76	14360850.64	39°32'46.3381"N	80°50'11.4269"W	10730.74	349.585	0.59	0.42	0.41
17831.00	89.850	341.790	6566.48	10709.22	10643.19	-1969.39	1686476.33	14360939.87	39°32'47.2209"N	80°50'11.8007"W	10823.87	349.517	0.19	-0.16	0.10
17926.00	89.780	341.020	6566.78	10804.21	10733.23	-1999.68	1686446.04	14361029.88	39°32'48.1113"N	80°50'12.1853"W	10917.92	349.446	0.81	-0.07	-0.81
18021.00	90.250	341.630	6566.76	10899.21	10823.23	-2030.10	1686415.64	14361119.84	39°32'49.0013"N	80°50'12.5715"W	11011.98	349.377	0.81	0.49	0.64
18116.00	89.750	341.020	6566.76	10994.21	10913.23	-2060.52	1686385.23	14361209.80	39°32'49.8913"N	80°50'12.9577"W	11106.05	349.308	0.83	-0.53	-0.64
18210.00	89.780	340.990	6567.14	11088.21	11002.11	-2091.12	1686354.65	14361298.64	39°32'50.7703"N	80°50'13.3463"W	11199.07	349.238	0.05	0.03	-0.03
18305.00	90.650	341.120	6566.79	11183.21	11091.96	-2121.96	1686323.82	14361388.46	39°32'51.6589"N	80°50'13.7379"W	11293.11	349.170	0.93	0.92	0.14
18400.00	91.600	341.340	6564.92	11278.19	11181.89	-2152.52	1686293.27	14361478.35	39°32'52.5482"N	80°50'14.1259"W	11387.19	349.104	1.03	1.00	0.23
18495.00	90.400	341.250	6563.26	11373.17	11271.86	-2182.98	1686262.82	14361568.29	39°32'53.4380"N	80°50'14.5127"W	11481.30	349.039	1.27	-1.26	-0.09
18589.00	90.340	341.490	6562.66	11467.17	11360.93	-2213.01	1686232.80	14361657.32	39°32'54.3188"N	80°50'14.8940"W	11574.46	348.977	0.26	-0.06	0.26
18683.00	90.710	341.250	6561.80	11561.17	11450.00	-2243.04	1686202.79	14361746.36	39°32'55.1997"N	80°50'15.2753"W	11667.64	348.916	0.47	0.39	-0.26
18777.00	90.860	340.780	6560.51	11655.16	11538.88	-2273.61	1686172.22	14361835.20	39°32'56.0786"N	80°50'15.6636"W	11760.74	348.853	0.52	0.16	-0.50
18823.00	90.550	341.030	6559.94	11701.15	11582.34	-2288.66	1686157.18	14361878.65	39°32'56.5085"N	80°50'15.8546"W	11806.30	348.822	0.87	-0.67	0.54
18848.00‡	90.550	341.030	6559.70	11726.15	11605.99	-2296.79	1686149.06	14361902.28	39°32'56.7423"N	80°50'15.9578"W	11831.07	348.806	0.00	0.00	0.00



Actual Wellpath Report

Specter Unit 2H AWP Proj: 18848'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Specter Unit 2H
Field	Tyler	API	47-095-02706-0000
Facility	Margery Pad	Wellbore	Specter Unit 2H AWB
Slot	Slot #04		

HOLE & CASING SECTIONS - Ref Wellbore: Specter Unit 2H AWB Ref Wellpath: Specter Unit 2H AWP Proj: 18848'										
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]	
20in Conductor	25.50	105.50	80.00	25.50	105.50	0.00	0.00	-0.19	0.00	
17.5in Open Hole	105.50	392.00	286.50	105.50	392.00	-0.19	0.00	0.18	-0.50	
13.375in Casing Surface	25.50	370.00	344.50	25.50	370.00	0.00	0.00	0.04	-0.43	
12.25in Open Hole	392.00	2637.00	2245.00	392.00	2632.96	0.18	-0.50	-22.93	78.79	
9.625in Casing Intermediate	25.50	2574.00	2548.50	25.50	2569.99	0.00	0.00	-24.51	79.74	
8.75in Open Hole	2637.00	6030.00	3393.00	2632.96	5762.85	-22.93	78.79	-13.68	1293.37	
8.5in Open Hole	6030.00	18848.00	12818.00	5762.85	6559.70	-13.68	1293.37	11605.99	-2296.79	
5.5in Casing Production	25.50	18848.00	18822.50	25.50	6559.70	0.00	0.00	11605.99	-2296.79	

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Specter Unit 2H POE Rev-2	6618.00	556.29	1442.65	1689887.00	14350857.00	39°31'7.4657"N	80°49'28.4962"W	point
Specter Unit 2H BHL Rev-2	6643.00	11593.42	-2322.21	1686123.65	14361889.72	39°32'56.6186"N	80°50'16.2826"W	point
Specter Unit 2H LP Rev-2	6643.00	733.82	1382.09	1689826.47	14351034.46	39°31'9.2214"N	80°49'29.2645"W	point
Specter Unit 2H 50' L/R Hard Line	7000.00	6074.86	-439.78	1688005.32	14356373.36	39°32'2.0429"N	80°49'52.3842"W	rectangle
2D Rectangle 11661.6 x 100.								



Actual Wellpath Report

Specter Unit 2H AWP Proj: 18848'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Specter Unit 2H
Field	Tyler	API	47-095-02706-0000
Facility	Margery Pad	Wellbore	Specter Unit 2H AWB
Slot	Slot #04		

WELLPATH COMPOSITION - Ref Wellbore: Specter Unit 2H AWB Ref Wellpath: Specter Unit 2H AWP Proj: 18848'					
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')	Specter Unit 2H AWB	10/Nov/2020
380.00	2563.00	BH NaviTrak (2019) (Axial)	02 APS EM <12-1/4"> (380')(419'-2563')	Specter Unit 2H AWB	10/Nov/2020
2563.00	5966.00	BH NaviTrak (2019) (Axial)	03 APS EM <8-3/4"> (2563')(2647'-5966')	Specter Unit 2H AWB	07/Dec/2020
5966.00	18848.00	BH AutoTrak Curve (2019) (Short spacing)	04 BH AT Curve <8-1/2"> (5966')(6073'-18823')	Specter Unit 2H AWB	07/Dec/2020

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Actual Wellpath Report

Specter Unit 2H AWP Proj: 18848'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Specter Unit 2H
Field	Tyler	API	47-095-02706-0000
Facility	Margery Pad	Wellbore	Specter Unit 2H AWB
Slot	Slot #04		

COMMENTS
<p>Wellpath general comments API: 47-095-02706-0000 BH Job #: 110631512-B Rig: H&P 317 Duration: 12/8/2020-12/14/2020 Gyrodatta MS Gyro <17-1/2"> (100'-380') APS EM <12-1/4"> (380')(419'-2563') APS EM <8-3/4"> (2563')(2647'-5966') BH AT Curve <8-1/2"> (5966')(6073'-18823') Sycamore: 6650' MD Middlesex: 6796' MD Burkett: 6963' MD Tully: 7015' MD Marcellus POE: 7183' MD Projected MD at TD: 18848'</p>

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