

ANTERO RESOURCES CORPORATION

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

Slot: Slot #05
 Well: Horst Unit 3H
 Wellbore: Horst Unit 3H PWB

POI reference wellpath is Horst Unit 3H PWB Rev-A.0	Grid System: NAD27 UTM Zone 17 North, US feet
True vertical depths are referenced to H&P 317 (RKB)	North Reference: Grid north
Measured depths are referenced to H&P 317 (RKB)	Scale: True distance
H&P 317 (RKB) to Mean Sea Level: 1138.5 feet	Depth is in feet
Mean Sea Level to Ground level (At Slot: Slot #05): -1111 feet	Created by: delaset on 2019-03-13
Coordinates are in feet referenced to Slot	Database: WA_MPL_EasternUS_Dein

Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
Meredith Pad	1877162.341	14288874.288	80°52'12.070"W
Slot	Local N (ft)	Local E (ft)	Local N (ft)
Slot #05	4.07	14.13	1877178.470
H&P 317 (RKB) to Ground level (At Slot: Slot #05)	25.5ft		80752'11.800"W
Mean Sea Level to Ground level (At Slot: Slot #05)	-1111ft		1138.5ft

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #05	Horst Unit 3H	Horst Unit 3H PWB	Horst Unit 3H AWP Proj: 16184
Slot #05	Horst Unit 3H	Horst Unit 3H PWB	Horst Unit 3H PWP Rev-A.0



Gyrodata MS Gyro <17-1/2>: (100-809') : 0.04° Inc, 110.50ft MD, 110.50ft TVD, -0.02ft VS

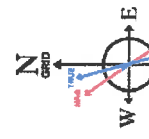
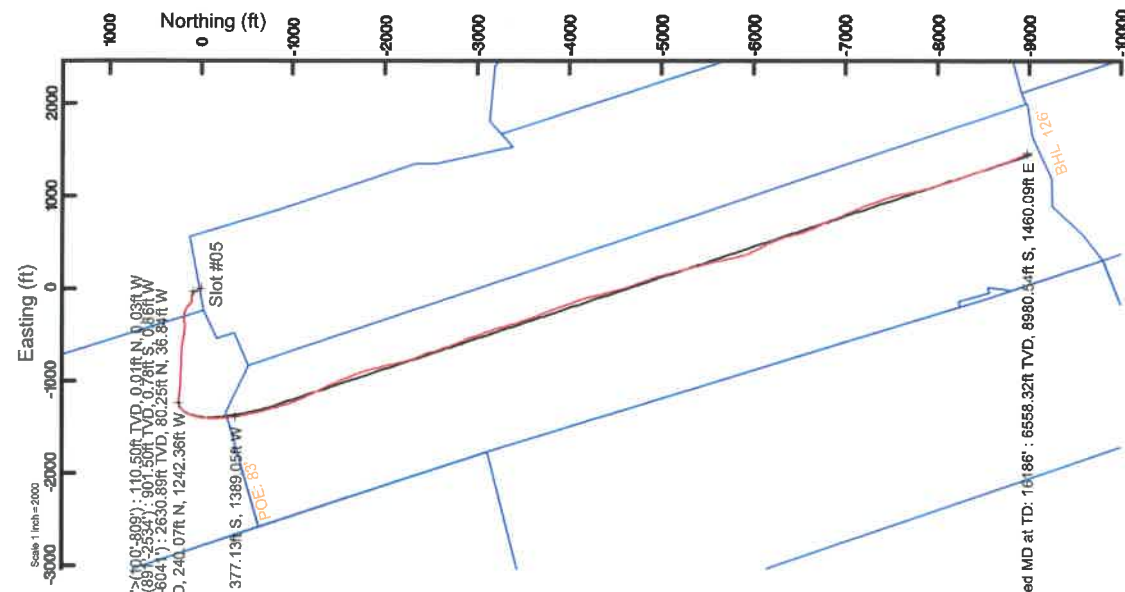
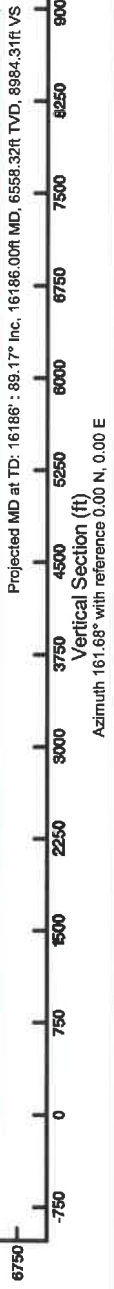
Panther EM <12-1/4>: (6051-2534') : 0.09° Inc, 901.50ft MD, 901.50ft TVD, 0.47ft VS

Well Profile Data							
Design Comment	MD (ft)	Inc (")	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	VS (ft)
Tie On	6051.50	24.610	284.600	5764.65	242.49	-1228.11	6.23
Proj. To Bottom	6111.50	25.050	253.280	5849.13	237.70	-1252.73	8.08
End of 3D Arc	6731.67	51.063	182.711	6353.85	-57.94	-1398.22	-384.49
POE	7056.74	75.258	170.000	6500.00	-344.20	-1376.51	-105.92
Landing Pt.	7236.52	90.000	170.000	6523.00	-519.30	-1345.84	70.01
On Azimuth	7513.86	90.000	161.680	6523.00	-787.96	-1277.85	346.38
BHL	16183.86	90.000	161.680	6523.00	-9018.52	1447.40	9016.38

Panther EM <8-3/4>: (2534') (2625-6041') : 3.49° Inc, 2635.50ft MD, 2630.89ft TVD, -87.76ft VS

BH AT Curve <8-1/2>: (6051.5)(6086-16160') : 25.08° Inc, 6086.00ft MD, 5825.97ft TVD, -618.41ft VS

Marcellus POE: 7098' MD : 77.91° Inc, 7098.00ft MD, 6512.51ft TVD, -78.59ft VS



User specified (HDGM) Dip: 68.45° East: 51884.0T
 Magnetic North is 7.64 degrees West of True North (at 20/2018)
 Grid North is 0.08 degrees East of True North
 To correct azimuth from True to Grid subtract 0.08 degrees
 To correct azimuth from Magnetic to Grid subtract 7.72 degrees



API: 47-095-02531-0000
 BHI Job #: 109653319
 Rig: H&P 317
 Duration: 02/10/2019-02/16/2019

Scale 1 inch = 1000

Scale 1 inch = 1000

Projected MD at TD: 16186° : 89.17° Inc, 16186.00ft MD, 6558.32ft TVD, 8984.31ft VS

Vertical Section (ft)

Azimuth 161.68° with reference 0.00 N, 0.00 E



Actual Wellpath Report

Horst Unit 3H AWP Proj: 16184'
Page 1 of 11



REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Meredith Pad
Slot	Slot #05
Well	Horst Unit 3H
Wellbore	Horst Unit 3H AWB

REPORT SETUP INFORMATION	
Projection System	NAD27 / UTM Zone 17 North, US feet
North Reference	Grid
Scale	0.999602
Convergence at slot	0.08° East
Software System	WellArchitect® 5.1
User	Delaset
Report Generated	3/13/2019 at 5:45:26 AM
Database/Source file	WA_MPL_EasternUS_Defn/Horst_Unit_3H_AWP_Proj_16184_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Northing[US ft]	Latitude	Longitude	
Slot Location	4.07	14.13	14288878.36	39°20'54.870"N	80°52'11.890"W	
Facility Reference Pt			1677162.34	39°20'54.830"N	80°52'12.070"W	
Field Reference Pt			0.00	0°00'00.000"	85°29'19.301"W	

WELLPATH DATUM	
Calculation method	H&P 317 (RKB) to Facility Vertical Datum
Horizontal Reference Pt	H&P 317 (RKB) to Mean Sea Level
Vertical Reference Pt	H&P 317 (RKB) to Ground Level at Slot (Slot #05)
MD Reference Pt	Section Origin
Field Vertical Reference	Section Azimuth
	25.50ft
	1136.50ft
	25.50ft
	N 0.00, E 0.00 ft
	161.68°



Actual Wellpath Report

Horst Unit 3H AWP Proj: 16184'
Page 2 of 11



REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #05
Operator	ANTERO RESOURCES CORPORATION	Well	Horst Unit 3H
Area	Tyler County, WV	Wellbore	Horst Unit 3H AWB
Field	Tyler		
Facility	Meredith Pad		

WELLPATH DATA (195 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	287.910	0.00	0.00	0.00	0.00	1677176.47	14288878.36	39°20'54.870"N	80°52'11.890"W	0.00	0.000	0.00	0.00	0.00	
25.50	0.000	287.910	25.50	0.00	0.00	0.00	1677176.47	14288878.36	39°20'54.870"N	80°52'11.890"W	0.00	0.000	0.00	0.00	0.00	
110.50	0.040	287.910	110.50	-0.02	0.01	-0.03	1677176.44	14288878.37	39°20'54.870"N	80°52'11.890"W	0.03	287.910	0.05	0.05	-84.81	Gyrodata MS Gyro <17-1/2"> (100'-809')
210.50	0.190	330.440	210.50	-0.20	0.16	-0.14	1677176.33	14288878.53	39°20'54.872"N	80°52'11.892"W	0.22	318.879	0.16	0.15	42.53	
310.50	0.220	324.120	310.50	-0.55	0.46	-0.34	1677176.13	14288878.83	39°20'54.875"N	80°52'11.894"W	0.57	323.956	0.04	0.03	-6.32	
410.50	0.020	251.680	410.50	-0.73	0.61	-0.47	1677176.00	14288878.98	39°20'54.876"N	80°52'11.896"W	0.77	322.761	0.21	-0.20	-72.46	
510.50	0.150	142.300	510.50	-0.61	0.50	-0.40	1677176.07	14288878.87	39°20'54.875"N	80°52'11.895"W	0.65	321.390	0.16	0.13	-109.36	
610.50	0.150	223.860	610.50	-0.42	0.31	-0.41	1677176.06	14288878.67	39°20'54.873"N	80°52'11.893"W	0.52	306.563	0.20	0.00	81.56	
710.50	0.280	215.880	710.50	-0.22	0.01	-0.65	1677175.82	14288878.38	39°20'54.870"N	80°52'11.898"W	0.65	271.287	0.13	0.13	-7.98	
810.50	0.360	188.720	810.50	-0.21	-0.49	-0.84	1677175.63	14288877.87	39°20'54.865"N	80°52'11.901"W	0.97	239.500	0.17	0.08	-27.16	
819.50	0.360	197.020	819.50	0.25	-0.55	-0.85	1677175.62	14288877.82	39°20'54.865"N	80°52'11.901"W	1.01	237.180	0.58	0.00	92.22	
901.50	0.090	77.210	901.50	0.47	-0.78	-0.86	1677175.61	14288877.58	39°20'54.862"N	80°52'11.901"W	1.16	227.879	0.50	-0.33	-146.11	Panther EIM <12-1/4"> (809')(891'-253.4')
995.50	1.810	341.700	995.48	-1.01	0.64	-1.26	1677175.21	14288879.01	39°20'54.876"N	80°52'11.906"W	1.41	297.143	1.94	1.83	-101.61	
1089.50	4.020	341.170	1089.35	-5.79	5.17	-2.79	1677173.68	14288883.54	39°20'54.921"N	80°52'11.925"W	5.88	331.682	2.35	2.35	-0.56	
1183.50	5.300	340.690	1183.04	-13.42	12.39	-5.29	1677171.19	14288890.75	39°20'54.993"N	80°52'11.957"W	13.47	336.891	1.36	1.36	-0.51	
1277.50	6.500	340.690	1276.54	-23.08	21.51	-8.48	1677167.99	14288899.86	39°20'55.083"N	80°52'11.998"W	23.12	338.478	1.28	1.28	0.00	
1372.50	6.720	326.670	1370.91	-33.83	31.23	-13.31	1677163.16	14288909.58	39°20'55.179"N	80°52'12.059"W	33.95	336.908	1.71	0.23	-14.76	
1466.50	6.890	319.090	1464.25	-44.35	40.08	-20.03	1677156.45	14288918.43	39°20'55.266"N	80°52'12.144"W	44.81	333.450	0.97	0.18	-8.05	
1560.50	6.010	317.680	1557.66	-54.05	47.98	-27.03	1677149.45	14288926.33	39°20'55.345"N	80°52'12.233"W	55.08	330.603	0.95	-0.94	-1.50	
1655.50	5.300	331.610	1652.20	-62.91	55.52	-32.47	1677144.01	14288933.86	39°20'55.419"N	80°52'12.302"W	64.32	329.681	1.62	-0.75	14.66	
1749.50	4.910	337.210	1745.83	-71.20	63.05	-36.09	1677140.39	14288941.39	39°20'55.494"N	80°52'12.348"W	72.65	330.212	0.67	-0.41	5.96	
1843.50	4.510	337.760	1839.51	-78.90	70.18	-39.05	1677137.44	14288948.52	39°20'55.564"N	80°52'12.386"W	80.31	330.909	0.43	-0.43	0.61	
2032.50	3.480	313.500	1934.28	-85.17	75.63	-42.56	1677133.93	14288953.96	39°20'55.618"N	80°52'12.430"W	86.78	330.632	2.06	-1.07	-25.56	
2126.50	0.710	163.890	2122.17	-88.82	77.98	-47.06	1677129.43	14288956.31	39°20'55.641"N	80°52'12.488"W	91.08	328.886	2.31	-1.03	-134.03	
2220.50	1.280	141.110	2216.16	-87.25	76.60	-46.24	1677130.25	14288954.93	39°20'55.628"N	80°52'12.477"W	89.48	328.880	0.73	0.61	-24.23	
2315.50	1.680	130.970	2311.13	-85.06	74.86	-44.53	1677131.96	14288953.19	39°20'55.611"N	80°52'12.455"W	87.10	329.256	0.50	0.42	-10.67	
2409.50	1.810	94.700	2405.09	-83.30	73.83	-42.01	1677134.48	14288952.17	39°20'55.600"N	80°52'12.423"W	84.95	330.364	1.16	0.14	-38.53	
2503.50	2.120	53.900	2499.04	-83.25	74.74	-39.12	1677137.36	14288953.07	39°20'55.609"N	80°52'12.387"W	84.36	332.370	1.49	0.33	-43.40	
2544.50	2.520	37.680	2540.00	-83.98	75.90	-37.96	1677136.53	14288954.23	39°20'55.621"N	80°52'12.372"W	84.86	333.430	1.87	0.98	-39.56	



Actual Wellpath Report

Horst Unit 3H AWP Proj: 16184'

Page 3 of 11



REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #05
Operator	ANTERO RESOURCES CORPORATION	Well	Horst Unit 3H
Area	Tyler County, WV	Wellbore	Horst Unit 3H AWB
Field	Tyler		
Facility	Meredith Pad		

WELLPATH DATA (195 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
2635.50	3.493	357.890	2630.89	-87.76	80.25	-36.84	1677139.65	14288958.58	39°20'55.664"N	80°52'12.357"W	88.30	335.344	2.46	1.07	-43.73	Panther EM <-8-3/4">(2625'-6041')
2729.50	4.993	312.880	2724.65	-94.09	85.89	-39.94	1677136.55	14288964.22	39°20'55.719"N	80°52'12.397"W	94.72	335.062	3.75	1.60	-47.88	
2823.50	9.104	301.600	2817.93	-103.37	92.57	-49.27	1677127.22	14288970.90	39°20'55.786"N	80°52'12.515"W	104.87	331.977	4.59	4.37	-12.00	
2917.50	12.510	284.500	2910.27	-114.58	99.02	-65.47	1677111.03	14288977.34	39°20'55.850"N	80°52'12.722"W	118.70	326.530	4.94	3.63	-18.19	
3012.50	14.410	271.990	3002.67	-124.26	102.01	-87.25	1677089.26	14288980.33	39°20'55.879"N	80°52'12.999"W	134.23	319.459	3.65	2.00	-13.17	
3106.50	13.920	266.300	3093.82	-131.18	101.68	-110.22	1677066.29	14288980.01	39°20'55.877"N	80°52'13.291"W	149.96	312.693	1.57	-0.52	-6.05	
3200.50	11.000	265.290	3185.60	-136.14	100.22	-130.45	1677046.08	14288978.54	39°20'55.862"N	80°52'13.549"W	164.50	307.534	3.11	-3.11	-1.07	
3300.50	8.620	296.580	3284.20	-143.68	102.79	-146.67	1677029.86	14288981.11	39°20'55.888"N	80°52'13.755"W	179.10	305.024	5.74	-2.38	31.29	
3399.50	14.410	311.600	3376.28	-158.79	113.72	-161.73	1677014.80	14288992.04	39°20'55.996"N	80°52'13.947"W	197.71	305.112	6.89	6.16	15.99	
3488.50	17.590	313.590	3466.63	-181.45	131.28	-180.77	1676995.77	14289009.59	39°20'56.170"N	80°52'14.189"W	223.41	305.988	3.43	3.38	2.12	
3583.50	19.490	306.800	3556.71	-207.12	150.68	-203.86	1676972.69	14289028.98	39°20'56.362"N	80°52'14.482"W	253.50	306.468	3.02	2.00	-7.15	
3678.50	20.680	297.500	3645.95	-232.16	167.92	-231.44	1676945.12	14289046.22	39°20'56.533"N	80°52'14.833"W	285.94	305.963	3.58	1.25	-9.75	
3710.50	21.300	293.980	3675.83	-240.12	172.89	-241.76	1676934.80	14289051.19	39°20'56.582"N	80°52'14.964"W	297.22	305.570	4.39	1.94	-11.00	
3741.50	21.610	289.390	3704.68	-247.40	177.08	-252.29	1676924.28	14289055.37	39°20'56.624"N	80°52'15.098"W	308.23	305.064	5.51	1.00	-14.81	
3773.50	22.090	283.180	3734.39	-254.15	180.40	-263.71	1676912.86	14289058.70	39°20'56.657"N	80°52'15.244"W	319.52	304.376	7.37	1.50	-19.41	
3805.50	22.800	277.100	3763.97	-258.96	182.54	-275.73	1676900.86	14289060.83	39°20'56.678"N	80°52'15.396"W	330.68	303.506	7.58	2.22	-19.00	
3900.50	26.290	267.800	3850.40	-273.71	184.01	-315.04	1676881.56	14289062.30	39°20'56.693"N	80°52'15.897"W	364.84	300.289	5.47	3.67	-9.75	
3999.50	24.790	265.200	3936.12	-284.21	181.54	-355.91	1676820.70	14289059.83	39°20'56.669"N	80°52'16.417"W	399.54	297.024	1.97	-1.58	-2.74	
4090.50	23.820	267.890	4022.70	-294.22	179.16	-394.93	1676781.69	14289057.46	39°20'56.646"N	80°52'16.914"W	433.67	294.402	1.55	-1.02	2.83	
4186.50	22.580	273.790	4110.95	-306.57	179.67	-432.70	1676743.94	14289057.96	39°20'56.652"N	80°52'17.395"W	468.52	292.549	2.74	-1.29	6.15	
4280.50	22.180	276.170	4197.87	-320.72	182.77	-468.35	1676708.31	14289061.06	39°20'56.683"N	80°52'17.848"W	502.75	291.318	1.05	-0.43	2.53	
4374.50	23.510	277.190	4284.50	-336.15	187.02	-504.60	1676672.08	14289065.31	39°20'56.726"N	80°52'18.310"W	538.14	290.337	1.48	1.41	1.09	
4468.50	26.910	280.180	4369.53	-354.38	193.13	-544.15	1676632.54	14289071.42	39°20'56.787"N	80°52'18.813"W	577.40	289.541	3.86	3.62	3.18	
4563.50	29.520	281.370	4453.24	-376.24	201.55	-588.26	1676588.45	14289079.83	39°20'56.870"N	80°52'19.374"W	621.83	288.912	2.81	2.75	1.25	
4659.50	30.310	275.600	4536.47	-397.78	208.57	-635.57	1676541.16	14289086.96	39°20'56.940"N	80°52'19.976"W	668.92	288.168	3.11	0.82	-6.01	
4722.50	30.000	274.100	4590.94	-410.23	211.25	-667.10	1676509.64	14289089.53	39°20'56.967"N	80°52'20.378"W	699.75	287.572	1.29	-0.49	-2.38	
4818.50	26.600	273.570	4675.45	-427.40	214.31	-712.50	1676484.26	14289092.59	39°20'56.998"N	80°52'20.956"W	744.03	286.740	3.55	-3.54	-0.55	
4914.50	24.390	271.280	4762.10	-442.07	216.09	-753.77	1676423.00	14289094.37	39°20'57.016"N	80°52'21.481"W	784.14	285.996	2.52	-2.30	-2.39	
5009.50	23.200	268.770	4849.03	-454.14	216.13	-792.09	1676384.69	14289094.40	39°20'57.017"N	80°52'21.969"W	821.05	285.262	1.64	-1.29	-2.64	
5104.50	23.860	273.480	4936.14	-466.78	216.89	-829.98	1676346.82	14289195.17	39°20'57.025"N	80°52'22.451"W	857.85	284.645	2.10	0.69	4.96	



Actual Wellpath Report

Horst Unit 3H AWP Proj: 16184'
Page 4 of 11



REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #05
Operator	ANTERO RESOURCES CORPORATION	Well	Horst Unit 3H
Area	Tyler County, WV	Wellbore	Horst Unit 3H AWB
Field	Tyler		
Facility	Meredith Pad		

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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
5199.50	24.300	274.190	5022.87	-481.40	219.48	-868.66	1676308.16	14289097.76	39°20'57.052"N	80°52'22.943"W	895.96	284.180	0.55	0.46	0.75	
5294.50	23.690	271.370	5109.66	-496.31	221.37	-907.23	1676269.60	14289099.64	39°20'57.071"N	80°52'23.434"W	933.85	283.712	1.37	-0.64	-2.97	
5390.50	25.010	272.470	5197.12	-509.02	222.70	-946.79	1676230.06	14289100.98	39°20'57.084"N	80°52'23.938"W	972.63	283.237	1.45	1.38	1.15	
5484.50	25.410	270.180	5282.17	-522.47	223.62	-986.81	1676190.05	14289104.29	39°20'57.094"N	80°52'24.447"W	1011.83	282.768	1.12	0.43	-2.44	
5611.50	24.220	275.070	5397.45	-541.46	226.01	-1040.01	1676136.87	14289101.90	39°20'57.118"N	80°52'25.124"W	1064.29	282.261	1.87	-0.94	3.85	
5674.50	23.910	272.910	5454.98	-551.21	227.80	-1065.64	1676111.26	14289106.08	39°20'57.136"N	80°52'25.451"W	1089.71	282.067	1.48	-0.49	-3.43	
5768.50	24.390	276.170	5540.75	-566.16	230.86	-1103.96	1676072.95	14289108.13	39°20'57.167"N	80°52'25.938"W	1127.84	281.811	1.51	0.51	3.47	
5862.50	27.090	278.110	5625.42	-583.73	235.96	-1144.45	1676032.48	14289114.23	39°20'57.218"N	80°52'26.454"W	1168.53	281.650	3.01	2.87	2.06	
5957.50	27.090	277.010	5710.00	-602.61	241.65	-1187.34	1675989.61	14289119.92	39°20'57.275"N	80°52'27.000"W	1211.68	281.504	0.53	0.00	-1.16	
6051.50	24.610	264.800	5794.65	-616.23	242.49	-1228.11	1675948.85	14289120.76	39°20'57.284"N	80°52'27.518"W	1251.82	281.169	6.23	-2.64	-12.90	
6086.00	25.080	256.000	5825.97	-618.41	240.07	-1242.36	1675934.61	14289118.34	39°20'57.260"N	80°52'27.700"W	1265.34	280.937	10.79	1.36	-25.57	BH AT Curve <-8-1/2>-(6051.5)-(6086*-16180')
6106.00	25.450	252.730	5844.05	-618.81	237.71	-1250.58	1675926.39	14289116.04	39°20'57.238"N	80°52'27.805"W	1272.98	280.765	7.22	1.85	-16.35	
6154.00	25.440	246.130	5887.41	-618.00	230.54	-1269.86	1675907.12	14289108.81	39°20'57.166"N	80°52'28.050"W	1290.62	280.290	5.90	-0.02	-13.75	
6201.00	25.460	239.510	5929.85	-614.89	221.32	-1287.80	1675889.19	14289099.60	39°20'57.075"N	80°52'28.279"W	1306.68	279.752	6.05	0.04	-14.09	
6249.00	26.070	231.530	5973.09	-609.08	209.52	-1304.95	1675872.04	14289087.80	39°20'56.969"N	80°52'28.497"W	1321.67	279.122	7.33	1.27	-16.62	
6296.00	27.130	224.990	6015.13	-600.71	195.52	-1320.62	1675856.38	14289073.80	39°20'56.821"N	80°52'28.697"W	1335.01	278.421	6.62	2.26	-13.91	
6344.00	28.700	217.060	6057.56	-589.24	178.57	-1335.31	1675841.70	14289056.86	39°20'56.654"N	80°52'28.884"W	1347.20	277.617	8.39	3.27	-16.52	
6390.00	30.270	211.300	6097.61	-575.45	159.85	-1347.99	1675829.02	14289038.15	39°20'56.469"N	80°52'29.046"W	1357.44	276.763	7.04	3.41	-12.52	
6438.00	32.960	204.420	6138.49	-558.01	137.61	-1359.68	1675817.33	14289015.92	39°20'56.249"N	80°52'29.195"W	1366.63	275.779	9.37	5.60	-14.33	
6485.00	35.710	200.850	6177.30	-537.98	113.14	-1369.85	1675807.17	14288991.46	39°20'56.007"N	80°52'29.325"W	1374.52	274.722	7.25	5.85	-7.60	
6533.00	39.410	196.230	6215.35	-514.56	85.41	-1379.10	1675797.92	14288963.74	39°20'55.733"N	80°52'29.443"W	1381.74	273.544	9.68	7.71	-9.62	
6580.00	41.380	194.140	6251.15	-489.16	56.01	-1387.07	1675789.96	14288934.35	39°20'55.443"N	80°52'29.545"W	1388.20	272.312	5.09	4.19	-4.45	
6627.00	43.920	190.340	6285.72	-461.74	24.90	-1393.79	1675783.24	14288903.26	39°20'55.136"N	80°52'29.631"W	1394.01	271.024	7.69	5.40	-8.09	
6675.00	45.950	187.470	6319.70	-431.60	-8.59	-1399.02	1675778.01	14288869.78	39°20'54.805"N	80°52'29.699"W	1399.05	269.648	5.98	4.23	-5.98	
6689.00	47.547	185.434	6336.15	-415.72	-25.95	-1400.98	1675776.05	14288852.42	39°20'54.633"N	80°52'29.724"W	1401.22	268.939	9.08	6.66	-8.43	Middlesex: 66'9" MD
6722.00	49.110	183.580	6351.44	-399.89	-43.08	-1402.33	1675774.70	14288835.30	39°20'54.464"N	80°52'29.741"W	1402.99	268.240	9.08	6.79	-8.06	
6770.00	52.640	182.140	6381.72	-365.17	-80.26	-1404.17	1675772.86	14288798.13	39°20'54.096"N	80°52'29.765"W	1406.47	266.729	7.71	7.35	-3.00	
6817.00	56.830	180.720	6408.86	-329.06	-118.62	-1405.12	1675771.91	14288759.80	39°20'53.717"N	80°52'29.778"W	1410.12	265.175	9.25	8.91	-3.02	
6865.00	60.680	180.050	6433.75	-290.19	-159.64	-1405.39	1675771.84	14288718.78	39°20'53.312"N	80°52'29.782"W	1414.43	263.519	8.11	8.02	-1.40	
6892.00	63.002	178.662	6446.49	-267.51	-183.45	-1405.12	1675771.91	14288694.99	39°20'53.077"N	80°52'29.779"W	1417.04	262.562	9.72	8.60	-5.14	Burkett: 6892' MD



Actual Wellpath Report

Horst Unit 3H AWP Proj: 16184'
Page 5 of 11



REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #05
Operator	ANTERO RESOURCES CORPORATION	Well	Horst Unit 3H
Area	Tyler County, WV	Wellbore	Horst Unit 3H AWB
Field	Tyler		
Facility	Meredith Pad		

WELLPATH DATA (195 stations) † = interpolated/extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
6912.00	64.73	177.67	6455.30	-250.30	-201.39	-1404.54	1675772.49	14288677.05	39°20'52.899"N	80°52'29.772"W	1418.91	261.840	9.72	8.64	-4.96	
6960.00	68.71	176.60	6474.27	-207.81	-245.42	-1402.33	1675774.70	14288633.05	39°20'52.464"N	80°52'29.745"W	1423.65	260.073	8.54	8.24	-2.23	
6977.00	70.17	176.15	6480.24	-192.41	-261.30	-1401.33	1675775.70	14288617.17	39°20'52.307"N	80°52'29.732"W	1425.48	259.437	8.95	8.61	-2.59	Tully: 6977 MD
7007.00	72.76	175.40	6489.77	-164.83	-289.67	-1399.23	1675777.80	14288588.81	39°20'52.027"N	80°52'29.706"W	1428.90	258.304	8.95	8.62	-2.53	
7055.00	75.86	173.42	6502.75	-119.76	-335.65	-1394.73	1675782.30	14288542.85	39°20'51.572"N	80°52'29.650"W	1434.55	256.469	7.58	6.48	-4.13	
7098.00	77.90	170.99	6512.51	-78.59	-377.13	-1389.05	1675787.98	14288501.38	39°20'51.162"N	80°52'29.578"W	1439.33	254.810	7.27	4.76	-5.64	Marcellus POE: 7098 MD
7102.00	78.10	170.77	6513.34	-74.73	-381.00	-1388.43	1675788.60	14288497.52	39°20'51.124"N	80°52'29.570"W	1439.75	254.655	7.27	4.76	-5.59	
7149.00	80.20	169.61	6522.19	-29.08	-426.48	-1380.56	1675796.46	14288452.06	39°20'50.674"N	80°52'29.471"W	1444.93	252.833	5.08	4.47	-2.47	
7196.00	83.55	168.00	6528.83	17.08	-472.11	-1371.53	1675805.49	14288406.44	39°20'50.223"N	80°52'29.357"W	1450.51	251.005	7.89	7.13	-3.43	
7244.00	87.42	167.94	6532.61	64.64	-518.90	-1361.55	1675815.46	14288359.67	39°20'49.760"N	80°52'29.231"W	1457.08	249.133	8.06	8.06	-0.13	
7339.00	90.55	168.23	6534.29	159.02	-611.83	-1341.95	1675836.06	14288266.78	39°20'48.842"N	80°52'28.983"W	1474.84	245.490	3.31	3.23	0.31	
7434.00	89.91	165.65	6533.91	253.61	-704.37	-1320.48	1675856.52	14288174.28	39°20'47.927"N	80°52'28.711"W	1496.60	241.924	2.80	-0.67	-2.72	
7529.00	88.95	164.31	6534.85	348.44	-796.11	-1295.86	1675881.13	14288082.57	39°20'47.020"N	80°52'28.399"W	1520.87	238.436	1.74	-1.01	-1.41	
7624.00	89.51	164.25	6536.13	443.33	-867.55	-1270.13	1675906.85	14287991.17	39°20'46.116"N	80°52'28.073"W	1549.51	235.055	0.59	0.55	-0.06	
7719.00	90.34	161.09	6536.26	539.31	-978.23	-1241.83	1675935.14	14287900.53	39°20'45.219"N	80°52'27.715"W	1580.85	231.772	3.44	0.87	-3.33	
7814.00	89.82	158.02	6536.12	633.23	-1067.23	-1208.65	1675968.30	14287811.56	39°20'44.339"N	80°52'27.294"W	1612.40	228.556	3.28	-0.55	-3.23	
7909.00	89.97	155.05	6536.30	727.84	-1154.36	-1170.83	1676006.11	14287724.46	39°20'43.477"N	80°52'26.814"W	1644.20	225.406	3.13	0.16	-3.13	
8004.00	89.94	154.18	6536.37	822.11	-1240.19	-1130.10	1676046.82	14287638.67	39°20'42.628"N	80°52'26.297"W	1677.86	222.341	0.92	-0.03	-0.92	
8099.00	89.66	153.58	6536.70	916.23	-1325.49	-1088.28	1676088.63	14287553.41	39°20'41.785"N	80°52'25.766"W	1715.01	219.387	0.70	-0.23	-0.63	
8195.00	89.82	154.77	6537.14	1011.41	-1411.90	-1046.46	1676130.43	14287467.03	39°20'40.930"N	80°52'25.236"W	1757.42	216.545	1.25	0.17	1.24	
8290.00	90.09	158.93	6537.21	1106.05	-1499.23	-1009.12	1676167.75	14287379.74	39°20'40.066"N	80°52'24.762"W	1807.21	213.944	4.39	0.28	4.38	
8385.00	90.09	158.45	6537.06	1200.81	-1587.11	-973.06	1676203.80	14287291.89	39°20'39.197"N	80°52'24.305"W	1861.66	211.513	2.61	0.01	-2.61	
8480.00	89.78	159.23	6537.17	1295.59	-1675.08	-937.23	1676239.62	14287203.95	39°20'38.327"N	80°52'23.850"W	1919.45	209.228	2.94	-0.33	2.93	
8575.00	87.72	162.24	6539.24	1390.54	-1764.73	-905.90	1676270.94	14287114.34	39°20'37.441"N	80°52'23.453"W	1983.66	207.173	3.84	-2.17	3.17	
8670.00	89.85	164.72	6541.26	1485.46	-1855.77	-878.89	1676297.93	14287023.33	39°20'36.541"N	80°52'23.111"W	2053.38	205.342	3.44	2.24	2.61	
8765.00	89.57	164.73	6541.74	1580.32	-1947.42	-853.87	1676322.95	14286931.73	39°20'35.634"N	80°52'22.794"W	2126.39	203.676	0.29	-0.23	0.01	
8860.00	90.18	168.44	6541.95	1674.96	-2039.81	-831.83	1676344.97	14286839.37	39°20'34.721"N	80°52'22.515"W	2202.90	202.186	3.96	0.64	3.91	
8955.00	90.89	169.14	6541.06	1769.22	-2132.99	-813.36	1676363.43	14286746.23	39°20'33.800"N	80°52'22.282"W	2282.81	200.873	1.05	0.75	0.74	
9050.00	91.54	164.87	6539.04	1863.78	-2225.47	-791.85	1676384.94	14286653.78	39°20'32.885"N	80°52'22.009"W	2362.15	199.586	4.75	0.68	-4.71	
9145.00	91.11	159.20	6536.85	1958.72	-2315.73	-762.41	1676414.37	14286563.56	39°20'31.993"N	80°52'21.636"W	2438.01	198.223	5.77	-0.45	-5.76	



Actual Wellpath Report

Horst Unit 3H AWP Proj: 16184'

Page 6 of 11



REFERENCE WELLPATH IDENTIFICATION		Slot #05
Operator	ANTERO RESOURCES CORPORATION	Horst Unit 3H
Area	Tyler County, WV	Horst Unit 3H AWP
Field	Tyler	
Facility	Meredith Pad	

WELLPATH DATA (195 stations)																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (IUS ft)	Grid North (IUS ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
9239.00	89.780	157.670	6536.12	2052.56	-2403.15	-727.86	1676448.90	14286476.18	39°20'31.128"N	80°52'21.198"W	2510.95	196.350	2.16	-1.41	-1.63	
9334.00	89.200	161.910	6536.96	2147.48	-2492.27	-695.05	1676481.70	14286387.09	39°20'30.247"N	80°52'20.782"W	2587.38	195.583	4.50	-0.61	4.46	
9429.00	90.180	163.720	6537.48	2242.46	-2583.03	-666.99	1676509.75	14286296.37	39°20'29.350"N	80°52'20.427"W	2667.75	194.479	2.17	1.03	1.91	
9524.00	90.430	162.130	6536.97	2337.43	-2673.83	-639.09	1676537.67	14286205.60	39°20'28.452"N	80°52'20.073"W	2749.15	193.442	1.69	0.26	-1.67	
9619.00	90.340	157.400	6536.33	2432.35	-2762.94	-606.24	1676550.47	14286116.53	39°20'27.571"N	80°52'19.657"W	2828.67	192.376	4.98	-0.09	-4.98	
9714.00	89.820	157.521	6536.20	2527.09	-2850.89	-569.83	1676606.87	14286028.82	39°20'26.703"N	80°52'19.195"W	2907.08	191.304	0.56	-0.55	0.13	
9809.00	89.820	159.330	6536.50	2621.93	-2939.03	-534.90	1676641.79	14285940.52	39°20'25.829"N	80°52'18.752"W	2987.30	190.315	1.91	0.00	1.91	
9904.00	89.820	160.860	6536.80	2716.89	-3028.35	-502.55	1676674.12	14285851.23	39°20'24.946"N	80°52'18.342"W	3069.76	189.422	1.61	0.00	1.61	
9999.00	89.720	160.240	6537.18	2811.87	-3117.92	-470.92	1676705.74	14285761.69	39°20'24.060"N	80°52'17.941"W	3153.29	188.589	0.66	-0.11	-0.65	
10094.00	89.780	162.480	6537.59	2906.86	-3207.93	-440.56	1676736.09	14285671.71	39°20'23.170"N	80°52'17.556"W	3238.05	187.820	2.36	0.06	2.36	
10188.00	89.850	163.930	6537.90	3000.83	-3297.92	-413.40	1676763.24	14285581.76	39°20'22.280"N	80°52'17.212"W	3323.73	187.145	1.54	0.07	1.54	
10283.00	89.910	163.170	6538.09	3095.78	-3389.03	-386.50	1676790.13	14285490.69	39°20'21.380"N	80°52'16.871"W	3411.00	186.506	0.80	0.06	-0.80	
10378.00	89.820	162.021	6538.32	3190.76	-3479.68	-358.08	1676818.53	14285400.08	39°20'20.483"N	80°52'16.511"W	3498.06	185.875	1.21	-0.09	-1.21	
10473.00	89.850	160.760	6538.59	3285.76	-3569.72	-327.78	1676848.82	14285310.08	39°20'19.593"N	80°52'16.127"W	3584.73	185.246	1.31	0.03	-1.31	
10568.00	89.780	157.140	6538.90	3380.64	-3658.37	-293.68	1676882.91	14285221.46	39°20'18.716"N	80°52'15.695"W	3670.14	184.590	3.83	-0.07	-3.83	
10663.00	89.660	156.810	6539.36	3475.31	-3745.80	-256.52	1676920.05	14285134.07	39°20'17.852"N	80°52'15.223"W	3754.57	183.918	0.37	-0.13	-0.35	
10757.00	89.380	160.870	6540.15	3569.18	-3833.44	-222.60	1676953.96	14285046.46	39°20'16.985"N	80°52'14.793"W	3839.90	183.323	4.33	-0.30	4.32	
10852.00	90.280	162.510	6540.43	3664.17	-3923.63	-192.76	1676983.79	14284956.31	39°20'16.093"N	80°52'14.415"W	3928.36	182.813	1.97	0.95	1.73	
10947.00	90.490	160.210	6539.79	3759.16	-4013.63	-162.39	1677014.14	14284866.34	39°20'15.203"N	80°52'14.030"W	4016.92	182.317	2.43	0.22	-2.42	
11042.00	89.780	160.020	6539.57	3854.13	-4102.97	-130.08	1677046.44	14284777.04	39°20'14.320"N	80°52'13.621"W	4105.03	181.816	0.77	-0.76	-0.20	
11136.00	88.980	164.540	6540.59	3948.09	-4192.48	-101.48	1677075.03	14284687.56	39°20'13.435"N	80°52'13.258"W	4193.71	181.387	4.88	-0.85	4.81	
11231.00	90.030	167.680	6541.41	4042.79	-4284.69	-78.68	1677097.82	14284595.39	39°20'12.523"N	80°52'12.970"W	4285.41	181.052	3.49	1.11	3.31	
11326.00	90.860	165.950	6540.67	4137.40	-4377.17	-57.01	1677119.48	14284502.94	39°20'11.608"N	80°52'12.696"W	4377.55	180.746	2.02	0.87	-1.82	
11420.00	89.820	165.720	6540.11	4231.15	-4468.31	-34.01	1677142.47	14284411.84	39°20'10.707"N	80°52'12.405"W	4468.44	180.436	1.13	-1.11	-0.24	
11515.00	89.850	163.800	6540.39	4326.01	-4559.97	-9.04	1677167.43	14284320.22	39°20'09.801"N	80°52'12.089"W	4559.98	180.114	2.02	0.03	-2.02	
11610.00	90.150	161.100	6540.39	4420.99	-4650.54	19.60	1677196.07	14284229.69	39°20'08.906"N	80°52'11.726"W	4650.58	179.758	2.86	0.32	-2.84	
11705.00	89.690	159.280	6540.52	4515.95	-4739.91	51.80	1677228.25	14284140.35	39°20'08.022"N	80°52'11.318"W	4740.19	179.374	1.98	-0.48	-1.92	
11800.00	89.820	161.800	6540.93	4610.93	-4829.48	83.44	1677259.88	14284050.82	39°20'07.136"N	80°52'10.916"W	4830.20	179.010	2.66	0.14	2.65	
11894.00	89.880	162.740	6541.17	4704.92	-4919.01	112.07	1677288.50	14283961.32	39°20'06.251"N	80°52'10.554"W	4920.29	178.695	1.00	0.06	1.00	
11989.00	89.750	163.800	6541.48	4799.88	-5009.99	139.42	1677315.83	14283870.38	39°20'05.351"N	80°52'10.207"W	5011.93	178.406	1.12	-0.14	-1.12	



Actual Wellpath Report

Horst Unit 3H AWP Proj: 16184'

Page 7 of 11



REFERENCE WELLPATH IDENTIFICATION		Slot #05
Operator	ANTERO RESOURCES CORPORATION	Horst Unit 3H
Area	Tyler County, WV	Horst Unit 3H AWB
Field	Tyler	
Facility	Meredith Pad	

WELLPATH DATA (195 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
12083.00	89.720	165.270	6541.91	4893.76	-5100.58	164.48	1677340.88	14283779.83	39°20'04.455"N	80°52'09.890"W	5103.23	178.153	1.56	-0.03	1.56	
12178.00	89.630	166.840	6542.45	4988.49	-5192.74	187.53	1677363.93	14283687.71	39°20'03.544"N	80°52'09.598"W	5196.12	177.932	1.45	-0.09	1.44	
12273.00	89.880	165.530	6542.86	5083.21	-5284.95	210.38	1677386.77	14283595.53	39°20'02.633"N	80°52'09.309"W	5289.13	177.720	1.20	0.26	-1.17	
12367.00	89.570	164.250	6543.31	5177.06	-5375.69	234.88	1677411.26	14283504.82	39°20'01.735"N	80°52'08.999"W	5380.82	177.498	1.40	-0.33	-1.36	
12462.00	89.380	166.040	6543.18	5274.88	-5467.51	259.24	1677435.60	14283413.04	39°20'00.827"N	80°52'08.691"W	5473.65	177.285	1.89	-0.20	1.88	
12557.00	89.570	167.610	6545.05	5366.49	-5560.00	280.89	1677457.24	14283320.59	39°19'59.913"N	80°52'08.417"W	5567.09	177.108	1.66	0.20	1.65	
12651.00	89.850	167.400	6545.63	5460.00	-5651.78	301.22	1677477.57	14283228.85	39°19'59.006"N	80°52'08.160"W	5659.80	176.949	0.37	0.30	-0.22	
12746.00	90.030	167.930	6545.63	5554.48	-5744.58	321.52	1677497.86	14283136.08	39°19'58.088"N	80°52'07.903"W	5753.57	176.797	0.59	0.19	0.56	
12841.00	89.970	167.240	6545.63	5648.98	-5837.36	341.94	1677518.28	14283043.34	39°19'57.171"N	80°52'07.645"W	5847.37	176.648	0.73	-0.06	-0.73	
12934.00	90.920	159.920	6544.90	5741.86	-5926.50	368.21	1677544.54	14282954.23	39°19'56.289"N	80°52'07.313"W	5937.93	176.445	7.94	1.02	-7.87	
13030.00	90.710	154.090	6543.54	5837.49	-6014.83	405.69	1677582.00	14282865.95	39°19'55.416"N	80°52'06.837"W	6028.49	176.141	6.08	-0.22	-6.07	
13125.00	89.820	151.070	6543.10	5931.28	-6099.14	449.44	1677625.73	14282781.66	39°19'54.582"N	80°52'06.282"W	6115.68	175.786	3.31	-0.94	-3.18	
13219.00	88.710	155.830	6544.30	6024.28	-6183.20	491.44	1677667.71	14282697.64	39°19'53.751"N	80°52'05.749"W	6202.70	175.456	5.20	-1.18	5.06	
13314.00	88.980	160.440	6546.22	6119.05	-6271.32	526.80	1677703.06	14282609.55	39°19'52.879"N	80°52'05.301"W	6293.41	175.198	4.86	0.28	4.85	
13409.00	89.290	163.880	6547.65	6214.02	-6361.73	555.90	1677732.14	14282519.18	39°19'51.985"N	80°52'04.932"W	6385.97	175.006	3.64	0.33	3.62	
13504.00	90.430	166.660	6547.89	6308.83	-6453.60	580.05	1677756.29	14282427.35	39°19'51.077"N	80°52'04.626"W	6479.61	174.864	3.16	1.20	2.93	
13598.00	90.550	162.850	6547.08	6402.67	-6544.27	604.76	1677780.99	14282336.72	39°19'50.180"N	80°52'04.314"W	6572.15	174.720	4.06	0.13	-4.05	
13693.00	90.920	156.060	6545.86	6497.53	-6633.17	638.08	1677814.29	14282247.85	39°19'49.301"N	80°52'03.891"W	6663.79	174.505	7.16	0.39	-7.15	
13788.00	89.660	153.040	6545.38	6591.79	-6718.94	678.90	1677855.09	14282162.12	39°19'48.453"N	80°52'03.374"W	6753.15	174.230	3.44	-1.33	-3.18	
13883.00	89.350	156.410	6546.20	6686.07	-6804.83	719.45	1677896.63	14282076.26	39°19'47.603"N	80°52'02.859"W	6842.75	173.965	3.56	-0.33	3.55	
13978.00	89.510	160.340	6547.15	6780.89	-6891.12	754.45	1677930.62	14281988.01	39°19'46.730"N	80°52'02.415"W	6934.28	173.754	4.14	0.17	4.14	
14073.00	89.570	157.600	6547.91	6875.77	-6981.78	788.54	1677964.69	14281899.38	39°19'45.853"N	80°52'01.983"W	7026.17	173.556	2.88	0.06	-2.88	
14168.00	89.380	156.200	6548.78	6970.43	-7069.16	825.81	1678001.95	14281812.04	39°19'44.989"N	80°52'01.510"W	7117.23	173.337	1.49	-0.20	-1.47	
14263.00	89.420	156.120	6549.78	7064.99	-7156.05	864.20	1678040.33	14281725.18	39°19'44.130"N	80°52'01.024"W	7208.04	173.114	0.09	0.04	-0.08	
14357.00	89.350	160.130	6550.78	7158.78	-7243.25	899.22	1678075.33	14281638.01	39°19'43.267"N	80°52'00.580"W	7298.86	172.923	4.27	-0.07	4.27	
14452.00	89.510	161.210	6551.73	7253.76	-7332.89	930.66	1678106.76	14281548.41	39°19'42.381"N	80°52'00.181"W	7391.72	172.767	1.15	0.17	1.14	
14547.00	89.540	160.670	6552.52	7348.75	-7422.68	961.68	1678137.77	14281458.65	39°19'41.493"N	80°51'59.788"W	7484.72	172.618	0.57	0.03	-0.57	
14642.00	89.320	162.890	6553.46	7443.74	-7512.91	991.38	1678167.46	14281368.46	39°19'40.601"N	80°51'59.412"W	7578.04	172.483	2.35	-0.23	2.34	
14737.00	89.170	168.150	6554.72	7538.48	-7604.85	1015.13	1678199.19	14281276.56	39°19'39.692"N	80°51'59.111"W	7672.30	172.397	5.54	-0.16	5.54	
14832.00	89.280	170.090	6555.99	7632.67	-7698.13	1033.06	1678209.11	14281183.32	39°19'38.770"N	80°51'58.885"W	7767.14	172.357	2.05	0.13	2.04	



Actual Wellpath Report

Horst Unit 3H AWP Proj: 16184'
Page 8 of 11



REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #05
Operator	ANTERO RESOURCES CORPORATION	Well	Horst Unit 3H
Area	Tyler County, WV	Wellbore	Horst Unit 3H AWP
Field	Tyler		
Facility	Meredith Pad		

WELLPATH DATA (195 stations)																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
14927.00	90.030	167.330	6556.56	7726.94	-7791.28	1051.65	1678227.70	14281090.20	39°19'37.849"N	80°51'58.650"W	7861.93	172.313	3.01	0.78	-2.91	
15022.00	89.750	163.770	6556.74	7821.71	-7893.26	1075.35	1678251.39	14280998.26	39°19'36.939"N	80°51'58.350"W	7956.27	172.232	3.76	-0.29	-3.75	
15117.00	90.000	162.800	6556.95	7916.67	-7974.24	1102.68	1678278.70	14280907.31	39°19'36.040"N	80°51'58.004"W	8050.12	172.127	1.05	0.26	-1.02	
15212.00	89.970	165.100	6556.97	8011.59	-8065.54	1128.94	1678304.96	14280816.06	39°19'35.137"N	80°51'57.672"W	8144.16	172.032	2.42	-0.03	2.42	
15306.00	91.690	163.700	6555.61	8105.47	-8156.06	1154.21	1678330.22	14280725.57	39°19'34.242"N	80°51'57.352"W	8237.32	171.945	2.36	1.83	-1.49	
15401.00	90.150	157.460	6554.08	8200.39	-8245.59	1185.78	1678361.78	14280636.07	39°19'33.356"N	80°51'58.952"W	8330.42	171.817	6.76	-1.62	-6.57	
15496.00	89.510	159.060	6554.36	8295.22	-8333.83	1220.97	1678396.95	14280547.87	39°19'32.484"N	80°51'58.506"W	8422.80	171.665	1.81	-0.67	1.68	
15591.00	89.780	162.410	6554.95	8390.19	-8423.50	1252.31	1678428.27	14280458.24	39°19'31.597"N	80°51'56.109"W	8516.08	171.544	3.54	0.28	3.53	
15686.00	90.250	159.400	6554.93	8485.17	-8513.26	1283.38	1678459.34	14280368.51	39°19'30.710"N	80°51'55.715"W	8609.45	171.427	3.21	0.43	-3.17	
15781.00	88.490	159.960	6555.97	8580.10	-8602.34	1316.37	1678492.31	14280279.47	39°19'29.829"N	80°51'55.297"W	8702.47	171.300	1.94	-1.82	0.59	
15876.00	89.940	162.980	6557.27	8675.08	-8692.39	1346.55	1678522.48	14280189.45	39°19'28.938"N	80°51'54.914"W	8796.07	171.194	3.53	1.53	3.18	
15971.00	90.220	160.480	6557.14	8770.07	-8782.60	1376.33	1678552.25	14280099.28	39°19'28.046"N	80°51'54.537"W	8889.79	171.094	2.65	0.23	-2.63	
16065.00	89.820	156.050	6557.11	8863.88	-8869.89	1411.13	1678587.04	14280012.02	39°19'27.183"N	80°51'54.096"W	8981.44	170.960	4.73	-0.43	-4.71	
16160.00	89.170	156.180	6557.95	8958.43	-8956.75	1449.59	1678625.48	14279925.20	39°19'26.324"N	80°51'53.608"W	9073.30	170.807	0.70	-0.69	0.14	
16186.00	89.170	156.180	6558.32	8984.31	-8980.54	1460.09	1678635.98	14279901.42	39°19'26.089"N	80°51'53.475"W	9098.46	170.765	0.00	0.00	0.00	Projected MD at TD: 16186'



Actual Wellpath Report

Horst Unit 3H AWP Proj: 16184'
Page 9 of 11



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #05
Area	Tyler County, WV	Well	Horst Unit 3H
Field	Tyler	Wellbore	Horst Unit 3H AWB
Facility	Meredith Pad		

HOLE & CASING SECTIONS - Ref Wellbore: Horst Unit 3H AWB Ref Wellpath: Horst Unit 3H AWP Proj: 16184'										
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	End N/S [ft]	Start E/W [ft]	End E/W [ft]	End E/W [ft]
20in Conductor	25.50	105.50	80.00	25.50	105.50	0.00	0.00	0.00	0.01	-0.03
17.5in Open Hole	105.50	831.50	726.00	105.50	831.50	0.01	-0.03	-0.03	-0.62	-0.87
13.375in Casing Surface	25.50	831.50	806.00	25.50	831.50	0.00	0.00	0.00	-0.62	-0.87
12.25in Open Hole	831.50	2612.50	1781.00	831.50	2607.92	-0.62	-0.87	-0.87	78.93	-36.87
9.625in Casing Intermediate	25.50	2612.50	2587.00	25.50	2607.92	0.00	0.00	0.00	78.93	-36.87
8.75in Open Hole	2612.50	6111.50	3499.00	2607.92	5849.02	78.93	237.05	-36.87	237.05	-1252.83
8.5in Open Hole	6111.50	16186.00	10074.50	5849.02	6558.32	237.05	-8980.54	-1252.83	-8980.54	1460.09
5.5in Casing Production	25.50	16186.00	16160.50	25.50	6558.32	0.00	0.00	0.00	-8980.54	1460.09

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Horst Unit 3H - POE - Rev-1	6500.00	-344.20	-1376.51	1675880.51	14288534.30	39°20'51.487"N	80°52'29.418"W	point
Horst Unit 3H - BHL - Rev-1	6523.00	-9065.99	1463.12	1678639.00	14279816.00	39°19'25.244"N	80°51'53.438"W	point
Horst Unit 3H - BHL - Rev-2	6523.00	-9018.52	1447.40	1678623.29	14279863.45	39°19'25.713"N	80°51'53.637"W	point
Horst Unit 3H - LP - Rev-1	6523.00	-519.30	-1345.64	1675831.37	14288359.27	39°20'49.756"N	80°52'29.028"W	point



Actual Wellpath Report

Horst Unit 3H AWP Proj: 16184'

Page 10 of 11



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #05
Area	Tyler County, WV	Well	Horst Unit 3H
Field	Tyler	Wellbore	Horst Unit 3H AWB
Facility	Meredith Pad		

WELLPATH COMPOSITION - Ref Wellbore: Horst Unit 3H AWB Ref Wellpath: Horst Unit 3H AWP Proj: 16184'			
Start MD (ft)	End MD (ft)	Positional Uncertainty Model	Log Name/Comment
25.50	819.50	Gyrodata standard - Drop gyro or Multi-shot	01 Gyrodala MS Gyro <17-1/2">(100'-809')
819.50	2544.50	ISCWSA MWD, Rev. 4 (Standard)	02 Panther EM <12-1/4">(809')891'-2534'
2544.50	6051.50	ISCWSA MWD, Rev. 4 (Standard)	03 Panther EM <8-3/4">(2534')2625'-6041'
6051.50	16160.00	BHI AutoTrak Curve (Short)	04 BH AT Curve <8-1/2">(6051.5')(6086'-16160')
16160.00	16166.00	Blind Drilling (std)	Protection to bit
			Horst Unit 3H AWB
			Horst Unit 3H AWB
			Horst Unit 3H AWB
			Horst Unit 3H AWB



Actual Wellpath Report

Horst Unit 3H AWP Proj: 16184'

Page 11 of 11



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #05
Area	Tyler County, WV	Well	Horst Unit 3H
Field	Tyler	Wellbore	Horst Unit 3H AWB
Facility	Meredith Pad		

COMMENTS

Wellpath general comments
 API: 47-095-02531-0000
 BHI Job #: 109653319
 Rig: H&P 317
 Duration: 02/10/2019-02/16/2019
 Gyrodatta MS Gyro <17-1/2">(100'-809')
 Panther EM <12-1/4">(809')(891'-2534')
 Panther EM <8-3/4">(2534')(2625'-6041')
 BH AT Curve <8-1/2">(6051.5')(6086'-16160')
 Middlesex: 6699' MD
 Burkett: 6892' MD
 Tully: 6977' MD
 Marcellus POE: 7098' MD
 Projected MD at TD: 16186'