

ANTERO RESOURCES CORPORATION

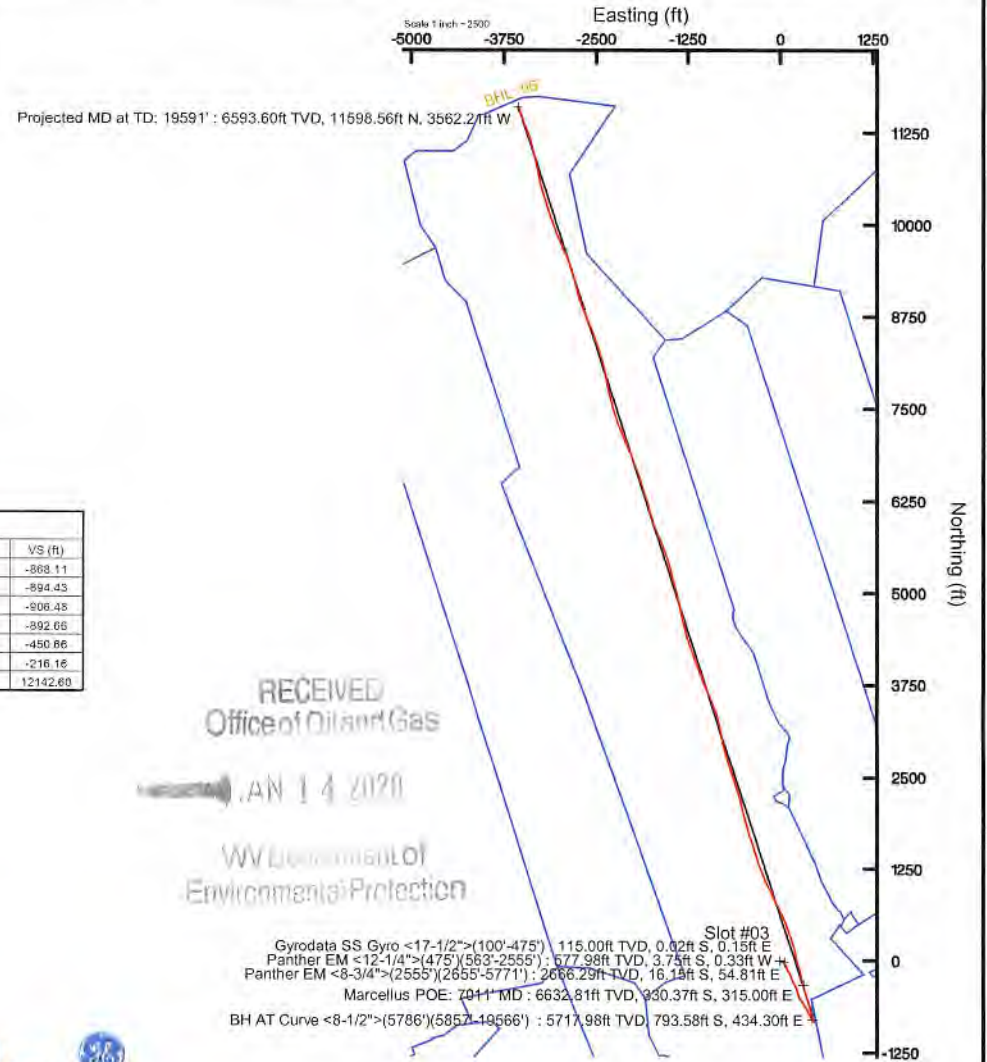
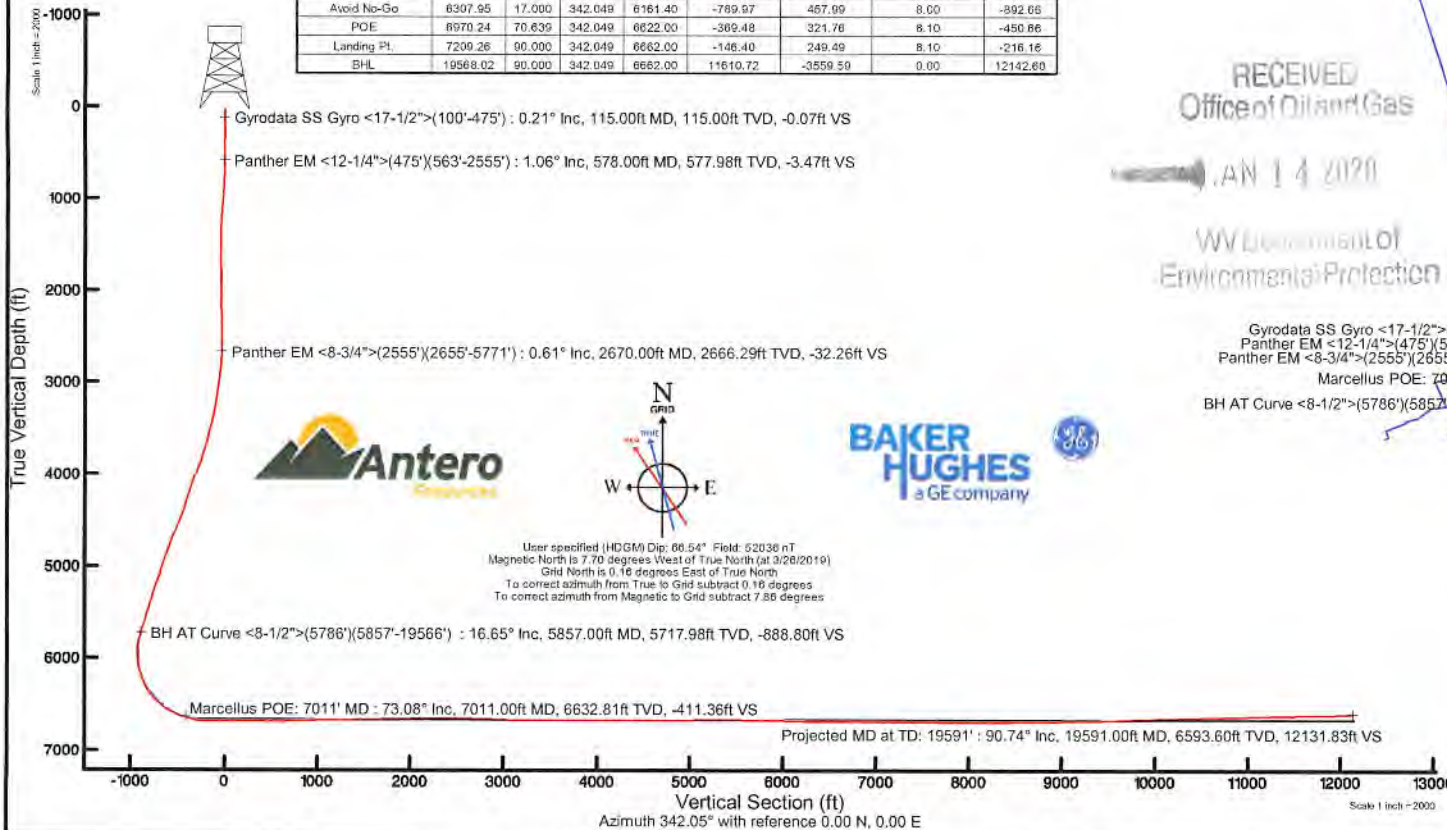
Location: Tyler County, WV Slot: Slot #03
 Field: Tyler Well: Braden Unit 3H
 Facility: Alta Pad Wellbore: Braden Unit 3H PWB

Plot reference wellpath is Braden Unit 3H PWB Rev-A.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to H&P 519 (RKB)	North Reference: Grid north
Measured depths are referenced to H&P 519 (RKB)	Scale: True distance
H&P 519 (RKB) to Mean Sea Level: 857 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot: Slot #03): -827 feet	Created by: delaset on 2019-04-04
Coordinates are in feet referenced to Slot	Database: WA_MPL_EasternUS_Defn

Location Information						
Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Alta Pad		1711946.826	14305610.532	39°23'39.580"N	80°44'48.520"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Slot #03	-19.21	5.55	1711952.373	14305591.331	39°23'39.390"N	80°44'48.450"W
H&P 519 (RKB) to Ground level (At Slot: Slot #03)				30ft		
Mean Sea Level to Ground level (At Slot: Slot #03)				-827ft		
H&P 519 (RKB) to Mean Sea Level				857ft		

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #03	Braden Unit 3H	Braden Unit 3H AWB	Braden Unit 3H AWP Proj: 19591'
Slot #03	Braden Unit 3H	Braden Unit 3H PWB	Braden Unit 3H PWB Rev-A.0

Well Profile Data								
Design Comment	MD (ft)	Inc (")	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	5786.00	18.000	149.960	5690.20	-423.76	423.76	1.80	-868.11
Proj. To Bottom	5879.00	15.520	152.340	5739.25	-798.71	436.74	2.77	-894.43
End of 3D Arc	5928.67	14.038	137.834	5787.29	-809.07	443.87	8.00	-906.45
Avoid No-Go	6307.95	17.000	342.049	6161.40	-789.97	467.99	8.00	-892.65
POE	6970.24	70.639	342.049	6622.00	-309.48	321.76	8.10	-450.86
Landing Pt.	7200.26	90.000	342.049	6662.00	-146.40	249.49	8.10	-216.16
BHL	19568.02	90.000	342.049	6662.00	11610.72	-3559.59	0.00	12142.80



API: 47-095-02503-0000
 BHI Job #: 109730862
 Rig: H&P 519
 Duration: 03/28/2019-04/01/2019



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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Tyler County, WV	Well	Braden Unit 3H
Field	Tyler	Wellbore	Braden Unit 3H AWB
Facility	Alta Pad		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Delaset
Scale	0.999606	Report Generated	4/4/2019 at 11:39:06 AM
Convergence at slot	0.16° East	Database/Source file	WA_MPL_EasternUS_Defn/Braden_Unit_3H_AWP_Proj_19591_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-19.21	5.55	1711952.37	14305591.33	39°23'39.390"N	80°44'48.450"W
Facility Reference Pt			1711946.83	14305610.53	39°23'39.580"N	80°44'48.520"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM			
Calculation method	Minimum curvature	H&P 519 (RKB) to Facility Vertical Datum	30.00ft
Horizontal Reference Pt	Slot	H&P 519 (RKB) to Mean Sea Level	857.00ft
Vertical Reference Pt	H&P 519 (RKB)	H&P 519 (RKB) to Ground Level at Slot (Slot #03)	30.00ft
MD Reference Pt	H&P 519 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	342.05°

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Area	Tyler County, WV	Well	Braden Unit 3H
Field	Tyler	Wellbore	Braden Unit 3H AWB
Facility	Alta Pad		

WELLPATH DATA (243 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	97.250	0.00	0.00	0.00	0.00	1711952.37	14305591.33	39°23'39.390"N	80°44'48.450"W	0.00	0.000	0.00	0.00	0.00	
30.00	0.000	97.250	30.00	0.00	0.00	0.00	1711952.37	14305591.33	39°23'39.390"N	80°44'48.450"W	0.00	0.000	0.00	0.00	0.00	
115.00	0.210	97.250	115.00	-0.07	-0.02	0.15	1711952.53	14305591.31	39°23'39.390"N	80°44'48.448"W	0.16	97.250	0.25	0.25	114.41	Gyrodata SS Gyro <17-1/2">(100'-475')
140.00	0.230	105.630	140.00	-0.11	-0.04	0.25	1711952.62	14305591.29	39°23'39.390"N	80°44'48.447"W	0.25	98.917	0.15	0.08	33.52	
165.00	0.270	121.730	165.00	-0.19	-0.08	0.35	1711952.72	14305591.25	39°23'39.389"N	80°44'48.446"W	0.36	103.534	0.32	0.16	64.40	
190.00	0.260	141.920	190.00	-0.28	-0.16	0.43	1711952.80	14305591.17	39°23'39.388"N	80°44'48.445"W	0.46	110.225	0.37	-0.04	80.76	
215.00	0.310	169.360	215.00	-0.40	-0.27	0.48	1711952.85	14305591.06	39°23'39.387"N	80°44'48.444"W	0.55	119.413	0.57	0.20	109.76	
240.00	0.230	213.490	240.00	-0.50	-0.38	0.46	1711952.84	14305590.95	39°23'39.386"N	80°44'48.444"W	0.60	129.202	0.86	-0.32	176.52	
265.00	0.320	197.310	265.00	-0.59	-0.49	0.42	1711952.79	14305590.84	39°23'39.385"N	80°44'48.445"W	0.64	139.523	0.47	0.36	-64.72	
290.00	0.470	211.220	290.00	-0.72	-0.64	0.34	1711952.71	14305590.69	39°23'39.384"N	80°44'48.446"W	0.73	151.953	0.71	0.60	55.64	
315.00	0.420	210.120	315.00	-0.84	-0.81	0.24	1711952.62	14305590.52	39°23'39.382"N	80°44'48.447"W	0.84	163.296	0.20	-0.20	-4.40	
340.00	0.480	211.130	340.00	-0.97	-0.98	0.14	1711952.52	14305590.35	39°23'39.380"N	80°44'48.448"W	0.99	171.706	0.24	0.24	4.04	
365.00	0.440	197.850	365.00	-1.12	-1.16	0.06	1711952.43	14305590.17	39°23'39.379"N	80°44'48.449"W	1.16	177.089	0.45	-0.16	-53.12	
390.00	0.430	196.950	389.99	-1.27	-1.34	0.00	1711952.37	14305589.99	39°23'39.377"N	80°44'48.450"W	1.34	179.910	0.05	-0.04	-3.60	
415.00	0.640	197.970	414.99	-1.46	-1.56	-0.07	1711952.30	14305589.77	39°23'39.375"N	80°44'48.451"W	1.56	182.504	0.84	0.84	4.08	
440.00	0.770	203.170	439.99	-1.70	-1.85	-0.18	1711952.20	14305589.48	39°23'39.372"N	80°44'48.452"W	1.86	185.483	0.58	0.52	20.80	
465.00	0.820	206.120	464.99	-1.96	-2.16	-0.32	1711952.05	14305589.17	39°23'39.369"N	80°44'48.454"W	2.19	188.471	0.26	0.20	11.80	
490.00	0.810	205.150	489.99	-2.22	-2.48	-0.48	1711951.90	14305588.85	39°23'39.365"N	80°44'48.456"W	2.53	190.849	0.07	-0.04	-3.88	
578.00	1.060	149.420	577.98	-3.47	-3.75	-0.33	1711952.05	14305587.58	39°23'39.353"N	80°44'48.454"W	3.76	184.977	1.02	0.28	-63.33	Panther EM <12-1/4">(475')(563'-2555')
668.00	1.290	144.360	667.96	-5.24	-5.29	0.69	1711953.06	14305586.04	39°23'39.338"N	80°44'48.441"W	5.33	172.594	0.28	0.26	-5.62	
757.00	3.800	103.090	756.87	-7.72	-6.77	4.14	1711956.52	14305584.56	39°23'39.323"N	80°44'48.397"W	7.94	148.530	3.32	2.82	-46.37	
849.00	6.610	98.180	848.48	-11.62	-8.22	12.36	1711964.72	14305583.12	39°23'39.308"N	80°44'48.293"W	14.84	123.617	3.09	3.05	-5.34	
938.00	7.280	106.040	936.83	-17.03	-10.50	22.85	1711975.21	14305580.83	39°23'39.286"N	80°44'48.159"W	25.15	114.687	1.30	0.75	8.83	
1033.00	7.380	106.140	1031.05	-23.82	-13.86	34.49	1711986.85	14305577.48	39°23'39.252"N	80°44'48.011"W	37.17	111.894	0.11	0.11	0.11	
1127.00	7.630	105.530	1124.25	-30.64	-17.21	46.30	1711998.66	14305574.13	39°23'39.219"N	80°44'47.861"W	49.40	110.389	0.28	0.27	-0.66	
1222.00	5.030	118.350	1218.66	-37.13	-20.88	56.05	1712008.40	14305570.46	39°23'39.182"N	80°44'47.737"W	59.81	110.430	3.10	-2.74	13.49	
1316.00	2.340	142.600	1312.47	-41.92	-24.36	60.84	1712013.19	14305566.98	39°23'39.148"N	80°44'47.676"W	65.54	111.820	3.25	-2.86	25.80	
1410.00	0.490	192.600	1406.44	-44.08	-26.28	61.92	1712014.27	14305565.07	39°23'39.129"N	80°44'47.662"W	67.26	112.995	2.19	-1.97	53.19	
1504.00	0.890	277.600	1500.43	-44.11	-26.57	61.11	1712013.46	14305564.77	39°23'39.126"N	80°44'47.673"W	66.64	113.501	1.04	0.43	90.43	
1599.00	0.800	307.850	1595.42	-43.24	-26.07	59.85	1712012.20	14305565.27	39°23'39.131"N	80°44'47.689"W	65.28	113.535	0.47	-0.09	31.84	

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Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Tyler County, WV	Well	Braden Unit 3H
Field	Tyler	Wellbore	Braden Unit 3H AWB
Facility	Alta Pad		

WELLPATH DATA (243 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
1693.00	0.910	319.050	1689.41	-42.02	-25.10	58.85	1712011.20	14305566.24	39°23'39.140"N	80°44'47.701"W	63.98	113.101	0.21	0.12	11.91	
1787.00	0.910	316.650	1783.40	-40.65	-23.99	57.84	1712010.19	14305567.35	39°23'39.151"N	80°44'47.714"W	62.62	112.530	0.04	0.00	-2.55	
1881.00	0.880	315.710	1877.39	-39.33	-22.94	56.83	1712009.18	14305568.41	39°23'39.162"N	80°44'47.727"W	61.28	111.979	0.04	-0.03	-1.00	
1975.00	0.880	307.160	1971.38	-38.09	-21.98	55.75	1712008.10	14305569.36	39°23'39.171"N	80°44'47.741"W	59.93	111.520	0.14	0.00	-9.10	
2069.00	1.010	309.270	2065.36	-36.80	-21.02	54.53	1712006.88	14305570.32	39°23'39.181"N	80°44'47.756"W	58.44	111.082	0.14	0.14	2.24	
2163.00	1.360	297.450	2159.34	-35.31	-19.98	52.90	1712005.25	14305571.36	39°23'39.191"N	80°44'47.777"W	56.55	110.694	0.45	0.37	-12.57	
2257.00	0.760	354.370	2253.33	-33.91	-18.85	51.85	1712004.20	14305572.49	39°23'39.202"N	80°44'47.790"W	55.17	109.978	1.21	-0.64	60.55	
2352.00	0.940	39.400	2348.32	-32.87	-17.62	52.28	1712004.63	14305573.72	39°23'39.214"N	80°44'47.785"W	55.17	108.624	0.71	0.19	47.40	
2446.00	1.080	32.400	2442.30	-31.89	-16.28	53.25	1712005.60	14305575.06	39°23'39.228"N	80°44'47.772"W	55.68	106.997	0.20	0.15	-7.45	
2541.00	0.530	87.710	2537.30	-31.44	-15.50	54.16	1712006.52	14305575.84	39°23'39.235"N	80°44'47.761"W	56.34	105.971	0.94	-0.58	58.22	
2570.00	0.290	123.380	2566.30	-31.53	-15.54	54.36	1712006.71	14305575.80	39°23'39.235"N	80°44'47.758"W	56.54	105.951	1.17	-0.83	123.00	
2670.00	0.610	153.600	2666.29	-32.26	-16.15	54.81	1712007.16	14305575.18	39°23'39.229"N	80°44'47.752"W	57.14	106.422	0.39	0.32	30.22	Panther EM <8-3/4">(2555')(2655'-5771')
2765.00	3.270	167.870	2761.23	-35.45	-19.26	55.60	1712007.95	14305572.08	39°23'39.198"N	80°44'47.742"W	58.84	109.102	2.82	2.80	15.02	
2859.00	5.840	144.270	2854.93	-42.68	-25.76	58.96	1712011.31	14305565.58	39°23'39.134"N	80°44'47.700"W	64.34	113.602	3.33	2.73	-25.11	
2953.00	8.080	143.970	2948.23	-53.51	-34.99	65.64	1712017.99	14305556.36	39°23'39.042"N	80°44'47.615"W	74.38	118.058	2.38	2.38	-0.32	
3048.00	8.950	159.630	3042.20	-67.24	-47.32	72.14	1712024.48	14305544.03	39°23'38.920"N	80°44'47.533"W	86.27	123.260	2.60	0.92	16.48	
3142.00	8.140	154.720	3135.16	-81.15	-60.19	77.53	1712029.87	14305531.17	39°23'38.793"N	80°44'47.465"W	98.15	127.824	1.16	-0.86	-5.22	
3241.00	9.860	165.880	3232.94	-96.56	-74.75	82.59	1712034.93	14305516.61	39°23'38.649"N	80°44'47.401"W	111.39	132.147	2.47	1.74	11.27	
3335.00	11.050	157.210	3325.38	-113.57	-90.86	88.04	1712040.38	14305500.51	39°23'38.490"N	80°44'47.332"W	126.52	135.903	2.10	1.27	-9.22	
3429.00	13.060	150.100	3417.31	-132.94	-108.37	96.83	1712049.16	14305483.00	39°23'38.316"N	80°44'47.221"W	145.33	138.221	2.65	2.14	-7.56	
3524.00	14.550	147.750	3509.57	-155.01	-127.77	108.55	1712060.88	14305463.61	39°23'38.124"N	80°44'47.072"W	167.65	139.651	1.68	1.57	-2.47	
3618.00	15.130	148.520	3600.43	-178.37	-148.22	121.25	1712073.58	14305443.17	39°23'37.922"N	80°44'46.911"W	191.50	140.715	0.65	0.62	0.82	
3712.00	16.140	154.570	3690.96	-203.26	-170.48	133.27	1712085.59	14305420.91	39°23'37.701"N	80°44'46.759"W	216.39	141.985	2.04	1.07	6.44	
3806.00	17.250	159.960	3781.00	-230.14	-195.38	143.66	1712095.97	14305396.03	39°23'37.455"N	80°44'46.627"W	242.51	143.674	2.03	1.18	5.73	
3901.00	19.070	164.150	3871.27	-259.73	-223.55	152.72	1712105.04	14305367.87	39°23'37.176"N	80°44'46.513"W	270.73	145.660	2.36	1.92	4.41	
3995.00	22.400	158.730	3959.17	-292.97	-255.02	163.42	1712115.73	14305336.41	39°23'36.865"N	80°44'46.378"W	302.89	147.348	4.09	3.54	-5.77	
4089.00	21.300	153.120	4046.43	-327.72	-286.94	177.64	1712129.94	14305304.50	39°23'36.549"N	80°44'46.198"W	337.48	148.240	2.51	-1.17	-5.97	
4184.00	18.870	146.310	4135.66	-359.56	-315.12	193.96	1712146.26	14305276.33	39°23'36.270"N	80°44'45.991"W	370.03	148.387	3.55	-2.56	-7.17	
4278.00	17.250	146.780	4225.02	-387.64	-339.43	210.03	1712162.32	14305252.03	39°23'36.029"N	80°44'45.787"W	399.16	148.252	1.73	-1.72	0.50	
4372.00	16.230	151.180	4315.04	-413.99	-362.60	224.00	1712176.29	14305228.87	39°23'35.800"N	80°44'45.610"W	426.21	148.294	1.73	-1.09	4.68	

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Area	Tyler County, WV	Well	Braden Unit 3H
Field	Tyler	Wellbore	Braden Unit 3H AWB
Facility	Alta Pad		

WELLPATH DATA (243 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
4466.00	18.340	167.230	4404.84	-441.64	-388.55	233.61	1712185.89	14305202.93	39°23'35.543"N	80°44'45.488"W	453.37	148.984	5.53	2.24	17.07	
4560.00	22.260	169.090	4492.99	-474.05	-420.47	240.25	1712192.53	14305171.03	39°23'35.228"N	80°44'45.405"W	484.27	150.257	4.23	4.17	1.98	
4654.00	24.000	164.440	4579.44	-510.82	-456.38	248.75	1712201.03	14305135.14	39°23'34.873"N	80°44'45.298"W	519.76	151.407	2.68	1.85	-4.95	
4748.00	22.470	153.730	4665.85	-547.72	-490.92	261.84	1712214.11	14305100.61	39°23'34.531"N	80°44'45.132"W	556.38	151.926	4.77	-1.63	-11.39	
4842.00	20.290	148.090	4753.38	-581.32	-520.87	278.41	1712230.67	14305070.67	39°23'34.234"N	80°44'44.923"W	590.60	151.875	3.19	-2.32	-6.00	
4936.00	18.440	143.110	4842.07	-611.20	-546.60	295.95	1712248.20	14305044.95	39°23'33.979"N	80°44'44.700"W	621.57	151.567	2.64	-1.97	-5.30	
5031.00	20.590	147.040	4931.61	-641.55	-572.63	314.06	1712266.31	14305018.92	39°23'33.722"N	80°44'44.470"W	653.10	151.258	2.65	2.26	4.14	
5125.00	19.140	144.770	5020.01	-672.23	-599.09	331.94	1712284.18	14304992.48	39°23'33.460"N	80°44'44.243"W	684.91	151.010	1.75	-1.54	-2.41	
5219.00	19.510	150.300	5108.73	-702.32	-625.32	348.61	1712300.84	14304966.26	39°23'33.200"N	80°44'44.032"W	715.93	150.861	1.99	0.39	5.88	
5313.00	17.900	153.750	5197.76	-731.98	-651.91	362.78	1712315.01	14304939.88	39°23'32.937"N	80°44'43.853"W	746.05	150.905	2.08	-1.71	3.67	
5408.00	17.310	160.330	5288.32	-760.56	-678.31	373.99	1712326.22	14304913.29	39°23'32.675"N	80°44'43.711"W	774.58	151.130	2.18	-0.62	6.93	
5502.00	16.570	153.040	5378.25	-787.78	-703.43	384.78	1712337.00	14304888.18	39°23'32.427"N	80°44'43.574"W	801.79	151.321	2.39	-0.79	-7.76	
5596.00	15.700	147.700	5468.55	-813.34	-726.13	397.65	1712349.87	14304865.49	39°23'32.202"N	80°44'43.411"W	827.89	151.294	1.83	-0.93	-5.68	
5691.00	17.250	155.030	5559.66	-839.78	-749.77	410.47	1712362.68	14304841.86	39°23'31.968"N	80°44'43.249"W	854.77	151.301	2.73	1.63	7.72	
5786.00	18.000	149.960	5650.20	-868.11	-775.25	423.76	1712375.97	14304816.39	39°23'31.716"N	80°44'43.080"W	883.51	151.338	1.80	0.79	-5.34	
5857.00	16.650	150.280	5717.98	-888.80	-793.58	434.30	1712386.50	14304798.07	39°23'31.535"N	80°44'42.947"W	904.65	151.310	1.91	-1.90	0.45	BH AT Curve <8-1/2">(5786)(5857-19566)
5895.00	14.560	148.740	5754.58	-898.78	-802.39	439.48	1712391.68	14304789.26	39°23'31.447"N	80°44'42.881"W	914.86	151.290	5.61	-5.50	-4.05	
5942.00	10.670	132.270	5800.45	-908.31	-810.37	445.77	1712397.96	14304781.28	39°23'31.368"N	80°44'42.801"W	924.89	151.186	11.20	-8.28	-35.04	
5990.00	7.590	107.700	5847.85	-914.02	-814.33	452.08	1712404.27	14304777.33	39°23'31.329"N	80°44'42.721"W	931.40	150.963	10.21	-6.42	-51.19	
6037.00	4.380	76.870	5894.60	-915.98	-814.86	456.79	1712408.98	14304776.79	39°23'31.324"N	80°44'42.661"W	934.16	150.726	9.44	-6.83	-65.60	
6084.00	1.310	75.440	5941.54	-916.16	-814.32	459.05	1712411.24	14304777.33	39°23'31.329"N	80°44'42.632"W	934.80	150.589	6.53	-6.53	-3.04	
6131.00	2.740	73.640	5988.51	-916.22	-813.87	460.65	1712412.84	14304777.78	39°23'31.333"N	80°44'42.612"W	935.19	150.490	3.05	3.04	-3.83	
6179.00	4.600	4.070	6036.43	-914.47	-811.63	461.89	1712414.08	14304780.03	39°23'31.355"N	80°44'42.596"W	933.85	150.356	9.28	3.87	-144.94	
6226.00	8.750	346.500	6083.10	-909.16	-806.27	461.19	1712413.38	14304785.38	39°23'31.408"N	80°44'42.605"W	928.85	150.230	9.74	8.83	-37.38	
6273.00	12.390	343.650	6129.30	-900.55	-797.95	458.93	1712411.13	14304793.70	39°23'31.491"N	80°44'42.633"W	920.51	150.095	7.82	7.74	-6.06	
6320.00	16.500	342.590	6174.80	-888.83	-786.74	455.52	1712407.71	14304804.91	39°23'31.602"N	80°44'42.676"W	909.09	149.929	8.76	8.74	-2.26	
6368.00	20.840	339.710	6220.27	-873.47	-772.22	450.51	1712402.71	14304819.42	39°23'31.745"N	80°44'42.739"W	894.03	149.741	9.24	9.04	-6.00	
6415.00	24.810	337.600	6263.58	-855.28	-755.25	443.85	1712396.05	14304836.38	39°23'31.913"N	80°44'42.824"W	876.02	149.558	8.62	8.45	-4.49	
6462.00	28.940	337.220	6305.49	-834.11	-735.64	435.69	1712387.89	14304855.98	39°23'32.107"N	80°44'42.927"W	854.98	149.364	8.79	8.79	-0.81	
6509.00	33.040	339.110	6345.78	-809.97	-713.18	426.71	1712378.92	14304878.44	39°23'32.329"N	80°44'43.040"W	831.09	149.107	8.96	8.72	4.02	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Tyler County, WV	Well	Braden Unit 3H
Field	Tyler	Wellbore	Braden Unit 3H AWB
Facility	Alta Pad		

WELLPATH DATA (243 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
6557.00	36.720	342.630	6385.15	-782.54	-687.25	417.76	1712369.97	14304904.36	39°23'32.586"N	80°44'43.154"W	804.26	148.706	8.74	7.67	7.33	
6594.00†	40.211	344.637	6414.12	-759.54	-665.16	411.29	1712363.50	14304926.43	39°23'32.804"N	80°44'43.235"W	782.05	148.270	10.02	9.44	5.42	Middlesex: 6594' MD
6604.00	41.160	345.130	6421.70	-753.03	-658.87	409.59	1712361.80	14304932.72	39°23'32.867"N	80°44'43.257"W	775.81	148.133	10.02	9.49	4.93	
6651.00	45.740	345.400	6455.81	-720.77	-627.62	401.38	1712353.59	14304963.96	39°23'33.176"N	80°44'43.360"W	744.99	147.400	9.75	9.74	0.57	
6698.00	50.140	344.760	6487.29	-685.93	-593.91	392.39	1712344.60	14304997.66	39°23'33.509"N	80°44'43.473"W	711.83	146.548	9.42	9.36	-1.36	
6745.00	53.920	343.650	6516.20	-648.91	-558.27	382.29	1712334.52	14305033.28	39°23'33.862"N	80°44'43.601"W	676.62	145.597	8.26	8.04	-2.36	
6792.00	57.690	343.440	6542.61	-610.06	-520.99	371.28	1712323.51	14305070.55	39°23'34.230"N	80°44'43.740"W	639.75	144.525	8.03	8.02	-0.45	
6799.00†	58.213	343.389	6546.33	-604.13	-515.31	369.59	1712321.82	14305076.23	39°23'34.287"N	80°44'43.761"W	634.14	144.351	7.50	7.48	-0.73	Burkett: 6799' MD
6840.00	61.280	343.100	6566.98	-568.72	-481.40	359.38	1712311.61	14305110.12	39°23'34.622"N	80°44'43.890"W	600.75	143.257	7.50	7.48	-0.70	
6861.00†	62.446	343.412	6576.89	-550.21	-463.66	354.04	1712306.28	14305127.85	39°23'34.798"N	80°44'43.957"W	583.38	142.635	5.70	5.55	1.49	Tully: 6861' MD
6887.00	63.890	343.790	6588.62	-527.02	-441.41	347.50	1712299.73	14305150.10	39°23'35.018"N	80°44'44.040"W	561.78	141.789	5.70	5.55	1.45	
6934.00	68.120	343.640	6607.73	-484.11	-400.20	335.46	1712287.70	14305191.29	39°23'35.425"N	80°44'44.192"W	522.20	140.030	9.00	9.00	-0.32	
6970.00†	71.023	343.648	6620.29	-450.39	-367.84	325.96	1712278.20	14305223.64	39°23'35.745"N	80°44'44.311"W	491.48	138.454	8.06	8.06	0.02	Hamilton: 6970' MD
6981.00	71.910	343.650	6623.79	-439.96	-357.83	323.02	1712275.27	14305233.65	39°23'35.844"N	80°44'44.348"W	482.06	137.927	8.06	8.06	0.02	
7011.00†	73.073	343.775	6632.81	-411.36	-330.37	315.00	1712267.25	14305261.10	39°23'36.116"N	80°44'44.450"W	456.47	136.364	3.92	3.90	0.42	Marcellus POE: 7011' MD
7029.00	73.780	343.850	6637.95	-394.12	-313.80	310.19	1712262.44	14305277.66	39°23'36.280"N	80°44'44.510"W	441.23	135.331	3.92	3.90	0.41	
7076.00	75.310	345.080	6650.47	-348.86	-270.15	298.06	1712250.31	14305321.28	39°23'36.712"N	80°44'44.663"W	402.27	132.189	4.12	3.26	2.62	
7123.00	78.100	346.820	6661.28	-303.23	-225.79	286.96	1712239.22	14305365.63	39°23'37.150"N	80°44'44.803"W	365.14	128.197	6.94	5.94	3.70	
7170.00	81.910	347.560	6669.44	-257.14	-180.66	276.70	1712228.96	14305410.74	39°23'37.597"N	80°44'44.932"W	330.46	123.141	8.25	8.11	1.57	
7217.00	87.970	346.520	6673.58	-210.53	-135.06	266.20	1712218.47	14305456.33	39°23'38.048"N	80°44'45.064"W	298.50	116.901	13.08	12.89	-2.21	
7264.00	90.030	344.220	6674.40	-163.62	-89.60	254.34	1712206.61	14305501.77	39°23'38.497"N	80°44'45.214"W	269.65	109.406	6.57	4.38	-4.89	
7312.00	90.030	343.650	6674.38	-115.64	-43.47	241.05	1712193.33	14305547.88	39°23'38.954"N	80°44'45.381"W	244.94	100.222	1.19	0.00	-1.19	
7406.00	89.970	347.860	6674.38	-21.86	47.62	217.93	1712170.21	14305638.93	39°23'39.855"N	80°44'45.672"W	223.07	77.674	4.48	-0.06	4.48	
7501.00	89.940	347.520	6674.45	72.68	140.43	197.67	1712149.97	14305731.71	39°23'40.773"N	80°44'45.927"W	242.48	54.608	0.36	-0.03	-0.36	
7596.00	89.970	343.930	6674.52	166.47	231.52	174.50	1712126.80	14305822.76	39°23'41.673"N	80°44'46.219"W	289.91	37.006	3.82	0.03	-3.82	
7690.00	90.740	341.610	6673.93	261.45	322.25	146.36	1712098.68	14305913.45	39°23'42.571"N	80°44'46.574"W	353.93	24.427	2.57	0.81	-2.44	
7784.00	90.490	340.830	6672.93	355.44	411.24	116.10	1712068.43	14306002.40	39°23'43.451"N	80°44'46.956"W	427.31	15.766	0.87	-0.27	-0.83	
7879.00	90.220	338.320	6672.34	450.34	500.25	82.95	1712035.29	14306091.39	39°23'44.332"N	80°44'47.376"W	507.08	9.415	2.66	-0.28	-2.64	
7973.00	90.800	335.690	6671.50	543.96	586.77	46.24	1711998.59	14306177.87	39°23'45.188"N	80°44'47.840"W	588.59	4.505	2.86	0.62	-2.80	
8068.00	90.990	334.670	6670.02	638.27	672.99	6.36	1711958.73	14306264.05	39°23'46.041"N	80°44'48.345"W	673.02	0.542	1.09	0.20	-1.07	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Tyler County, WV	Well	Braden Unit 3H
Field	Tyler	Wellbore	Braden Unit 3H AWB
Facility	Alta Pad		

WELLPATH DATA (243 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
8162.00	91.450	335.100	6668.01	731.51	758.08	-33.52	1711918.86	14306349.11	39°23'46.883"N	80°44'48.850"W	758.82	357.468	0.67	0.49	0.46	
8257.00	90.650	332.200	6666.27	825.47	843.18	-75.68	1711876.72	14306434.18	39°23'47.726"N	80°44'49.384"W	846.57	354.871	3.17	-0.84	-3.05	
8351.00	91.630	334.700	6664.40	918.38	927.25	-117.68	1711834.74	14306518.21	39°23'48.558"N	80°44'49.916"W	934.69	352.767	2.86	1.04	2.66	
8446.00	90.920	334.210	6662.29	1012.53	1012.94	-158.64	1711793.80	14306603.87	39°23'49.406"N	80°44'50.435"W	1025.29	351.099	0.91	-0.75	-0.52	
8540.00	90.580	336.190	6661.06	1105.84	1098.26	-198.06	1711754.39	14306689.15	39°23'50.250"N	80°44'50.934"W	1115.97	349.777	2.14	-0.36	2.11	
8635.00	90.520	338.050	6660.15	1200.48	1185.78	-234.99	1711717.47	14306776.64	39°23'51.116"N	80°44'51.401"W	1208.84	348.790	1.96	-0.06	1.96	
8730.00	91.320	340.010	6658.62	1295.33	1274.47	-268.99	1711683.49	14306865.29	39°23'51.994"N	80°44'51.831"W	1302.54	348.082	2.23	0.84	2.06	
8824.00	91.320	341.200	6656.46	1389.28	1363.11	-300.19	1711652.30	14306953.90	39°23'52.871"N	80°44'52.225"W	1395.77	347.580	1.27	0.00	1.27	
8918.00	91.450	341.930	6654.18	1483.24	1452.26	-329.91	1711622.59	14307043.01	39°23'53.753"N	80°44'52.601"W	1489.26	347.201	0.79	0.14	0.78	
9013.00	91.480	342.930	6651.75	1578.21	1542.79	-358.58	1711593.94	14307133.52	39°23'54.648"N	80°44'52.963"W	1583.92	346.916	1.05	0.03	1.05	
9108.00	90.800	341.480	6649.86	1673.19	1633.23	-387.60	1711564.92	14307223.91	39°23'55.543"N	80°44'53.329"W	1678.59	346.649	1.69	-0.72	-1.53	
9202.00	90.990	342.230	6648.40	1767.17	1722.54	-416.87	1711535.66	14307313.19	39°23'56.426"N	80°44'53.699"W	1772.27	346.395	0.82	0.20	0.80	
9297.00	91.420	344.660	6646.40	1862.12	1813.58	-443.94	1711508.61	14307404.19	39°23'57.327"N	80°44'54.040"W	1867.12	346.245	2.60	0.45	2.56	
9391.00	91.420	344.840	6644.07	1955.99	1904.24	-468.65	1711483.91	14307494.82	39°23'58.224"N	80°44'54.352"W	1961.06	346.174	0.19	0.00	0.19	
9485.00	90.550	345.320	6642.45	2049.84	1995.06	-492.85	1711459.72	14307585.60	39°23'59.122"N	80°44'54.657"W	2055.03	346.124	1.06	-0.93	0.51	
9580.00	90.460	345.630	6641.62	2144.67	2087.02	-516.68	1711435.90	14307677.52	39°24'00.031"N	80°44'54.957"W	2150.02	346.095	0.34	-0.09	0.33	
9674.00	90.800	346.230	6640.58	2238.44	2178.19	-539.53	1711413.06	14307768.66	39°24'00.933"N	80°44'55.245"W	2244.01	346.088	0.73	0.36	0.64	
9768.00	90.150	343.940	6639.80	2332.30	2269.01	-563.72	1711388.88	14307859.45	39°24'01.831"N	80°44'55.550"W	2337.99	346.048	2.53	-0.69	-2.44	
9862.00	90.180	343.450	6639.53	2426.26	2359.23	-590.11	1711362.50	14307949.63	39°24'02.724"N	80°44'55.883"W	2431.91	345.957	0.52	0.03	-0.52	
9957.00	89.140	341.390	6640.10	2521.25	2449.79	-618.80	1711333.82	14308040.15	39°24'03.620"N	80°44'56.245"W	2526.73	345.824	2.43	-1.09	-2.17	
10051.00	88.890	342.280	6641.71	2615.24	2539.09	-648.10	1711304.53	14308129.41	39°24'04.503"N	80°44'56.615"W	2620.50	345.681	0.98	-0.27	0.95	
10146.00	88.520	342.520	6643.86	2710.21	2629.62	-676.82	1711275.82	14308219.91	39°24'05.399"N	80°44'56.978"W	2715.32	345.566	0.46	-0.39	0.25	
10240.00	88.120	343.230	6646.61	2804.16	2719.41	-704.49	1711248.17	14308309.67	39°24'06.287"N	80°44'57.327"W	2809.18	345.476	0.87	-0.43	0.76	
10335.00	87.440	343.700	6650.29	2899.06	2810.41	-731.50	1711221.16	14308400.63	39°24'07.187"N	80°44'57.668"W	2904.05	345.411	0.87	-0.72	0.49	
10429.00	87.910	345.930	6654.11	2992.87	2901.05	-756.10	1711196.57	14308491.23	39°24'08.083"N	80°44'57.978"W	2997.96	345.392	2.42	0.50	2.37	
10524.00	87.780	346.200	6657.68	3087.57	2993.19	-778.96	1711173.72	14308583.34	39°24'08.995"N	80°44'58.266"W	3092.89	345.413	0.32	-0.14	0.28	
10618.00	90.090	352.050	6659.43	3180.79	3085.44	-796.68	1711156.00	14308675.55	39°24'09.907"N	80°44'58.489"W	3186.64	345.522	6.69	2.46	6.22	
10713.00	90.550	351.450	6658.90	3274.43	3179.45	-810.32	1711142.38	14308769.53	39°24'10.836"N	80°44'58.659"W	3281.09	345.702	0.80	0.48	-0.63	
10807.00	90.310	346.530	6658.19	3367.71	3271.69	-828.26	1711124.44	14308861.73	39°24'11.749"N	80°44'58.884"W	3374.91	345.793	5.24	-0.26	-5.23	
10902.00	89.510	340.090	6658.34	3462.63	3362.64	-855.53	1711097.18	14308952.64	39°24'12.648"N	80°44'59.229"W	3469.77	345.726	6.83	-0.84	-6.78	

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Braden Unit 3H AWP Proj: 19591'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Tyler County, WV	Well	Braden Unit 3H
Field	Tyler	Wellbore	Braden Unit 3H AWP
Facility	Alta Pad		

WELLPATH DATA (243 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
10996.00	89.600	337.060	6659.07	3556.45	3450.13	-889.86	1711062.86	14309040.10	39°24'13.514"N	80°44'59.663"W	3563.04	345.537	3.22	0.10	-3.22	
11091.00	89.600	336.640	6659.74	3651.05	3537.48	-927.21	1711025.53	14309127.41	39°24'14.378"N	80°45'00.135"W	3656.98	345.313	0.44	0.00	-0.44	
11185.00	90.000	336.390	6660.06	3744.61	3623.69	-964.67	1710988.09	14309213.59	39°24'15.231"N	80°45'00.610"W	3749.90	345.093	0.50	0.43	-0.27	
11280.00	89.910	337.320	6660.14	3839.22	3711.05	-1002.01	1710950.76	14309300.91	39°24'16.096"N	80°45'01.082"W	3843.94	344.890	0.98	-0.09	0.98	
11374.00	89.720	337.110	6660.44	3932.89	3797.71	-1038.41	1710914.37	14309387.54	39°24'16.953"N	80°45'01.543"W	3937.12	344.707	0.30	-0.20	-0.22	
11469.00	89.850	338.860	6660.80	4027.64	3885.78	-1074.02	1710878.78	14309475.57	39°24'17.825"N	80°45'01.994"W	4031.48	344.549	1.85	0.14	1.84	
11564.00	91.260	341.880	6659.88	4122.58	3975.24	-1105.93	1710846.88	14309565.00	39°24'18.710"N	80°45'02.397"W	4126.21	344.453	3.51	1.48	3.18	
11658.00	89.940	339.680	6658.89	4216.55	4063.99	-1136.87	1710815.95	14309653.71	39°24'19.588"N	80°45'02.788"W	4220.01	344.371	2.73	-1.40	-2.34	
11753.00	91.050	340.530	6658.07	4311.49	4153.32	-1169.20	1710783.64	14309743.00	39°24'20.471"N	80°45'03.197"W	4314.75	344.278	1.47	1.17	0.89	
11847.00	89.690	339.620	6657.47	4405.43	4241.68	-1201.23	1710751.62	14309831.33	39°24'21.346"N	80°45'03.602"W	4408.50	344.188	1.74	-1.45	-0.97	
11942.00	90.460	341.230	6657.34	4500.38	4331.19	-1233.06	1710719.80	14309920.80	39°24'22.231"N	80°45'04.004"W	4503.29	344.109	1.88	0.81	1.69	
12036.00	89.630	342.380	6657.27	4594.38	4420.49	-1262.41	1710690.46	14310010.07	39°24'23.115"N	80°45'04.375"W	4597.21	344.062	1.51	-0.88	1.22	
12130.00	89.510	345.800	6657.97	4688.30	4510.87	-1288.17	1710664.71	14310100.41	39°24'24.009"N	80°45'04.700"W	4691.20	344.062	3.64	-0.13	3.64	
12225.00	90.400	348.080	6658.05	4782.95	4603.41	-1309.64	1710643.25	14310192.91	39°24'24.924"N	80°45'04.970"W	4786.07	344.119	2.58	0.94	2.40	
12319.00	90.430	347.560	6657.37	4876.47	4695.29	-1329.47	1710623.43	14310284.76	39°24'25.832"N	80°45'05.219"W	4879.88	344.191	0.55	0.03	-0.55	
12414.00	90.430	347.120	6656.65	4971.07	4787.97	-1350.29	1710602.62	14310377.41	39°24'26.749"N	80°45'05.481"W	4974.73	344.251	0.46	0.00	-0.46	
12508.00	90.650	346.870	6655.77	5064.71	4879.56	-1371.44	1710581.47	14310468.96	39°24'27.655"N	80°45'05.748"W	5068.62	344.302	0.35	0.23	-0.27	
12603.00	90.180	345.570	6655.08	5159.45	4971.82	-1394.07	1710558.86	14310561.18	39°24'28.567"N	80°45'06.033"W	5163.57	344.337	1.46	-0.49	-1.37	
12698.00	90.150	345.240	6654.81	5254.29	5063.75	-1418.01	1710534.93	14310653.08	39°24'29.477"N	80°45'06.334"W	5258.55	344.356	0.35	-0.03	-0.35	
12792.00	90.000	344.800	6654.68	5348.16	5154.56	-1442.31	1710510.64	14310743.85	39°24'30.375"N	80°45'06.641"W	5352.54	344.368	0.49	-0.16	-0.47	
12886.00	89.480	344.940	6655.11	5442.05	5245.30	-1466.84	1710486.11	14310834.55	39°24'31.272"N	80°45'06.950"W	5446.54	344.376	0.57	-0.55	0.15	
12981.00	89.690	345.590	6655.80	5536.90	5337.17	-1491.00	1710461.96	14310926.39	39°24'32.181"N	80°45'07.255"W	5541.52	344.392	0.72	0.22	0.68	
13076.00	89.110	343.300	6656.79	5631.80	5428.68	-1516.47	1710436.50	14311017.86	39°24'33.086"N	80°45'07.576"W	5636.51	344.393	2.49	-0.61	-2.41	
13170.00	89.110	341.240	6658.25	5725.79	5518.20	-1545.10	1710407.89	14311107.35	39°24'33.971"N	80°45'07.938"W	5730.43	344.358	2.19	0.00	-2.19	
13265.00	89.260	339.170	6659.60	5820.72	5607.57	-1577.26	1710375.74	14311196.68	39°24'34.856"N	80°45'08.344"W	5825.17	344.290	2.18	0.16	-2.18	
13359.00	89.200	335.730	6660.87	5914.40	5694.37	-1613.30	1710339.71	14311283.44	39°24'35.714"N	80°45'08.800"W	5918.49	344.182	3.66	-0.06	-3.66	
13454.00	88.890	337.710	6662.45	6008.97	5781.61	-1650.84	1710302.19	14311370.66	39°24'36.578"N	80°45'09.276"W	6012.68	344.064	2.11	-0.33	2.08	
13548.00	87.910	338.110	6665.08	6102.68	5868.68	-1686.18	1710266.86	14311457.69	39°24'37.439"N	80°45'09.723"W	6106.11	343.970	1.13	-1.04	0.43	
13643.00	88.340	340.710	6668.19	6197.52	5957.56	-1719.57	1710233.49	14311546.53	39°24'38.319"N	80°45'10.145"W	6200.76	343.900	2.77	0.45	2.74	
13737.00	88.650	343.040	6670.65	6291.48	6046.85	-1748.80	1710204.27	14311635.79	39°24'39.202"N	80°45'10.514"W	6294.66	343.870	2.50	0.33	2.48	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Tyler County, WV	Well	Braden Unit 3H
Field	Tyler	Wellbore	Braden Unit 3H AWB
Facility	Alta Pad		

WELLPATH DATA (243 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
13832.00	89.940	346.650	6671.82	6386.35	6138.53	-1773.62	1710179.45	14311727.43	39°24'40.109"N	80°45'10.827"W	6389.62	343.884	4.03	1.36	3.80	
13926.00	90.180	343.570	6671.73	6480.20	6229.36	-1797.78	1710155.31	14311818.22	39°24'41.007"N	80°45'11.132"W	6483.59	343.902	3.29	0.26	-3.28	
14021.00	90.060	339.850	6671.53	6575.18	6319.54	-1827.58	1710125.51	14311908.37	39°24'41.899"N	80°45'11.509"W	6578.50	343.870	3.92	-0.13	-3.92	
14115.00	90.250	341.540	6671.27	6669.15	6408.25	-1858.66	1710094.45	14311997.05	39°24'42.777"N	80°45'11.901"W	6672.36	343.826	1.81	0.20	1.80	
14210.00	90.060	343.610	6671.01	6764.14	6498.89	-1887.11	1710066.01	14312087.65	39°24'43.673"N	80°45'12.261"W	6767.33	343.808	2.19	-0.20	2.18	
14305.00	90.090	342.700	6670.89	6859.12	6589.81	-1914.64	1710038.50	14312178.53	39°24'44.573"N	80°45'12.608"W	6862.32	343.799	0.96	0.03	-0.96	
14399.00	90.030	338.520	6670.79	6953.07	6678.46	-1945.84	1710007.31	14312267.15	39°24'45.450"N	80°45'13.003"W	6956.16	343.756	4.45	-0.06	-4.45	
14494.00	90.090	337.670	6670.69	7047.85	6766.60	-1981.28	1709971.88	14312355.25	39°24'46.322"N	80°45'13.451"W	7050.70	343.680	0.90	0.06	-0.89	
14588.00	90.310	337.450	6670.36	7141.56	6853.48	-2017.16	1709936.01	14312442.10	39°24'47.181"N	80°45'13.905"W	7144.17	343.599	0.33	0.23	-0.23	
14683.00	90.090	336.640	6670.03	7236.11	6940.63	-2054.97	1709898.22	14312529.21	39°24'48.044"N	80°45'14.384"W	7238.46	343.507	1.92	-0.23	-1.91	
14777.00	89.780	337.160	6670.14	7329.65	7026.76	-2092.60	1709860.60	14312615.31	39°24'48.896"N	80°45'14.861"W	7331.74	343.416	1.65	-0.33	1.62	
14872.00	89.860	337.520	6670.60	7424.33	7114.43	-2129.20	1709824.02	14312702.94	39°24'49.764"N	80°45'15.324"W	7426.21	343.339	0.40	-0.13	0.38	
14966.00	88.830	338.080	6671.84	7518.07	7201.45	-2164.71	1709788.52	14312789.93	39°24'50.625"N	80°45'15.773"W	7519.77	343.270	1.07	-0.88	0.60	
15061.00	88.310	338.480	6674.21	7612.83	7289.68	-2199.86	1709753.39	14312878.12	39°24'51.498"N	80°45'16.218"W	7614.38	343.207	0.69	-0.55	0.42	
15155.00	88.430	341.440	6676.89	7706.72	7377.94	-2232.05	1709721.20	14312966.35	39°24'52.371"N	80°45'16.625"W	7708.19	343.168	3.15	0.13	3.15	
15250.00	88.980	344.400	6679.04	7801.67	7468.72	-2259.95	1709693.32	14313057.09	39°24'53.269"N	80°45'16.977"W	7803.15	343.165	3.17	0.58	3.12	
15344.00	89.940	345.650	6679.92	7895.54	7559.52	-2284.23	1709669.04	14313147.86	39°24'54.167"N	80°45'17.284"W	7897.09	343.187	1.68	1.02	1.33	
15438.00	90.030	345.330	6679.95	7989.37	7650.52	-2307.78	1709645.50	14313238.82	39°24'55.067"N	80°45'17.581"W	7991.02	343.214	0.35	0.10	-0.34	
15533.00	90.060	345.940	6679.87	8084.18	7742.55	-2331.35	1709621.94	14313330.82	39°24'55.977"N	80°45'17.878"W	8085.93	343.242	0.64	0.03	0.64	
15627.00	90.620	348.990	6679.31	8177.75	7834.30	-2351.75	1709601.55	14313422.53	39°24'56.884"N	80°45'18.134"W	8179.67	343.291	3.30	0.60	3.24	
15722.00	90.770	351.100	6678.16	8271.81	7927.86	-2368.17	1709585.14	14313516.05	39°24'57.809"N	80°45'18.340"W	8274.00	343.368	2.23	0.16	2.22	
15816.00	90.620	348.440	6677.02	8364.95	8020.35	-2384.87	1709568.45	14313608.50	39°24'58.724"N	80°45'18.550"W	8367.41	343.440	2.83	-0.16	-2.83	
15911.00	90.650	345.600	6675.97	8459.57	8112.90	-2406.20	1709547.13	14313701.02	39°24'59.639"N	80°45'18.819"W	8462.21	343.480	2.99	0.03	-2.99	
16005.00	90.650	342.870	6674.90	8553.49	8203.35	-2431.73	1709521.60	14313791.44	39°25'00.534"N	80°45'19.141"W	8556.19	343.489	2.90	0.00	-2.90	
16099.00	90.890	342.740	6673.64	8647.47	8293.14	-2459.52	1709493.83	14313881.19	39°25'01.422"N	80°45'19.492"W	8650.17	343.481	0.29	0.26	-0.14	
16194.00	90.680	340.240	6672.34	8742.45	8383.21	-2489.68	1709463.68	14313971.22	39°25'02.313"N	80°45'19.873"W	8745.10	343.459	2.64	-0.22	-2.63	
16288.00	90.580	339.340	6671.30	8836.37	8471.42	-2522.15	1709431.23	14314059.40	39°25'03.186"N	80°45'20.284"W	8838.90	343.420	0.96	-0.11	-0.96	
16382.00	90.620	337.410	6670.32	8930.17	8558.80	-2556.78	1709396.60	14314146.74	39°25'04.050"N	80°45'20.722"W	8932.53	343.367	2.05	0.04	-2.05	
16477.00	90.740	337.360	6669.19	9024.85	8646.48	-2593.31	1709360.09	14314234.39	39°25'04.918"N	80°45'21.184"W	9027.01	343.305	0.14	0.13	-0.05	
16571.00	90.710	336.750	6668.00	9118.48	8733.04	-2629.96	1709323.46	14314320.91	39°25'05.774"N	80°45'21.648"W	9120.45	343.240	0.65	-0.03	-0.65	

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #03
Area	Tyler County, WV		Well	Braden Unit 3H
Field	Tyler		Wellbore	Braden Unit 3H AWP
Facility	Alta Pad			

WELLPATH DATA (243 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
16665.00	90.710	337.980	6666.84	9212.16	8819.79	-2666.13	1709287.30	14314407.63	39°25'06.633"N	80°45'22.106"W	9213.95	343.180	1.31	0.00	1.31	
16760.00	90.740	341.350	6665.63	9307.06	8908.85	-2699.13	1709254.31	14314496.65	39°25'07.514"N	80°45'22.524"W	9308.76	343.145	3.55	0.03	3.55	
16854.00	91.660	342.760	6663.66	9401.03	8998.25	-2728.09	1709225.36	14314586.02	39°25'08.398"N	80°45'22.889"W	9402.72	343.134	1.79	0.98	1.50	
16948.00	92.370	344.790	6660.36	9494.93	9088.45	-2754.34	1709199.13	14314676.18	39°25'09.290"N	80°45'23.221"W	9496.65	343.140	2.29	0.76	2.16	
17042.00	92.250	345.040	6656.57	9588.73	9179.14	-2778.78	1709174.69	14314766.83	39°25'10.187"N	80°45'23.529"W	9590.53	343.157	0.29	-0.13	0.27	
17137.00	92.430	344.690	6652.69	9683.54	9270.76	-2803.56	1709149.92	14314858.42	39°25'11.094"N	80°45'23.842"W	9685.40	343.174	0.41	0.19	-0.37	
17231.00	92.220	343.540	6648.88	9777.40	9361.10	-2829.27	1709124.22	14314948.72	39°25'11.987"N	80°45'24.166"W	9779.31	343.183	1.24	-0.22	-1.22	
17326.00	91.380	341.080	6645.89	9872.34	9451.55	-2858.12	1709095.38	14315039.14	39°25'12.882"N	80°45'24.531"W	9874.25	343.175	2.74	-0.88	-2.59	
17420.00	91.480	337.550	6643.55	9966.19	9539.45	-2891.31	1709062.21	14315127.01	39°25'13.752"N	80°45'24.951"W	9967.99	343.138	3.76	0.11	-3.76	
17515.00	91.570	336.620	6641.02	10060.80	9626.92	-2928.29	1709025.25	14315214.44	39°25'14.617"N	80°45'25.419"W	10062.43	343.081	0.98	0.09	-0.98	
17609.00	91.510	337.120	6638.49	10154.38	9713.34	-2965.20	1708988.35	14315300.82	39°25'15.472"N	80°45'25.886"W	10155.85	343.024	0.54	-0.06	0.53	
17704.00	91.450	337.350	6636.04	10249.02	9800.91	-3001.95	1708951.62	14315388.36	39°25'16.339"N	80°45'26.351"W	10250.34	342.971	0.25	-0.06	0.24	
17798.00	91.540	338.090	6633.59	10342.72	9887.86	-3037.57	1708916.00	14315475.27	39°25'17.199"N	80°45'26.802"W	10343.92	342.923	0.79	0.10	0.79	
17893.00	91.540	339.060	6631.03	10437.51	9976.26	-3072.26	1708881.33	14315563.64	39°25'18.074"N	80°45'27.241"W	10438.61	342.883	1.02	0.00	1.02	
17987.00	91.510	340.200	6628.53	10531.39	10064.35	-3104.97	1708848.63	14315651.69	39°25'18.945"N	80°45'27.655"W	10532.42	342.854	1.21	-0.03	1.21	
18081.00	91.450	341.640	6626.10	10625.33	10153.15	-3135.68	1708817.93	14315740.46	39°25'19.824"N	80°45'28.043"W	10626.34	342.837	1.53	-0.06	1.53	
18176.00	91.630	342.810	6623.55	10720.30	10243.59	-3164.67	1708788.95	14315830.86	39°25'20.718"N	80°45'28.410"W	10721.30	342.832	1.25	0.19	1.23	
18270.00	91.420	342.300	6621.05	10814.26	10333.23	-3192.85	1708760.79	14315920.47	39°25'21.605"N	80°45'28.766"W	10815.26	342.829	0.59	-0.22	-0.54	
18365.00	91.660	342.240	6618.50	10909.23	10423.68	-3221.77	1708731.88	14316010.89	39°25'22.500"N	80°45'29.131"W	10910.22	342.825	0.26	0.25	-0.06	
18459.00	91.450	345.160	6615.94	11003.14	10513.86	-3248.14	1708705.52	14316101.03	39°25'23.392"N	80°45'29.464"W	11004.17	342.832	3.11	-0.22	3.11	
18554.00	91.570	347.660	6613.44	11097.83	10606.16	-3270.45	1708683.22	14316193.29	39°25'24.304"N	80°45'29.745"W	11098.94	342.863	2.63	0.13	2.63	
18649.00	91.510	348.720	6610.89	11192.25	10699.12	-3289.88	1708663.79	14316286.21	39°25'25.224"N	80°45'29.990"W	11193.50	342.908	1.12	-0.06	1.12	
18743.00	91.600	349.130	6608.34	11285.54	10791.33	-3307.93	1708645.75	14316378.39	39°25'26.136"N	80°45'30.217"W	11286.95	342.958	0.45	0.10	0.44	
18838.00	91.540	347.170	6605.73	11379.96	10884.27	-3327.43	1708626.26	14316471.29	39°25'27.055"N	80°45'30.462"W	11381.53	343.001	2.06	-0.06	-2.06	
18932.00	91.200	345.840	6603.49	11473.64	10975.65	-3349.36	1708604.34	14316562.63	39°25'27.958"N	80°45'30.738"W	11475.32	343.030	1.46	-0.36	-1.41	
19027.00	91.050	345.340	6601.62	11568.45	11067.64	-3373.00	1708580.71	14316654.59	39°25'28.868"N	80°45'31.036"W	11570.21	343.051	0.55	-0.16	-0.53	
19121.00	90.830	342.900	6600.08	11662.36	11158.03	-3398.72	1708555.00	14316744.94	39°25'29.762"N	80°45'31.361"W	11664.17	343.059	2.61	-0.23	-2.60	
19216.00	90.800	339.900	6598.73	11757.34	11248.05	-3429.01	1708524.72	14316834.93	39°25'30.653"N	80°45'31.744"W	11759.11	343.046	3.16	-0.03	-3.16	
19310.00	90.860	339.190	6597.37	11851.24	11336.11	-3461.86	1708491.89	14316922.95	39°25'31.524"N	80°45'32.159"W	11852.93	343.018	0.76	0.06	-0.76	
19404.00	90.710	338.850	6596.08	11945.10	11423.87	-3495.51	1708458.25	14317010.68	39°25'32.392"N	80°45'32.585"W	11946.69	342.987	0.40	-0.16	-0.36	

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Actual Wellpath Report

Braden Unit 3H AWP Proj: 19591'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Tyler County, WV	Well	Braden Unit 3H
Field	Tyler	Wellbore	Braden Unit 3H AWB
Facility	Alta Pad		

WELLPATH DATA (243 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
19499.00	90.800	339.410	6594.83	12039.96	11512.63	-3529.35	1708424.42	14317099.40	39°25'33.270"N	80°45'33.014"W	12041.47	342.956	0.60	0.09	0.59	
19566.00	90.740	338.880	6593.93	12106.87	11575.24	-3553.20	1708400.58	14317161.98	39°25'33.890"N	80°45'33.315"W	12108.32	342.935	0.80	-0.09	-0.79	
19591.00	90.740	338.880	6593.60	12131.83	11598.56	-3562.21	1708391.58	14317185.29	39°25'34.120"N	80°45'33.429"W	12133.25	342.927	0.00	0.00	0.00	Projected MD at TD: 19591'

HOLE & CASING SECTIONS - Ref Wellbore: Braden Unit 3H AWB Ref Wellpath: Braden Unit 3H AWP Proj: 19591'									
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	30.00	113.00	83.00	30.00	113.00	0.00	0.00	-0.02	0.15
17.5in Open Hole	113.00	507.00	394.00	113.00	506.99	-0.02	0.15	-2.71	-0.55
13.375in Casing Surface	30.00	507.00	477.00	30.00	506.99	0.00	0.00	-2.71	-0.55
12.25in Open Hole	507.00	2638.00	2131.00	506.99	2634.29	-2.71	-0.55	-15.88	54.66
9.625in Casing Intermediate	30.00	2638.00	2608.00	30.00	2634.29	0.00	0.00	-15.88	54.66
8.75in Open Hole	2638.00	5879.00	3241.00	2634.29	5739.12	-15.88	54.66	-798.84	437.35
8.5in Open Hole	5879.00	19591.00	13712.00	5739.12	6593.60	-798.84	437.35	11598.56	-3562.21
5.5in Casing Production	30.00	19591.00	19561.00	30.00	6593.60	0.00	0.00	11598.56	-3562.21

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Tyler County, WV	Well	Braden Unit 3H
Field	Tyler	Wellbore	Braden Unit 3H AWB
Facility	Alta Pad		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Braden Unit 3H - POE - Rev-1	6622.00	-369.48	321.76	1712274.01	14305222.00	39°23'35.729"N	80°44'44.365"W	point
Braden Unit 3H - BHL - Rev-1	6662.00	11610.72	-3559.59	1708394.19	14317197.45	39°25'34.241"N	80°45'33.396"W	point
Braden Unit 3H - LP - Rev-1	6662.00	-146.40	249.49	1712201.76	14305444.99	39°23'37.936"N	80°44'45.277"W	point

WELLPATH COMPOSITION - Ref Wellbore: Braden Unit 3H AWB Ref Wellpath: Braden Unit 3H AWP Proj: 19591'				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
30.00	490.00	Gyrodatta standard - Single-shot	01 Gyrodatta SS Gyro <17-1/2">(100'-475')	Braden Unit 3H AWB
490.00	2570.00	ISCWSA MWD, Rev. 4 (Standard)	02 Panther EM <12-1/4">(475')(563'-2555')	Braden Unit 3H AWB
2570.00	5786.00	ISCWSA MWD, Rev. 4 (Standard)	03 Panther EM <8-3/4">(2555')(2655'-5771')	Braden Unit 3H AWB
5786.00	19566.00	BHI AutoTrak Curve (Short)	04 BH AT Curve <8-1/2">(5786')(5857'-19566')	Braden Unit 3H AWB
19566.00	19591.00	Blind Drilling (std)	Projection to bit	Braden Unit 3H AWB

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Braden Unit 3H AWP Proj: 19591'

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Area	Tyler County, WV	Well	Braden Unit 3H
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Facility	Alta Pad		

COMMENTS
<p>Wellpath general comments API: 47-095-02503-0000 BHI Job #: 109730862 Rig: H&P 519 Duration: 03/28/2019-04/01/2019 Gyrodata SS Gyro <17-1/2">(100'-475') Panther EM <12-1/4">(475')(563'-2555') Panther EM <8-3/4">(2555')(2655'-5771') BH AT Curve <8-1/2">(5786')(5857'-19566') Middlesex: 6594' MD Burkett: 6799' MD Tully: 6861' MD Hamilton: 6970' MD Marcellus POE: 7011' MD Projected MD at TD: 19591'</p>

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