

ANTERO RESOURCES CORPORATION

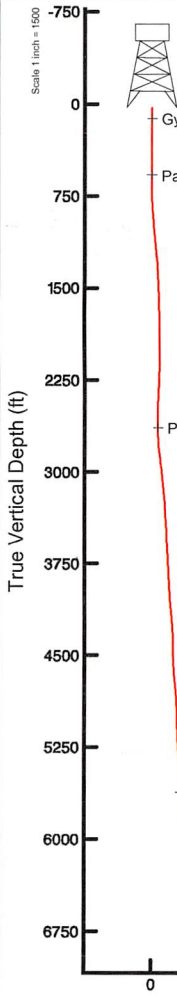
Location: Tyler County, WV Slot: Slot #04
 Field: Tyler Well: Lindsey Unit 1H
 Facility: Alta Pad Wellbore: Lindsey Unit 1H PWB

Plot reference wellpath is Lindsey Unit 1H PWP 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 #04): -827 feet	Created by: delaseton on 2019-03-26
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 #04	-29.32	7.93	1711954.755	14305581.224	39°23'39.290"N	80°44'48.420"W
H&P 519 (RKB) to Ground level (At Slot: Slot #04)			30ft			
Mean Sea Level to Ground level (At Slot: Slot #04)			-827ft			
H&P 519 (RKB) to Mean Sea Level			857ft			

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #04	Lindsey Unit 1H	Lindsey Unit 1H AWB	Lindsey Unit 1H AWP Proj: 16853'
Slot #04	Lindsey Unit 1H	Lindsey Unit 1H PWB	Lindsey Unit 1H PWP 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	5943.00	23.760	254.860	5517.66	-403.43	-1976.86	2.33	228.60
Proj. To Bottom	6068.00	26.910	259.610	5630.63	-415.12	-2029.01	3.00	233.64
Hold Tangent	6510.30	41.771	309.941	6001.85	-336.67	-2245.71	7.00	375.34
End of Hold	6956.61	41.771	309.941	6334.71	-145.80	-2473.66	0.00	627.42
POE	7407.65	70.162	341.965	6589.00	164.01	-2661.59	8.50	980.19
Landing Pt.	7641.03	90.000	341.965	6629.00	381.52	-2732.41	8.50	1208.94
BHL	16848.29	90.000	341.965	6629.00	9136.40	-5582.97	0.00	10416.20



Gyrodatta SS Gyro <17-1/2">(100'-475') : 0.32° Inc, 115.00ft MD, 115.00ft TVD, -0.21ft VS

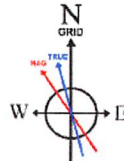
Panther EM <12-1/4">(475')(564'-2619') : 0.73° Inc, 579.00ft MD, 578.98ft TVD, -1.95ft VS

Panther EM <8-3/4">(2619')(2718'-5928') : 21.96° Inc, 2733.00ft MD, 2636.44ft TVD, 49.37ft VS

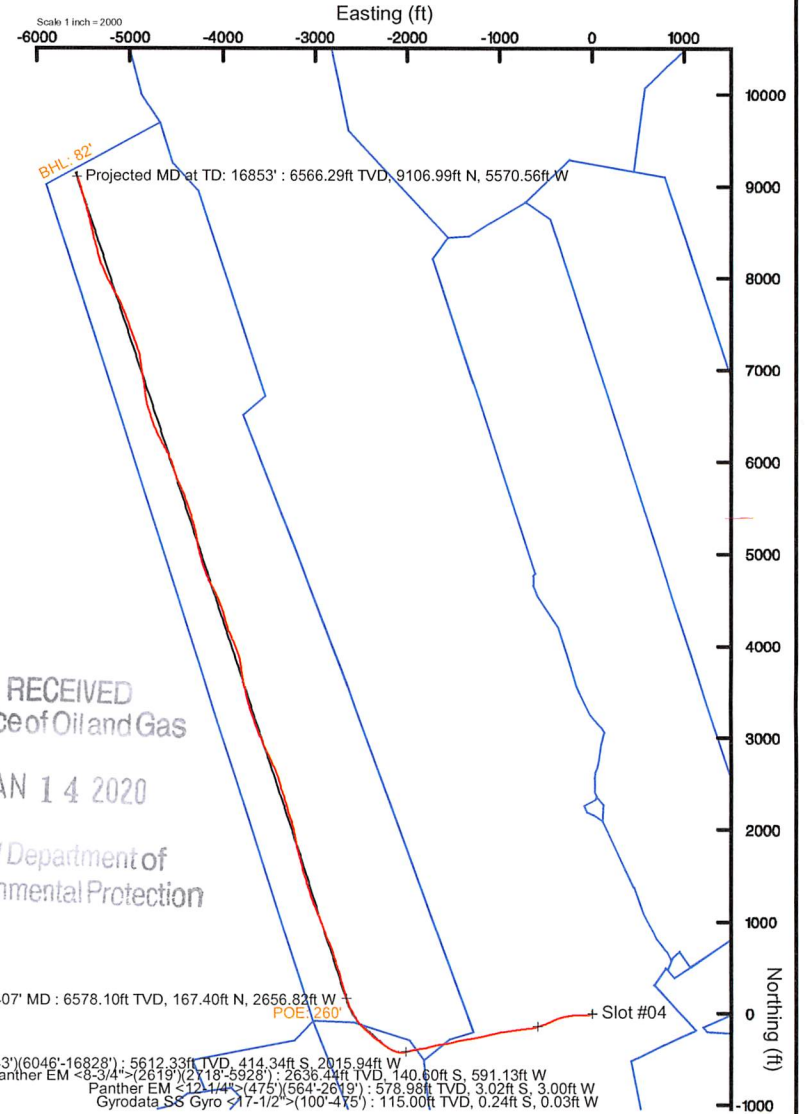
BH AT Curve <8-1/2">(5943')(6046'-16828') : 22.64° Inc, 6046.00ft MD, 5612.33ft TVD, 230.33ft VS

Marcellus POE: 7407' MD : 71.99° Inc, 7407.00ft MD, 6578.10ft TVD, 981.94ft VS

Projected MD at TD: 16853' : 90.28° Inc, 16853.00ft MD, 6566.29ft TVD, 10384.39ft VS



User specified (HDGM) Dip: 66.54° Field: 52038 nT
 Magnetic North is 7.70 degrees West of True North (at 3/20/2019)
 Grid North is 0.16 degrees East of True North
 To correct azimuth from True to Grid subtract 0.16 degrees
 To correct azimuth from Magnetic to Grid subtract 7.86 degrees



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Marcellus POE: 7407' MD : 6578.10ft TVD, 167.40ft N, 2656.83ft W
 BH AT Curve <8-1/2">(5943')(6046'-16828') : 5612.33ft TVD, 414.34ft S, 2015.94ft W
 Panther EM <8-3/4">(2619')(2718'-5928') : 2636.44ft TVD, 140.60ft S, 591.13ft W
 Panther EM <12-1/4">(475')(564'-2619') : 578.98ft TVD, 3.02ft S, 3.00ft W
 Gyrodatta SS Gyro <17-1/2">(100'-475') : 115.00ft TVD, 0.24ft S, 0.03ft W

API: 47-095-02547-0000
 BHI Job #: 109712917
 Rig: H&P 519
 Duration: 03/22/2019-03/25/2019

Vertical Section (ft)
 Azimuth 341.96° with reference 0.00 N, 0.00 E

Scale 1 inch = 1500



Actual Wellpath Report

Lindsey Unit 1H AWP Proj: 16853'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Tyler County, WV	Well	Lindsey Unit 1H
Field	Tyler	Wellbore	Lindsey Unit 1H 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	3/26/2019 at 3:03:53 PM
Convergence at slot	0.16° East	Database/Source file	WA_MPL_EasternUS_Defn/Lindsey_Unit_1H_AWP_Proj_16853_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-29.32	7.93	1711954.76	14305581.22	39°23'39.290"N	80°44'48.420"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 #04)	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	341.96°

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Lindsey Unit 1H AWP Proj: 16853'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Tyler County, WV	Well	Lindsey Unit 1H
Field	Tyler	Wellbore	Lindsey Unit 1H AWB
Facility	Alta Pad		

WELLPATH DATA (214 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	187.210	0.00	0.00	0.00	0.00	1711954.76	14305581.22	39°23'39.290"N	80°44'48.420"W	0.00	0.000	0.00	0.00	0.00	
30.00	0.000	187.210	30.00	0.00	0.00	0.00	1711954.76	14305581.22	39°23'39.290"N	80°44'48.420"W	0.00	0.000	0.00	0.00	0.00	
115.00	0.320	187.210	115.00	-0.21	-0.24	-0.03	1711954.73	14305580.99	39°23'39.288"N	80°44'48.420"W	0.24	187.210	0.38	0.38	-203.28	Gyrodata SS Gyro <17-1/2">(100'-475')
140.00	0.370	181.710	140.00	-0.35	-0.39	-0.04	1711954.71	14305580.84	39°23'39.286"N	80°44'48.421"W	0.39	186.066	0.24	0.20	-22.00	
165.00	0.450	174.720	165.00	-0.53	-0.56	-0.03	1711954.72	14305580.66	39°23'39.284"N	80°44'48.420"W	0.56	183.485	0.38	0.32	-27.96	
190.00	0.620	193.390	190.00	-0.74	-0.79	-0.06	1711954.70	14305580.43	39°23'39.282"N	80°44'48.421"W	0.80	184.083	0.97	0.68	74.68	
215.00	0.680	189.270	215.00	-0.98	-1.07	-0.11	1711954.64	14305580.15	39°23'39.279"N	80°44'48.421"W	1.08	185.961	0.30	0.24	-16.48	
240.00	0.800	183.610	239.99	-1.28	-1.39	-0.15	1711954.61	14305579.83	39°23'39.276"N	80°44'48.422"W	1.40	186.018	0.56	0.48	-22.64	
265.00	0.390	200.380	264.99	-1.51	-1.65	-0.19	1711954.57	14305579.58	39°23'39.274"N	80°44'48.422"W	1.66	186.495	1.76	-1.64	67.08	
290.00	0.420	238.040	289.99	-1.60	-1.77	-0.29	1711954.46	14305579.45	39°23'39.272"N	80°44'48.424"W	1.80	189.433	1.05	0.12	150.64	
315.00	0.400	240.150	314.99	-1.64	-1.87	-0.45	1711954.31	14305579.36	39°23'39.272"N	80°44'48.426"W	1.92	193.505	0.10	-0.08	8.44	
340.00	0.440	235.400	339.99	-1.68	-1.96	-0.60	1711954.15	14305579.26	39°23'39.271"N	80°44'48.428"W	2.05	197.065	0.21	0.16	-19.00	
365.00	0.420	236.130	364.99	-1.73	-2.07	-0.76	1711954.00	14305579.16	39°23'39.270"N	80°44'48.430"W	2.20	200.115	0.08	-0.08	2.92	
390.00	0.490	241.920	389.99	-1.78	-2.17	-0.93	1711953.83	14305579.05	39°23'39.269"N	80°44'48.432"W	2.36	203.154	0.33	0.28	23.16	
415.00	0.520	247.360	414.99	-1.80	-2.26	-1.13	1711953.63	14305578.96	39°23'39.268"N	80°44'48.434"W	2.53	206.463	0.23	0.12	21.76	
440.00	0.550	250.940	439.99	-1.82	-2.35	-1.35	1711953.41	14305578.88	39°23'39.267"N	80°44'48.437"W	2.71	209.817	0.18	0.12	14.32	
465.00	0.730	249.330	464.99	-1.83	-2.44	-1.61	1711953.15	14305578.78	39°23'39.266"N	80°44'48.441"W	2.92	213.351	0.72	0.72	-6.44	
490.00	0.800	254.060	489.98	-1.83	-2.55	-1.92	1711952.83	14305578.68	39°23'39.265"N	80°44'48.445"W	3.19	217.075	0.38	0.28	18.92	
579.00	0.730	237.340	578.98	-1.95	-3.02	-3.00	1711951.76	14305578.20	39°23'39.260"N	80°44'48.458"W	4.26	224.768	0.26	-0.08	-18.79	Panther EM <12-1/4">(475')(564'-2619')
668.00	4.190	249.590	667.88	-2.22	-4.46	-6.53	1711948.23	14305576.76	39°23'39.246"N	80°44'48.503"W	7.91	235.622	3.91	3.89	13.76	
757.00	9.920	260.460	756.17	-1.22	-6.87	-17.14	1711937.62	14305574.36	39°23'39.223"N	80°44'48.639"W	18.47	248.158	6.58	6.44	12.21	
847.00	14.690	268.170	844.09	3.11	-8.52	-36.20	1711918.57	14305572.71	39°23'39.207"N	80°44'48.881"W	37.19	256.756	5.59	5.30	8.57	
938.00	15.320	268.920	931.98	9.84	-9.12	-59.76	1711895.02	14305572.11	39°23'39.202"N	80°44'49.181"W	60.45	261.326	0.72	0.69	0.82	
1033.00	15.460	268.250	1023.58	17.05	-9.74	-84.96	1711869.83	14305571.49	39°23'39.196"N	80°44'49.503"W	85.52	263.461	0.24	0.15	-0.71	
1127.00	16.510	269.520	1113.94	24.59	-10.23	-110.84	1711843.96	14305570.99	39°23'39.192"N	80°44'49.832"W	111.31	264.725	1.18	1.12	1.35	
1222.00	17.360	269.780	1204.82	33.00	-10.40	-138.51	1711816.30	14305570.83	39°23'39.191"N	80°44'50.185"W	138.90	265.706	0.90	0.89	0.27	
1316.00	17.660	268.090	1294.46	41.26	-10.93	-166.79	1711788.04	14305570.30	39°23'39.187"N	80°44'50.545"W	167.14	266.250	0.63	0.32	-1.80	
1410.00	15.200	265.590	1384.62	48.12	-12.35	-193.33	1711761.51	14305568.88	39°23'39.173"N	80°44'50.883"W	193.72	266.344	2.72	-2.62	-2.66	
1504.00	14.160	262.930	1475.55	53.22	-14.72	-217.02	1711737.82	14305566.51	39°23'39.151"N	80°44'51.185"W	217.52	266.121	1.32	-1.11	-2.83	
1599.00	14.940	259.170	1567.51	56.96	-18.45	-240.58	1711714.27	14305562.78	39°23'39.114"N	80°44'51.485"W	241.29	265.615	1.29	0.82	-3.96	

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Lindsey Unit 1H AWP Proj: 16853'
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Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Tyler County, WV	Well	Lindsey Unit 1H
Field	Tyler	Wellbore	Lindsey Unit 1H AWB
Facility	Alta Pad		

WELLPATH DATA (214 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	14.480	258.300	1658.43	59.78	-23.11	-263.99	1711690.87	14305558.13	39°23'39.069"N	80°44'51.783"W	265.00	264.998	0.54	-0.49	-0.93	
1787.00	13.830	256.810	1749.57	62.03	-28.05	-286.44	1711668.43	14305553.18	39°23'39.021"N	80°44'52.070"W	287.81	264.406	0.79	-0.69	-1.59	
1881.00	15.050	254.910	1840.60	63.61	-33.80	-309.16	1711645.71	14305547.44	39°23'38.965"N	80°44'52.359"W	311.00	263.762	1.39	1.30	-2.02	
1975.00	16.540	253.680	1931.05	64.64	-40.73	-333.79	1711621.10	14305540.51	39°23'38.897"N	80°44'52.673"W	336.27	263.043	1.62	1.59	-1.31	
2069.00	19.310	252.630	2020.48	65.22	-49.13	-361.47	1711593.43	14305532.11	39°23'38.814"N	80°44'53.026"W	364.79	262.259	2.97	2.95	-1.12	
2163.00	20.860	245.420	2108.77	63.50	-60.74	-391.53	1711563.38	14305520.51	39°23'38.701"N	80°44'53.409"W	396.21	261.182	3.10	1.65	-7.67	
2257.00	24.010	246.570	2195.65	59.79	-75.31	-424.30	1711530.62	14305505.95	39°23'38.557"N	80°44'53.827"W	430.93	259.936	3.38	3.35	1.22	
2352.00	24.260	247.050	2282.34	56.31	-90.60	-460.01	1711494.93	14305490.66	39°23'38.407"N	80°44'54.283"W	468.85	258.858	0.33	0.26	0.51	
2446.00	21.390	245.380	2368.97	52.69	-105.28	-493.38	1711461.57	14305475.99	39°23'38.263"N	80°44'54.708"W	504.49	257.955	3.13	-3.05	-1.78	
2541.00	20.630	248.310	2457.66	49.64	-118.68	-524.68	1711430.28	14305462.59	39°23'38.132"N	80°44'55.107"W	537.94	257.255	1.36	-0.80	3.08	
2634.00	21.450	252.840	2544.46	48.86	-129.75	-556.16	1711398.82	14305451.52	39°23'38.023"N	80°44'55.509"W	571.09	256.868	1.96	0.88	4.87	
2733.00	21.960	252.690	2636.44	49.37	-140.60	-591.13	1711363.86	14305440.68	39°23'37.917"N	80°44'55.954"W	607.62	256.621	0.52	0.52	-0.15	Panther EM <8-3/4">(2619')(2718'-5928')
2828.00	22.060	255.090	2724.52	50.57	-150.48	-625.32	1711329.68	14305430.81	39°23'37.820"N	80°44'56.390"W	643.17	256.470	0.95	0.11	2.53	
2922.00	27.130	264.320	2810.00	56.13	-157.15	-663.75	1711291.27	14305424.14	39°23'37.755"N	80°44'56.880"W	682.10	256.680	6.75	5.39	9.82	
3016.00	31.120	265.560	2892.10	66.43	-161.15	-709.31	1711245.72	14305420.14	39°23'37.717"N	80°44'57.461"W	727.39	257.200	4.29	4.24	1.32	
3110.00	29.550	263.350	2973.23	76.72	-165.72	-756.56	1711198.50	14305415.57	39°23'37.673"N	80°44'58.062"W	774.50	257.645	2.05	-1.67	-2.35	
3210.00	27.110	261.070	3061.25	85.20	-172.11	-803.57	1711151.50	14305409.18	39°23'37.611"N	80°44'58.661"W	821.79	257.911	2.67	-2.44	-2.28	
3304.00	26.210	261.890	3145.25	92.17	-178.36	-845.28	1711109.81	14305402.93	39°23'37.550"N	80°44'59.193"W	863.89	258.085	1.03	-0.96	0.87	
3398.00	26.850	262.630	3229.35	99.68	-184.01	-886.88	1711068.22	14305397.28	39°23'37.496"N	80°44'59.723"W	905.77	258.278	0.77	0.68	0.79	
3492.00	26.740	259.410	3313.27	106.36	-190.62	-928.73	1711026.40	14305390.68	39°23'37.432"N	80°45'00.256"W	948.09	258.401	1.55	-0.12	-3.43	
3587.00	26.430	260.690	3398.22	112.34	-197.97	-970.60	1710984.54	14305383.33	39°23'37.360"N	80°45'00.790"W	990.58	258.472	0.69	-0.33	1.35	
3681.00	25.160	256.440	3482.86	117.07	-206.04	-1010.67	1710944.48	14305375.26	39°23'37.281"N	80°45'01.301"W	1031.46	258.477	2.39	-1.35	-4.52	
3775.00	25.940	256.270	3567.67	120.18	-215.61	-1050.07	1710905.10	14305365.70	39°23'37.188"N	80°45'01.803"W	1071.98	258.397	0.83	0.83	-0.18	
3869.00	26.310	259.510	3652.07	124.46	-224.28	-1090.53	1710864.66	14305357.03	39°23'37.103"N	80°45'02.318"W	1113.35	258.378	1.57	0.39	3.45	
3964.00	26.390	256.610	3737.20	128.94	-233.00	-1131.77	1710823.44	14305348.31	39°23'37.018"N	80°45'02.844"W	1155.50	258.367	1.36	0.08	-3.05	
4058.00	26.710	258.080	3821.29	132.88	-242.20	-1172.76	1710782.46	14305339.12	39°23'36.928"N	80°45'03.366"W	1197.51	258.331	0.78	0.34	1.56	
4152.00	25.900	257.810	3905.55	137.23	-250.90	-1213.50	1710741.74	14305330.42	39°23'36.844"N	80°45'03.886"W	1239.17	258.318	0.87	-0.86	-0.29	
4247.00	24.460	258.280	3991.53	141.51	-259.28	-1253.04	1710702.21	14305322.05	39°23'36.762"N	80°45'04.390"W	1279.58	258.309	1.53	-1.52	0.49	
4341.00	24.140	262.510	4077.20	147.17	-265.74	-1291.15	1710664.11	14305315.59	39°23'36.699"N	80°45'04.875"W	1318.22	258.370	1.88	-0.34	4.50	
4435.00	26.610	261.690	4162.13	154.25	-271.29	-1331.05	1710624.23	14305310.04	39°23'36.645"N	80°45'05.384"W	1358.41	258.480	2.65	2.63	-0.87	

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 WV Department of
 Environmental Protection



Actual Wellpath Report

Lindsey Unit 1H AWP Proj: 16853'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Tyler County, WV	Well	Lindsey Unit 1H
Field	Tyler	Wellbore	Lindsey Unit 1H AWB
Facility	Alta Pad		

WELLPATH DATA (214 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
4529.00	29.400	260.440	4245.11	161.21	-278.16	-1374.64	1710580.66	14305303.17	39°23'36.579"N	80°45'05.939"W	1402.50	258.560	3.03	2.97	-1.33	
4623.00	27.010	255.580	4327.96	165.96	-287.31	-1418.08	1710537.24	14305294.02	39°23'36.489"N	80°45'06.493"W	1446.89	258.546	3.52	2.54	-5.17	
4717.00	26.820	254.310	4411.78	168.18	-298.36	-1459.17	1710496.17	14305282.98	39°23'36.381"N	80°45'07.016"W	1489.36	258.444	0.64	-0.20	-1.35	
4811.00	26.430	255.270	4495.81	170.26	-309.42	-1499.82	1710455.53	14305271.93	39°23'36.273"N	80°45'07.535"W	1531.40	258.343	0.62	-0.41	1.02	
4905.00	25.230	259.100	4580.42	173.96	-318.53	-1539.72	1710415.64	14305262.82	39°23'36.184"N	80°45'08.043"W	1572.33	258.312	2.19	-1.28	4.07	
4999.00	26.720	263.010	4664.93	180.50	-324.89	-1580.38	1710375.00	14305256.47	39°23'36.122"N	80°45'08.561"W	1613.43	258.383	2.41	1.59	4.16	
5094.00	25.680	263.750	4750.17	188.80	-329.73	-1622.04	1710333.36	14305251.63	39°23'36.076"N	80°45'09.092"W	1655.21	258.509	1.15	-1.09	0.78	
5188.00	25.530	260.840	4834.94	196.08	-335.17	-1662.28	1710293.13	14305246.19	39°23'36.023"N	80°45'09.605"W	1695.74	258.600	1.35	-0.16	-3.10	
5282.00	25.880	255.160	4919.65	200.36	-343.65	-1702.12	1710253.31	14305237.71	39°23'35.940"N	80°45'10.113"W	1736.46	258.586	2.65	0.37	-6.04	
5377.00	26.060	255.380	5005.06	202.76	-354.23	-1742.35	1710213.09	14305227.14	39°23'35.837"N	80°45'10.625"W	1778.00	258.508	0.21	0.19	0.23	
5471.00	24.700	255.790	5089.98	205.30	-364.26	-1781.37	1710174.09	14305217.11	39°23'35.739"N	80°45'11.123"W	1818.23	258.443	1.46	-1.45	0.44	
5565.00	25.680	256.860	5175.04	208.36	-373.71	-1820.25	1710135.23	14305207.66	39°23'35.646"N	80°45'11.618"W	1858.21	258.398	1.15	1.04	1.14	
5659.00	26.910	262.120	5259.33	213.85	-381.26	-1861.16	1710094.33	14305200.12	39°23'35.573"N	80°45'12.140"W	1899.81	258.423	2.80	1.31	5.60	
5754.00	24.960	258.590	5344.76	219.96	-388.17	-1902.11	1710053.40	14305193.20	39°23'35.506"N	80°45'12.661"W	1941.31	258.466	2.62	-2.05	-3.72	
5849.00	23.290	260.220	5431.46	224.97	-395.33	-1940.27	1710015.26	14305186.05	39°23'35.436"N	80°45'13.148"W	1980.13	258.484	1.89	-1.76	1.72	
5943.00	23.760	254.860	5517.66	228.60	-403.43	-1976.86	1709978.67	14305177.95	39°23'35.357"N	80°45'13.614"W	2017.61	258.466	2.33	0.50	-5.70	
6046.00	22.640	253.930	5612.33	230.33	-414.34	-2015.94	1709939.61	14305167.05	39°23'35.250"N	80°45'14.112"W	2058.08	258.386	1.14	-1.09	-0.90	BH AT Curve <8-1/2">(5943')(6046'-16828')
6081.00	23.230	256.340	5644.56	231.09	-417.84	-2029.13	1709926.43	14305163.55	39°23'35.216"N	80°45'14.280"W	2071.70	258.364	3.17	1.69	6.89	
6128.00	24.800	264.900	5687.51	234.00	-420.90	-2047.96	1709907.61	14305160.49	39°23'35.186"N	80°45'14.520"W	2090.76	258.386	8.12	3.34	18.21	
6175.00	27.130	274.180	5729.78	240.27	-421.00	-2068.47	1709887.10	14305160.39	39°23'35.186"N	80°45'14.782"W	2110.88	258.496	9.95	4.96	19.74	
6222.00	28.980	282.220	5771.27	250.06	-417.80	-2090.30	1709865.28	14305163.59	39°23'35.218"N	80°45'15.060"W	2131.65	258.697	8.95	3.94	17.11	
6270.00	30.270	288.180	5813.00	263.07	-411.57	-2113.16	1709842.43	14305169.82	39°23'35.280"N	80°45'15.351"W	2152.87	258.979	6.70	2.69	12.42	
6317.00	32.360	292.170	5853.16	278.20	-403.12	-2136.07	1709819.53	14305178.26	39°23'35.364"N	80°45'15.642"W	2173.78	259.313	6.26	4.45	8.49	
6364.00	35.260	296.430	5892.21	295.83	-392.33	-2159.88	1709795.73	14305189.05	39°23'35.471"N	80°45'15.945"W	2195.22	259.705	7.97	6.17	9.06	
6411.00	37.810	300.300	5929.98	316.10	-379.02	-2184.47	1709771.15	14305202.35	39°23'35.604"N	80°45'16.258"W	2217.11	260.157	7.31	5.43	8.23	
6459.00	40.670	304.060	5967.15	339.44	-362.83	-2210.14	1709745.49	14305218.53	39°23'35.764"N	80°45'16.584"W	2239.73	260.677	7.75	5.96	7.83	
6506.00	42.820	306.620	6002.22	364.56	-344.73	-2235.65	1709719.99	14305236.64	39°23'35.944"N	80°45'16.908"W	2262.08	261.234	5.84	4.57	5.45	
6553.00	42.860	306.650	6036.68	390.63	-325.66	-2261.30	1709694.35	14305255.70	39°23'36.133"N	80°45'17.234"W	2284.63	261.805	0.10	0.09	0.06	
6600.00	42.860	306.250	6071.14	416.66	-306.66	-2287.01	1709668.65	14305274.68	39°23'36.321"N	80°45'17.561"W	2307.48	262.363	0.58	0.00	-0.85	
6648.00	42.740	306.520	6106.35	443.18	-287.32	-2313.27	1709642.40	14305294.02	39°23'36.513"N	80°45'17.895"W	2331.04	262.920	0.46	-0.25	0.56	

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Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Tyler County, WV	Well	Lindsey Unit 1H
Field	Tyler	Wellbore	Lindsey Unit 1H AWB
Facility	Alta Pad		

WELLPATH DATA (214 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
6695.00	42.770	308.140	6140.87	469.44	-267.97	-2338.64	1709617.04	14305313.36	39°23'36.705"N	80°45'18.217"W	2353.94	263.463	2.34	0.06	3.45	
6742.00	42.750	309.440	6175.37	496.14	-247.98	-2363.51	1709592.18	14305333.34	39°23'36.904"N	80°45'18.534"W	2376.48	264.010	1.88	-0.04	2.77	
6789.00	42.710	310.800	6209.90	523.24	-227.43	-2387.90	1709567.81	14305353.88	39°23'37.107"N	80°45'18.843"W	2398.70	264.559	1.97	-0.09	2.89	
6836.00	42.650	312.500	6244.45	550.74	-206.26	-2411.70	1709544.01	14305375.05	39°23'37.317"N	80°45'19.146"W	2420.51	265.112	2.46	-0.13	3.62	
6883.00	42.730	313.430	6279.00	578.61	-184.54	-2435.02	1709520.70	14305396.76	39°23'37.532"N	80°45'19.442"W	2442.00	265.666	1.35	0.17	1.98	
6931.00	42.450	313.570	6314.34	607.17	-162.18	-2458.58	1709497.15	14305419.11	39°23'37.754"N	80°45'19.742"W	2463.93	266.226	0.62	-0.58	0.29	
6978.00	43.070	314.740	6348.85	635.40	-139.95	-2481.47	1709474.26	14305441.33	39°23'37.974"N	80°45'20.032"W	2485.42	266.772	2.14	1.32	2.49	
7005.00†	44.379	316.704	6368.36	652.14	-126.59	-2494.50	1709461.24	14305454.69	39°23'38.107"N	80°45'20.198"W	2497.71	267.095	6.98	4.85	7.27	Middlesex: 7005' MD
7025.00	45.370	318.100	6382.53	664.97	-116.20	-2504.05	1709451.70	14305465.07	39°23'38.210"N	80°45'20.319"W	2506.74	267.343	6.98	4.95	6.98	
7072.00	48.810	321.890	6414.53	696.89	-89.82	-2526.14	1709429.61	14305491.44	39°23'38.471"N	80°45'20.600"W	2527.74	267.964	9.40	7.32	8.06	
7120.00	52.390	325.730	6445.00	732.13	-59.88	-2548.01	1709407.76	14305521.36	39°23'38.768"N	80°45'20.877"W	2548.71	268.654	9.68	7.46	8.00	
7167.00	55.700	328.870	6472.60	768.93	-27.87	-2568.54	1709387.24	14305553.37	39°23'39.084"N	80°45'21.137"W	2568.69	269.378	8.88	7.04	6.68	
7214.00	58.920	331.960	6497.98	807.67	6.53	-2588.04	1709367.74	14305587.75	39°23'39.425"N	80°45'21.385"W	2588.05	270.145	8.81	6.85	6.57	Burkett: 7214' MD
7261.00	61.920	335.050	6521.19	848.10	43.11	-2606.26	1709349.53	14305624.31	39°23'39.787"N	80°45'21.616"W	2606.61	270.948	8.57	6.38	6.57	
7273.00†	62.727	335.501	6526.76	858.65	52.76	-2610.70	1709345.09	14305633.96	39°23'39.883"N	80°45'21.672"W	2611.23	271.158	7.51	6.73	3.76	Tully: 7273' MD
7308.00	65.090	336.780	6542.15	889.92	81.50	-2623.41	1709332.38	14305662.70	39°23'40.167"N	80°45'21.833"W	2624.68	271.780	7.51	6.75	3.65	
7355.00	68.640	338.670	6560.62	933.01	121.49	-2639.78	1709316.02	14305702.67	39°23'40.563"N	80°45'22.040"W	2642.58	272.635	8.41	7.55	4.02	
7373.00†	69.830	339.338	6567.00	949.82	137.21	-2645.81	1709309.99	14305718.38	39°23'40.718"N	80°45'22.116"W	2649.37	272.969	7.47	6.61	3.71	Hamilton: 7373' MD
7403.00	71.820	340.430	6576.85	978.14	163.81	-2655.55	1709300.25	14305744.97	39°23'40.981"N	80°45'22.239"W	2660.60	273.530	7.47	6.63	3.64	
7407.00†	71.986	340.609	6578.10	981.94	167.40	-2656.82	1709298.99	14305748.56	39°23'41.017"N	80°45'22.255"W	2662.09	273.605	5.94	4.15	4.47	Marcellus POE: 7407' MD
7450.00	73.780	342.510	6590.75	1023.03	206.38	-2669.82	1709286.00	14305787.52	39°23'41.402"N	80°45'22.419"W	2677.78	274.420	5.94	4.17	4.42	
7497.00	77.240	344.010	6602.51	1068.51	249.95	-2682.92	1709272.90	14305831.08	39°23'41.833"N	80°45'22.585"W	2694.54	275.323	7.98	7.36	3.19	
7544.00	80.190	344.550	6611.71	1114.56	294.31	-2695.40	1709260.42	14305875.42	39°23'42.272"N	80°45'22.742"W	2711.42	276.231	6.38	6.28	1.15	
7592.00	82.960	344.480	6618.74	1161.99	340.07	-2708.08	1709247.75	14305921.16	39°23'42.725"N	80°45'22.902"W	2729.35	277.157	5.77	5.77	-0.15	
7639.00	86.520	344.260	6623.05	1208.74	385.13	-2720.69	1709235.15	14305966.20	39°23'43.170"N	80°45'23.061"W	2747.81	278.057	7.59	7.57	-0.47	
7686.00	89.510	343.590	6624.67	1255.68	430.26	-2733.69	1709222.15	14306011.31	39°23'43.617"N	80°45'23.225"W	2767.34	278.945	6.52	6.36	-1.43	
7781.00	89.940	342.590	6625.13	1350.66	521.15	-2761.32	1709194.53	14306102.17	39°23'44.516"N	80°45'23.574"W	2810.07	280.688	1.15	0.45	-1.05	
7875.00	89.940	342.000	6625.23	1444.66	610.70	-2789.91	1709165.95	14306191.68	39°23'45.402"N	80°45'23.935"W	2855.97	282.347	0.63	0.00	-0.63	
7970.00	90.150	341.060	6625.15	1539.65	700.80	-2820.01	1709135.87	14306281.75	39°23'46.293"N	80°45'24.316"W	2905.78	283.956	1.01	0.22	-0.99	
8064.00	90.400	336.740	6624.70	1633.50	788.48	-2853.84	1709102.05	14306369.39	39°23'47.160"N	80°45'24.743"W	2960.76	285.445	4.60	0.27	-4.60	

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8159.00	90.340	339.850	6624.09	1728.29	876.73	-2888.97	1709066.93	14306457.61	39°23'48.034"N	80°45'25.188"W	3019.07	286.882	3.27	-0.06	3.27	
8253.00	90.220	341.070	6623.63	1822.25	965.31	-2920.40	1709035.51	14306546.16	39°23'48.910"N	80°45'25.585"W	3075.81	288.291	1.30	-0.13	1.30	
8348.00	89.630	338.150	6623.75	1917.16	1054.35	-2953.50	1709002.43	14306635.16	39°23'49.791"N	80°45'26.004"W	3136.05	289.646	3.14	-0.62	-3.07	
8443.00	89.510	336.330	6624.47	2011.83	1141.95	-2990.25	1708965.69	14306722.72	39°23'50.658"N	80°45'26.469"W	3200.88	290.901	1.92	-0.13	-1.92	
8537.00	89.720	338.590	6625.10	2105.54	1228.76	-3026.28	1708929.67	14306809.50	39°23'51.517"N	80°45'26.925"W	3266.22	292.099	2.41	0.22	2.40	
8632.00	89.690	340.680	6625.59	2200.45	1317.82	-3059.34	1708896.63	14306898.52	39°23'52.398"N	80°45'27.343"W	3331.09	293.304	2.20	-0.03	2.20	
8726.00	89.420	342.790	6626.32	2294.44	1407.07	-3088.80	1708867.18	14306987.74	39°23'53.281"N	80°45'27.715"W	3394.19	294.491	2.26	-0.29	2.24	
8821.00	89.540	341.700	6627.18	2389.44	1497.54	-3117.76	1708838.23	14307078.17	39°23'54.176"N	80°45'28.081"W	3458.77	295.656	1.15	0.13	-1.15	
8915.00	90.090	344.520	6627.48	2483.41	1587.48	-3145.07	1708810.93	14307168.07	39°23'55.065"N	80°45'28.426"W	3523.00	296.782	3.06	0.59	3.00	
9010.00	89.630	346.300	6627.72	2578.23	1679.41	-3169.00	1708787.01	14307259.97	39°23'55.974"N	80°45'28.728"W	3586.50	297.921	1.94	-0.48	1.87	
9104.00	89.780	345.210	6628.20	2672.02	1770.52	-3192.13	1708763.89	14307351.04	39°23'56.875"N	80°45'29.019"W	3650.26	299.015	1.17	0.16	-1.16	
9199.00	90.520	351.380	6627.95	2766.40	1863.50	-3211.39	1708744.63	14307443.98	39°23'57.795"N	80°45'29.261"W	3712.91	300.126	6.54	0.78	6.49	
9293.00	89.600	348.350	6627.85	2859.49	1956.02	-3227.93	1708728.10	14307536.47	39°23'58.710"N	80°45'29.469"W	3774.33	301.214	3.37	-0.98	-3.22	
9388.00	89.540	344.500	6628.57	2954.18	2048.34	-3250.23	1708705.82	14307628.76	39°23'59.623"N	80°45'29.750"W	3841.83	302.220	4.05	-0.06	-4.05	
9482.00	89.510	343.440	6629.35	3048.12	2138.68	-3276.18	1708679.87	14307719.06	39°24'00.516"N	80°45'30.077"W	3912.46	303.136	1.13	-0.03	-1.13	
9576.00	89.720	343.450	6629.98	3142.08	2228.79	-3302.97	1708653.10	14307809.13	39°24'01.408"N	80°45'30.415"W	3984.60	304.011	0.22	0.22	0.01	
9670.00	89.540	343.360	6630.58	3236.05	2318.87	-3329.81	1708626.26	14307899.17	39°24'02.299"N	80°45'30.754"W	4057.68	304.853	0.21	-0.19	-0.10	
9765.00	89.910	343.100	6631.04	3331.03	2409.83	-3357.22	1708598.86	14307990.10	39°24'03.198"N	80°45'31.100"W	4132.58	305.671	0.48	0.39	-0.27	
9859.00	90.120	344.390	6631.02	3424.98	2500.07	-3383.53	1708572.56	14308080.30	39°24'04.091"N	80°45'31.432"W	4206.97	306.460	1.39	0.22	1.37	
9953.00	89.910	341.870	6630.99	3518.95	2590.01	-3410.81	1708545.30	14308170.21	39°24'04.981"N	80°45'31.777"W	4282.73	307.211	2.69	-0.22	-2.68	
10048.00	89.910	335.740	6631.14	3613.76	2678.55	-3445.14	1708510.98	14308258.71	39°24'05.857"N	80°45'32.211"W	4363.90	307.865	6.45	0.00	-6.45	
10142.00	89.780	333.950	6631.39	3707.04	2763.63	-3485.09	1708471.04	14308343.76	39°24'06.699"N	80°45'32.717"W	4447.87	308.414	1.91	-0.14	-1.90	
10237.00	89.850	335.140	6631.70	3801.24	2849.40	-3525.92	1708430.23	14308429.50	39°24'07.547"N	80°45'33.234"W	4533.35	308.943	1.25	0.07	1.25	
10332.00	89.780	336.540	6632.01	3895.70	2936.08	-3564.81	1708391.36	14308516.14	39°24'08.405"N	80°45'33.727"W	4618.27	309.476	1.48	-0.07	1.47	
10426.00	89.690	338.120	6632.44	3989.38	3022.81	-3601.03	1708355.15	14308602.84	39°24'09.263"N	80°45'34.185"W	4701.58	310.011	1.68	-0.10	1.68	
10520.00	89.690	341.270	6632.95	4083.30	3110.96	-3633.65	1708322.55	14308690.95	39°24'10.135"N	80°45'34.598"W	4783.46	310.569	3.35	0.00	3.35	
10615.00	89.690	340.080	6633.47	4178.27	3200.60	-3665.09	1708291.12	14308780.56	39°24'11.022"N	80°45'34.995"W	4865.87	311.130	1.25	0.00	-1.25	
10709.00	89.850	341.900	6633.84	4272.25	3289.47	-3695.70	1708260.52	14308869.39	39°24'11.901"N	80°45'35.382"W	4947.61	311.672	1.94	0.17	1.94	
10804.00	89.850	342.780	6634.09	4367.25	3379.99	-3724.52	1708231.71	14308959.88	39°24'12.797"N	80°45'35.746"W	5029.56	312.224	0.93	0.00	0.93	
10898.00	89.880	346.500	6634.31	4461.13	3470.62	-3749.42	1708206.82	14309050.47	39°24'13.693"N	80°45'36.060"W	5109.14	312.789	3.96	0.03	3.96	

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Lindsey Unit 1H AWP Proj: 16853'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Tyler County, WV	Well	Lindsey Unit 1H
Field	Tyler	Wellbore	Lindsey Unit 1H AWB
Facility	Alta Pad		

WELLPATH DATA (214 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
10993.00	89.780	346.940	6634.60	4555.80	3563.08	-3771.24	1708185.01	14309142.89	39°24'14.608"N	80°45'36.335"W	5188.24	313.374	0.47	-0.11	0.46	
11087.00	89.940	350.530	6634.82	4649.13	3655.25	-3789.60	1708166.66	14309235.03	39°24'15.519"N	80°45'36.566"W	5265.16	313.966	3.82	0.17	3.82	
11182.00	89.940	353.160	6634.92	4742.71	3749.28	-3803.07	1708153.19	14309329.02	39°24'16.449"N	80°45'36.735"W	5340.46	314.592	2.77	0.00	2.77	
11276.00	90.000	349.420	6634.97	4835.45	3842.18	-3817.31	1708138.96	14309421.89	39°24'17.367"N	80°45'36.913"W	5416.11	315.186	3.98	0.06	-3.98	
11371.00	90.030	340.310	6634.95	4930.23	3933.79	-3842.08	1708114.19	14309513.46	39°24'18.273"N	80°45'37.225"W	5498.76	315.676	9.59	0.03	-9.59	
11466.00	89.940	337.170	6634.97	5025.07	4022.32	-3876.53	1708079.76	14309601.95	39°24'19.149"N	80°45'37.661"W	5586.28	316.057	3.31	-0.09	-3.31	
11560.00	89.750	334.990	6635.23	5118.57	4108.24	-3914.64	1708041.67	14309687.83	39°24'19.999"N	80°45'38.144"W	5674.68	316.382	2.33	-0.20	-2.32	
11655.00	90.060	341.530	6635.39	5213.32	4196.43	-3949.81	1708006.51	14309775.99	39°24'20.872"N	80°45'38.589"W	5762.90	316.734	6.89	0.33	6.88	
11749.00	89.820	346.750	6635.48	5307.22	4286.82	-3975.49	1707980.84	14309866.35	39°24'21.766"N	80°45'38.913"W	5846.48	317.158	5.56	-0.26	5.55	
11844.00	90.000	342.320	6635.63	5402.10	4378.36	-4000.81	1707955.53	14309957.85	39°24'22.671"N	80°45'39.232"W	5930.98	317.580	4.67	0.19	-4.66	
11938.00	90.550	338.560	6635.18	5496.04	4466.92	-4032.28	1707924.08	14310046.37	39°24'23.547"N	80°45'39.630"W	6017.69	317.928	4.04	0.59	-4.00	
12033.00	90.400	333.920	6634.39	5590.54	4553.84	-4070.54	1707885.83	14310133.26	39°24'24.408"N	80°45'40.115"W	6107.92	318.207	4.89	-0.16	-4.88	
12127.00	90.340	332.630	6633.79	5683.46	4637.79	-4112.81	1707843.57	14310217.18	39°24'25.238"N	80°45'40.650"W	6198.74	318.433	1.37	-0.06	-1.37	
12221.00	90.490	334.430	6633.11	5776.44	4721.93	-4154.71	1707801.69	14310301.29	39°24'26.071"N	80°45'41.181"W	6289.53	318.656	1.92	0.16	1.91	
12316.00	90.550	339.580	6632.24	5871.05	4809.35	-4191.80	1707764.61	14310388.67	39°24'26.936"N	80°45'41.651"W	6379.74	318.925	5.42	0.06	5.42	
12410.00	90.430	342.810	6631.44	5965.02	4898.32	-4222.10	1707734.33	14310477.60	39°24'27.816"N	80°45'42.034"W	6466.81	319.240	3.44	-0.13	3.44	
12505.00	90.490	344.320	6630.68	6059.98	4989.43	-4248.98	1707707.46	14310568.68	39°24'28.717"N	80°45'42.373"W	6553.49	319.582	1.59	0.06	1.59	
12599.00	90.520	348.880	6629.85	6153.64	5080.85	-4270.75	1707685.69	14310660.06	39°24'29.621"N	80°45'42.648"W	6637.34	319.951	4.85	0.03	4.85	
12694.00	90.620	352.360	6628.90	6247.54	5174.56	-4286.23	1707670.22	14310753.73	39°24'30.548"N	80°45'42.842"W	6719.21	320.364	3.66	0.11	3.66	
12789.00	91.020	347.480	6627.54	6341.59	5268.05	-4302.85	1707653.61	14310847.19	39°24'31.472"N	80°45'43.050"W	6801.98	320.759	5.15	0.42	-5.14	
12883.00	91.540	342.580	6625.44	6435.40	5358.81	-4327.12	1707629.35	14310937.91	39°24'32.370"N	80°45'43.356"W	6887.73	321.080	5.24	0.55	-5.21	
12978.00	91.690	342.950	6622.76	6530.35	5449.51	-4355.26	1707601.22	14311028.57	39°24'33.267"N	80°45'43.712"W	6976.06	321.368	0.42	0.16	0.39	
13072.00	91.570	342.470	6620.09	6624.31	5539.22	-4383.19	1707573.31	14311118.25	39°24'34.155"N	80°45'44.065"W	7063.66	321.645	0.53	-0.13	-0.51	
13167.00	91.540	338.050	6617.51	6719.21	5628.59	-4415.25	1707541.25	14311207.58	39°24'35.039"N	80°45'44.470"W	7153.70	321.888	4.65	-0.03	-4.65	
13261.00	91.690	335.350	6614.86	6812.77	5714.88	-4452.41	1707504.10	14311293.84	39°24'35.893"N	80°45'44.941"W	7244.57	322.078	2.88	0.16	-2.87	
13356.00	91.630	337.540	6612.11	6907.28	5801.92	-4490.36	1707466.17	14311380.85	39°24'36.754"N	80°45'45.421"W	7336.60	322.262	2.31	-0.06	2.31	
13450.00	91.540	343.030	6609.51	7001.17	5890.34	-4522.05	1707434.50	14311469.23	39°24'37.629"N	80°45'45.822"W	7425.97	322.486	5.84	-0.10	5.84	
13545.00	91.480	340.940	6607.00	7096.13	5980.65	-4551.42	1707405.14	14311559.50	39°24'38.522"N	80°45'46.193"W	7515.55	322.728	2.20	-0.06	-2.20	
13639.00	91.690	336.180	6604.40	7189.90	6068.09	-4585.75	1707370.82	14311646.91	39°24'39.387"N	80°45'46.628"W	7605.97	322.921	5.07	0.22	-5.06	
13733.00	91.420	330.050	6601.85	7282.71	6151.85	-4628.22	1707328.37	14311730.64	39°24'40.216"N	80°45'47.166"W	7698.43	323.045	6.53	-0.29	-6.52	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Tyler County, WV	Well	Lindsey Unit 1H
Field	Tyler	Wellbore	Lindsey Unit 1H AWP
Facility	Alta Pad		

WELLPATH DATA (214 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
13828.00	91.020	333.280	6599.82	7376.14	6235.44	-4673.30	1707283.31	14311814.20	39°24'41.043"N	80°45'47.737"W	7792.33	323.149	3.43	-0.42	3.40	
13923.00	91.080	335.860	6598.08	7470.33	6321.22	-4714.08	1707242.54	14311899.94	39°24'41.892"N	80°45'48.254"W	7885.45	323.286	2.72	0.06	2.72	
14017.00	91.170	339.160	6596.24	7564.01	6408.04	-4750.02	1707206.61	14311986.72	39°24'42.751"N	80°45'48.709"W	7976.57	323.452	3.51	0.10	3.51	
14112.00	91.260	342.460	6594.22	7658.96	6497.73	-4781.24	1707175.41	14312076.38	39°24'43.638"N	80°45'49.104"W	8067.26	323.653	3.47	0.09	3.47	
14206.00	91.020	343.450	6592.35	7752.93	6587.58	-4808.79	1707147.87	14312166.19	39°24'44.527"N	80°45'49.452"W	8156.02	323.871	1.08	-0.26	1.05	
14301.00	91.020	349.340	6590.66	7847.59	6679.86	-4831.12	1707125.55	14312258.44	39°24'45.440"N	80°45'49.733"W	8243.80	324.124	6.20	0.00	6.20	
14396.00	91.230	355.380	6588.79	7940.96	6773.95	-4843.74	1707112.93	14312352.49	39°24'46.370"N	80°45'49.891"W	8327.56	324.433	6.36	0.22	6.36	
14490.00	90.650	349.940	6587.25	8033.28	6867.13	-4855.75	1707100.93	14312445.64	39°24'47.291"N	80°45'50.041"W	8410.46	324.736	5.82	-0.62	-5.78	
14585.00	90.680	349.980	6586.15	8127.35	6960.67	-4872.31	1707084.38	14312539.14	39°24'48.216"N	80°45'50.249"W	8496.49	325.009	0.05	0.03	0.04	
14679.00	90.680	354.330	6585.03	8219.84	7053.77	-4885.13	1707071.56	14312632.19	39°24'49.137"N	80°45'50.409"W	8580.22	325.295	4.63	0.00	4.63	
14774.00	90.310	351.340	6584.21	8313.12	7148.01	-4896.98	1707059.71	14312726.40	39°24'50.068"N	80°45'50.557"W	8664.55	325.586	3.17	-0.39	-3.15	
14868.00	90.460	339.360	6583.58	8406.78	7238.79	-4920.71	1707035.99	14312817.14	39°24'50.966"N	80°45'50.856"W	8752.91	325.793	12.75	0.16	-12.74	
14963.00	90.400	340.060	6582.86	8501.70	7327.89	-4953.65	1707003.06	14312906.21	39°24'51.848"N	80°45'51.273"W	8845.15	325.941	0.74	-0.06	0.74	
15057.00	90.280	339.670	6582.30	8595.64	7416.14	-4986.01	1706970.72	14312994.43	39°24'52.721"N	80°45'51.682"W	8936.41	326.086	0.43	-0.13	-0.41	
15152.00	90.430	340.100	6581.72	8690.57	7505.34	-5018.68	1706938.06	14313083.60	39°24'53.603"N	80°45'52.096"W	9028.70	326.230	0.48	0.16	0.45	
15246.00	90.620	340.170	6580.86	8784.52	7593.75	-5050.62	1706906.14	14313171.96	39°24'54.478"N	80°45'52.500"W	9119.97	326.372	0.22	0.20	0.07	
15341.00	90.460	338.370	6579.96	8879.41	7682.59	-5084.24	1706872.52	14313260.77	39°24'55.357"N	80°45'52.925"W	9212.58	326.504	1.90	-0.17	-1.89	
15435.00	90.860	333.490	6578.88	8972.86	7768.38	-5122.57	1706834.22	14313346.53	39°24'56.206"N	80°45'53.411"W	9305.29	326.599	5.21	0.43	-5.19	
15530.00	90.520	330.620	6577.73	9066.42	7852.29	-5167.08	1706789.72	14313430.41	39°24'57.036"N	80°45'53.975"W	9399.85	326.654	3.04	-0.36	-3.02	
15624.00	90.620	332.250	6576.80	9158.83	7934.84	-5212.02	1706744.80	14313512.92	39°24'57.853"N	80°45'54.545"W	9493.52	326.701	1.74	0.11	1.73	
15719.00	90.770	335.900	6575.64	9252.91	8020.26	-5253.55	1706703.29	14313598.31	39°24'58.699"N	80°45'55.071"W	9587.72	326.774	3.85	0.16	3.84	
15813.00	90.740	336.190	6574.41	9346.40	8106.16	-5291.71	1706665.14	14313684.17	39°24'59.548"N	80°45'55.554"W	9680.49	326.863	0.31	-0.03	0.31	
15907.00	90.830	342.100	6573.12	9440.24	8193.95	-5325.15	1706631.71	14313771.93	39°25'00.417"N	80°45'55.978"W	9772.31	326.981	6.29	0.10	6.29	
16002.00	90.800	346.520	6571.76	9535.13	8285.38	-5350.84	1706606.04	14313863.32	39°25'01.321"N	80°45'56.302"W	9863.01	327.145	4.65	-0.03	4.65	
16096.00	90.830	343.800	6570.43	9628.96	8376.23	-5374.91	1706581.98	14313954.13	39°25'02.220"N	80°45'56.606"W	9952.43	327.312	2.89	0.03	-2.89	
16190.00	90.680	348.420	6569.19	9722.68	8467.45	-5397.47	1706559.43	14314045.32	39°25'03.122"N	80°45'56.890"W	10041.43	327.485	4.92	-0.16	4.91	
16285.00	90.220	347.620	6568.44	9817.15	8560.37	-5417.18	1706539.72	14314138.21	39°25'04.041"N	80°45'57.138"W	10130.44	327.674	0.97	-0.48	-0.84	
16379.00	90.120	345.770	6568.16	9910.82	8651.84	-5438.82	1706518.09	14314229.64	39°25'04.946"N	80°45'57.411"W	10219.35	327.845	1.97	-0.11	-1.97	
16473.00	90.280	344.960	6567.83	10004.65	8742.79	-5462.56	1706494.35	14314320.55	39°25'05.845"N	80°45'57.710"W	10309.03	328.003	0.88	0.17	-0.86	
16568.00	90.370	344.890	6567.30	10099.53	8834.52	-5487.27	1706469.66	14314412.25	39°25'06.752"N	80°45'58.022"W	10399.95	328.155	0.12	0.09	-0.07	

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Tyler County, WV	Well	Lindsey Unit 1H
Field	Tyler	Wellbore	Lindsey Unit 1H AWB
Facility	Alta Pad		

WELLPATH DATA (214 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
16662.00	90.090	344.240	6566.92	10193.43	8925.13	-5512.29	1706444.65	14314502.82	39°25'07.648"N	80°45'58.338"W	10490.15	328.300	0.75	-0.30	-0.69	
16756.00	90.180	342.030	6566.70	10287.40	9015.08	-5539.56	1706417.39	14314592.74	39°25'08.538"N	80°45'58.682"W	10581.04	328.430	2.35	0.10	-2.35	
16828.00	90.280	340.970	6566.41	10359.40	9083.36	-5562.40	1706394.55	14314660.99	39°25'09.214"N	80°45'58.971"W	10651.19	328.518	1.48	0.14	-1.47	
16853.00	90.280	340.970	6566.29	10384.39	9106.99	-5570.56	1706386.41	14314684.61	39°25'09.447"N	80°45'59.074"W	10675.60	328.547	0.00	0.00	0.00	Projected MD at TD: 16853'

HOLE & CASING SECTIONS - Ref Wellbore: Lindsey Unit 1H AWB Ref Wellpath: Lindsey Unit 1H AWP Proj: 16853'

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	-0.22	-0.03
17.5in Open Hole	113.00	506.00	393.00	113.00	505.98	-0.22	-0.03	-2.61	-2.14
13.375in Casing Surface	30.00	506.00	476.00	30.00	505.98	0.00	0.00	-2.61	-2.14
12.25in Open Hole	506.00	2702.00	2196.00	505.98	2607.68	-2.61	-2.14	-137.17	-580.09
9.625in Casing Intermediate	30.00	2702.00	2672.00	30.00	2607.68	0.00	0.00	-137.17	-580.09
8.75in Open Hole	2702.00	6068.00	3366.00	2607.68	5632.61	-137.17	-580.09	-416.59	-2024.18
8.5in Open Hole	6068.00	16853.00	10785.00	5632.61	6566.29	-416.59	-2024.18	9106.99	-5570.56
5.5in Casing Production	30.00	16853.00	16823.00	30.00	6566.29	0.00	0.00	9106.99	-5570.56

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Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Tyler County, WV	Well	Lindsey Unit 1H
Field	Tyler	Wellbore	Lindsey Unit 1H AWB
Facility	Alta Pad		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Lindsey Unit 1H - POE - Rev-1	6589.00	164.01	-2661.59	1709294.22	14305745.17	39°23'40.983"N	80°45'22.316"W	point
Lindsey Unit 1H - LP - Rev-1	6629.00	381.52	-2732.41	1709223.43	14305962.59	39°23'43.135"N	80°45'23.211"W	point
Lindsey Unit 1H - BHL - Rev-1	6629.00	9136.40	-5582.97	1706374.00	14314714.00	39°25'09.738"N	80°45'59.232"W	point

WELLPATH COMPOSITION - Ref Wellbore: Lindsey Unit 1H AWB Ref Wellpath: Lindsey Unit 1H AWP Proj: 16853'				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
30.00	490.00	Gyrodata standard - Single-shot	01 Gyrodata SS Gyro <17-1/2">(100'-475')	Lindsey Unit 1H AWB
490.00	2634.00	ISCWSA MWD, Rev. 4 (Standard)	02 Panther EM <12-1/4">(475')(564'-2619')	Lindsey Unit 1H AWB
2634.00	5943.00	ISCWSA MWD, Rev. 4 (Standard)	03 Panther EM <8-3/4">(2619')(2718'-5928')	Lindsey Unit 1H AWB
5943.00	16828.00	BHI AutoTrak Curve (Short)	04 BH AT Curve <8-1/2">(5943')(6046'-16828')	Lindsey Unit 1H AWB
16828.00	16853.00	Blind Drilling (std)	Projection to bit	Lindsey Unit 1H AWB

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Actual Wellpath Report

Lindsey Unit 1H AWP Proj: 16853'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Tyler County, WV	Well	Lindsey Unit 1H
Field	Tyler	Wellbore	Lindsey Unit 1H AWB
Facility	Alta Pad		

COMMENTS
<p>Wellpath general comments API: 47-095-02547-0000 BHI Job #: 109712917 Rig: H&P 519 Duration: 03/22/2019-03/25/2019 Gyrodatta SS Gyro <17-1/2">(100'-475') Panther EM <12-1/4">(475')(564'-2619') Panther EM <8-3/4">(2619')(2718'-5928') BH AT Curve <8-1/2">(5943')(6046'-16828') Middlesex: 7005' MD Burkett: 7214' MD Tully: 7273' MD Hamilton: 7373' MD Marcellus POE: 7407' MD Projected MD at TD: 16853'</p>

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