

ANTERO RESOURCES CORPORATION

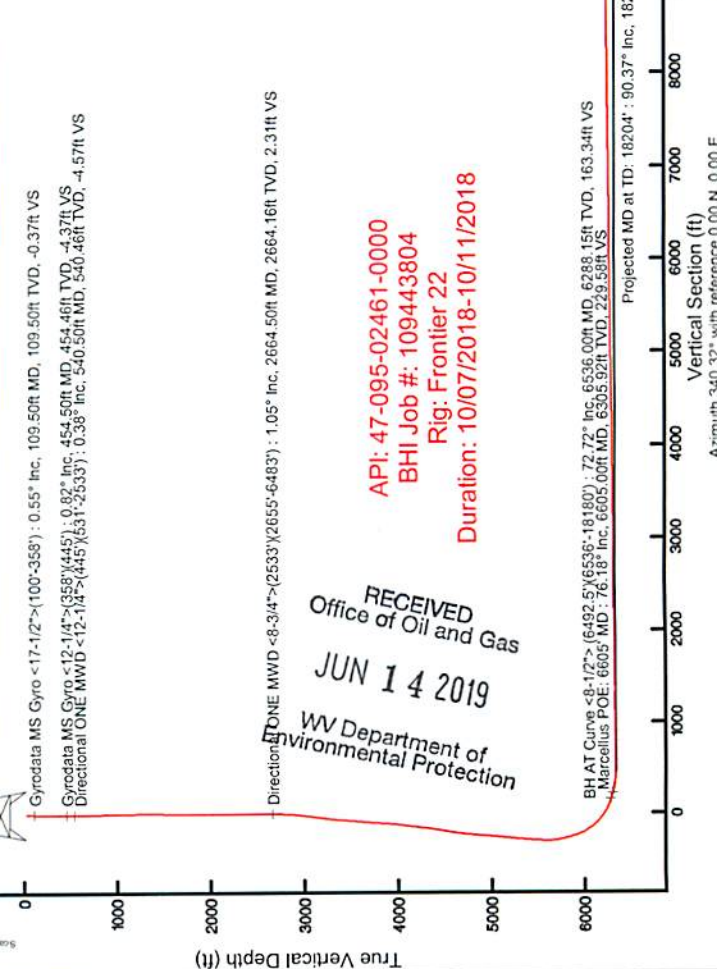
Location: Tyler County, WV
 Field: Tyler
 Facility: Neat Pad
 Slot: Slot #06
 Well: Jack Unit 1H
 Wellbore: Jack Unit 1H PWB

Plot reference depths in Jack Unit 1H PWB Rev-A-0
 True vertical depths are referenced to Frontier 22 (RKB)
 Measured depths are referenced to Frontier 22 (RKB)
 Scale: True distance
 Depths are in feet
 Frontier 22 (RKB) to Mean Sea Level: 1029.5 feet
 Mean Sea Level to Ground level (At Slot, Slot #06): -1005 feet
 Coordinates are in feet referenced to Slot

Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
Neat Pad	1658012.200	14315414.665	807°56'15.700"W
Slot	Local E (ft)	Local N (ft)	Longitude
Slot #06	0.00	14315414.665	807°56'15.700"W
Comment	Jack Unit 1H		
Frontier 22 (RKB) to Ground level (At Slot, Slot #06)		24.5ft	
Mean Sea Level to Ground level (At Slot, Slot #06)		-1005ft	
Frontier 22 (RKB) to Mean Sea Level		1029.5ft	

Well Profile Data								
Design Comment	MD (ft)	Incl (°)	AS (°)	TVD (ft)	Local E (ft)	Local N (ft)	DLS (°/100ft)	VS (ft)
Tie On	6492.50	69.440	330.310	6274.04	-446.67	9.56		122.71
Proj. To Bottom	6560.50	73.550	335.500	6295.62	-475.99	9.46		186.63
POE	6607.73	76.018	337.000	6308.00	-494.34	6.00		232.08
Landing Pt	6870.64	90.000	346.945	6340.00	-574.47	6.50		491.64
Lateral Shift	7156.77	90.000	352.670	6340.00	-625.08	2.00		774.04
On Azimuth	7774.24	90.000	340.320	6340.00	-769.00	2.00		1386.74
B.H.L.	16203.99	90.000	340.320	6340.00	-4781.39	0.00		11816.49

Well Data	
Well	Wellbore
Slot #06	Jack Unit 1H AHB
Slot #06	Jack Unit 1H PWB
	Jack Unit 1H PWB Rev-A-0



Marcellus POE: 6605° MD : 6305.92ft TVD, 66.52ft N, 495.72ft W
 BH AT Curve <8-1/2"> : (6492.5)(6536°-18180°) : 6288.15ft TVD, 6.63ft N, 466.47ft W

Directional ONE MWD : <8-3/4"> (2533)(2655°-6483°) : 2664.16ft TVD, 2.88ft N, 1.21ft E
 Directional ONE MWD : <12-1/4"> (45)(333°) : 40.46ft TVD, 5.04ft N, 1.53ft W
 Gyrodatta MS Gyro : <17-1/2"> (100°-358°) : 109.50ft TVD, 0.41ft S, 0.95ft W
 Gyrodatta MS Gyro : <17-1/2"> (100°-358°) : 109.50ft TVD, 0.41ft S, 0.95ft W

User specified (HDGM) Dip: 66.56° Field: 51835 nt
 Magnetic North is 7.67 degrees West of True North (at 04/Oct/2018)
 Grid North is 0.04 degrees East of True North
 To correct azimuth from True to Grid subtract 0.04 degrees
 To correct azimuth from Magnetic to Grid subtract 7.71 degrees

API: 47-095-02461-0000
 BHI Job #: 109443804
 Rig: Frontier 22
 Duration: 10/07/2018-10/11/2018

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Actual Wellpath Report

Jack Unit 1H AWP Proj: 18204'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Tyler County, WV	Well	Jack Unit 1H
Field	Tyler	Wellbore	Jack Unit 1H AWB
Facility	Neat Pad		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Delaset
Scale	0.999600	Report Generated	16/Oct/2018 at 16:04
Convergence at slot	0.04° East	Database/Source file	WA_MPL_EasternUS_Defm/Jack_Unit_1H_AWP_Proj_18204_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	1658012.20	14315414.67	39°25'17.450"N	80°56'15.700"W
Facility Reference Pt			1658012.20	14315414.67	39°25'17.450"N	80°56'15.700"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM		
Calculation method	Minimum curvature	Frontier 22 (RKB) to Facility Vertical Datum
Horizontal Reference Pt	Slot	Frontier 22 (RKB) to Mean Sea Level
Vertical Reference Pt	Frontier 22 (RKB)	Frontier 22 (RKB) to Ground Level at Slot (Slot #06)
MD Reference Pt	Frontier 22 (RKB)	Section Origin
Field Vertical Reference	Mean Sea Level	Section Azimuth
		1029.50ft
		1029.50ft
		24.50ft
		N 0.00, E 0.00 ft
		340.32°

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Area	Tyler County, WV		Well	Jack Unit 1H
Field	Tyler		Wellbore	Jack Unit 1H AWB
Facility	Neat Pad			

WELLPATH DATA (209 stations) † = interpolated/extrapolated station

MD ft	Inclination °	Azimuth °	TVD ft	Vert ft	Sec 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
0.00	0.00	186.770	0.00	0.00	0.00	0.00	0.00	1658012.20	14315414.67	39°25'17.450"N	80°56'15.700"W	0.00	0.000	0.00	0.00	0.00	
24.50	0.00	186.770	24.50	0.00	0.00	0.00	0.00	1658012.20	14315414.67	39°25'17.450"N	80°56'15.700"W	0.00	0.000	0.00	0.00	0.00	
109.50	0.550	186.770	109.50	-0.37	-0.41	-0.05	1658012.15	14315414.26	39°25'17.446"N	80°56'15.701"W	0.41	186.770	0.65	0.65	-203.80	Gyrodata MS Gyro <17-1/2> (100-358)	
209.50	0.520	187.720	209.49	-1.20	-1.33	-0.17	1658012.03	14315413.33	39°25'17.437"N	80°56'15.702"W	1.34	187.091	0.03	-0.03	0.93		
309.50	0.910	187.850	309.49	-2.30	-2.57	-0.34	1658011.86	14315412.10	39°25'17.425"N	80°56'15.704"W	2.59	187.434	0.39	0.39	0.13		
367.50	1.160	193.370	367.48	-3.21	-3.60	-0.53	1658011.67	14315411.07	39°25'17.414"N	80°56'15.707"W	3.63	188.444	0.46	0.43	9.52		
454.50	0.820	206.580	454.46	-4.37	-5.01	-1.02	1658011.18	14315409.66	39°25'17.401"N	80°56'15.713"W	5.11	191.466	0.47	-0.39	15.18	Gyrodata MS Gyro <12-1/4> (358)(445)	
540.50	0.380	303.270	540.46	-4.57	-5.40	-1.53	1658010.67	14315409.27	39°25'17.397"N	80°56'15.720"W	5.61	195.809	1.10	-0.51	112.43	Directional ONE MWD <12-1/4> (445)(631-2533)	
629.50	0.840	318.940	629.46	-3.95	-4.92	-2.05	1658010.15	14315408.74	39°25'17.401"N	80°56'15.726"W	5.33	202.621	0.23	0.18	17.61		
719.50	1.170	351.080	719.45	-2.65	-3.70	-2.47	1658009.73	14315410.97	39°25'17.413"N	80°56'15.732"W	4.45	213.780	0.85	0.70	35.71		
809.50	1.180	345.070	809.43	-0.82	-1.89	-2.85	1658009.35	14315412.77	39°25'17.431"N	80°56'15.736"W	3.43	236.436	0.14	0.01	-6.68		
904.50	1.510	347.850	904.40	1.39	0.28	-3.37	1658008.83	14315414.94	39°25'17.453"N	80°56'15.743"W	3.38	274.667	0.35	0.35	2.93		
997.50	1.550	348.370	997.37	3.85	2.70	-3.88	1658008.32	14315417.37	39°25'17.477"N	80°56'15.749"W	4.73	304.874	0.05	0.04	0.56		
1091.50	0.410	333.110	1091.35	5.45	4.25	-4.29	1658007.91	14315418.91	39°25'17.492"N	80°56'15.755"W	6.04	314.736	1.23	-1.21	-16.23		
1186.50	0.810	296.200	1186.35	6.27	4.85	-5.05	1658007.16	14315419.51	39°25'17.498"N	80°56'15.764"W	7.00	313.865	0.57	0.42	-38.85		
1280.50	0.380	321.020	1280.34	7.04	5.39	-5.84	1658006.36	14315420.05	39°25'17.503"N	80°56'15.774"W	7.94	312.691	0.52	-0.46	26.40		
1374.50	0.180	170.800	1374.34	7.19	5.48	-6.01	1658006.19	14315420.15	39°25'17.504"N	80°56'15.777"W	8.14	312.367	0.58	-0.21	-159.81		
1468.50	0.600	177.750	1468.34	6.57	4.84	-5.97	1658006.23	14315419.51	39°25'17.498"N	80°56'15.776"W	7.69	309.070	0.45	0.45	7.39		
1561.50	1.020	185.510	1561.33	5.36	3.53	-6.03	1658006.17	14315418.20	39°25'17.485"N	80°56'15.777"W	6.99	300.382	0.47	0.45	8.34		
1656.50	1.250	150.410	1656.31	3.57	1.79	-5.60	1658006.60	14315416.46	39°25'17.468"N	80°56'15.771"W	5.88	287.745	0.76	0.24	-36.95		
1750.50	1.220	150.930	1750.29	1.57	0.03	-4.60	1658007.60	14315414.69	39°25'17.450"N	80°56'15.759"W	4.61	270.311	0.03	-0.03	0.55		
1843.50	0.860	123.340	1843.28	0.04	-1.22	-3.54	1658008.66	14315413.68	39°25'17.438"N	80°56'15.745"W	3.75	250.932	0.65	-0.39	-29.67		
1937.50	1.040	42.360	1937.27	-0.12	-0.98	-2.38	1658009.82	14315414.91	39°25'17.440"N	80°56'15.730"W	2.57	247.566	1.32	0.19	-86.15		
2031.50	0.970	41.850	2031.25	0.66	0.24	-1.27	1658010.93	14315414.91	39°25'17.452"N	80°56'15.716"W	1.29	280.770	0.08	-0.07	-0.54		
2126.50	0.920	21.020	2126.24	1.62	1.55	-0.46	1658011.74	14315416.22	39°25'17.465"N	80°56'15.706"W	1.62	343.464	0.36	-0.05	-21.93		
2220.50	1.110	10.030	2220.23	2.98	3.15	-0.03	1658012.17	14315417.82	39°25'17.481"N	80°56'15.700"W	3.15	359.424	0.29	0.20	-11.69		
2314.50	1.210	358.280	2314.21	4.72	5.04	0.10	1658012.30	14315419.71	39°25'17.500"N	80°56'15.699"W	5.04	1.103	0.27	0.11	-12.50		
2408.50	0.570	34.060	2408.20	5.94	6.42	0.33	1658012.53	14315421.08	39°25'17.513"N	80°56'15.696"W	6.43	2.934	0.87	-0.68	38.06		
2502.50	1.080	168.670	2502.19	5.34	5.94	0.77	1658012.95	14315420.60	39°25'17.509"N	80°56'15.690"W	5.99	7.339	1.63	0.54	143.20		
2542.50	1.150	165.370	2542.18	4.56	5.18	0.94	1658013.14	14315419.85	39°25'17.501"N	80°56'15.688"W	5.27	10.286	0.24	0.17	-8.25		

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Jack Unit 1H AWP Proj: 18204'
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Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Tyler County, WV	Well	Jack Unit 1H
Field	Tyler	Wellbore	Jack Unit 1H AWB
Facility	Neat Pad		

WELLPATH DATA (209 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
2654.50	1.050	182.100	2664.16	2.31	2.88	1.21	1658013.41	14315417.55	39°25'17.478"N	80°56'15.685"W	3.12	22.763	0.27	-0.08	13.71	Directional ONE MWD <-8-3/4">(2533')(2655'-6483')
2758.50	1.720	179.720	2758.13	0.18	0.61	1.18	1658013.38	14315415.27	39°25'17.456"N	80°56'15.685"W	1.33	62.769	0.72	0.71	-2.53	
2852.50	4.450	191.820	2851.99	-4.27	-4.37	0.44	1658012.64	14315410.30	39°25'17.407"N	80°56'15.694"W	4.39	174.202	2.97	2.90	12.87	
2946.50	7.290	187.830	2945.49	-12.67	-13.85	-1.12	1658011.08	14315400.82	39°25'17.313"N	80°56'15.714"W	13.90	184.606	3.05	3.02	-4.24	
3040.50	7.960	185.740	3038.65	-23.83	-26.24	-2.58	1658009.82	14315388.44	39°25'17.191"N	80°56'15.733"W	26.36	185.615	0.77	0.71	-2.22	
3134.50	8.090	190.760	3131.74	-35.42	-39.21	-4.47	1658007.74	14315375.47	39°25'17.062"N	80°56'15.757"W	39.46	186.497	0.76	0.14	5.34	
3228.50	9.260	197.540	3224.66	-47.14	-52.92	-7.98	1658004.22	14315361.77	39°25'16.927"N	80°56'15.802"W	53.52	188.575	1.65	1.24	7.21	
3322.50	9.700	208.370	3317.38	-58.46	-67.10	-14.02	1657998.18	14315347.59	39°25'16.787"N	80°56'15.879"W	68.55	191.803	1.95	0.47	11.52	
3416.50	8.700	213.830	3410.18	-67.98	-79.97	-21.74	1657990.47	14315334.72	39°25'16.660"N	80°56'15.978"W	82.88	195.210	1.41	-1.06	5.81	
3510.50	7.830	205.950	3503.20	-76.69	-91.64	-28.50	1657983.71	14315323.06	39°25'16.544"N	80°56'16.064"W	95.97	197.278	1.52	-0.93	-8.38	
3604.50	7.690	212.640	3596.34	-85.01	-102.69	-34.70	1657977.52	14315312.01	39°25'16.435"N	80°56'16.143"W	108.40	198.669	0.97	-0.15	7.12	
3698.50	7.920	221.910	3689.48	-91.93	-112.81	-42.42	1657969.80	14315301.90	39°25'16.335"N	80°56'16.241"W	120.52	200.606	1.36	0.24	9.86	
3792.50	6.510	213.100	3782.73	-98.24	-122.09	-49.65	1657962.57	14315292.62	39°25'16.244"N	80°56'16.334"W	131.80	202.131	1.90	-1.50	-9.37	
3886.50	8.050	215.850	3875.97	-105.19	-131.89	-56.42	1657955.81	14315282.83	39°25'16.147"N	80°56'16.420"W	143.45	203.159	1.68	1.64	2.93	
3980.50	8.190	211.600	3969.03	-113.10	-142.93	-63.78	1657948.44	14315271.79	39°25'16.038"N	80°56'16.514"W	156.51	204.048	0.66	0.15	-4.52	
4074.50	10.140	205.160	4061.83	-123.16	-156.12	-70.81	1657941.42	14315258.61	39°25'15.907"N	80°56'16.604"W	171.43	204.396	2.34	2.07	-6.85	
4168.50	9.300	196.530	4154.48	-135.15	-170.89	-76.49	1657935.74	14315243.84	39°25'15.761"N	80°56'16.676"W	187.23	204.112	1.79	-0.89	-9.18	
4262.50	8.670	191.520	4247.34	-147.27	-185.04	-80.05	1657932.19	14315229.70	39°25'15.622"N	80°56'16.722"W	201.61	203.393	1.13	-0.78	-5.33	
4356.50	10.070	187.530	4340.10	-160.57	-200.05	-82.52	1657929.71	14315214.70	39°25'15.473"N	80°56'16.753"W	216.40	202.417	1.74	1.60	-4.24	
4450.50	10.690	183.840	4432.56	-175.88	-216.90	-84.18	1657928.05	14315197.86	39°25'15.307"N	80°56'16.775"W	232.66	201.213	0.97	0.66	-3.93	
4545.50	11.480	193.930	4525.80	-191.83	-234.87	-87.05	1657925.19	14315179.89	39°25'15.129"N	80°56'16.811"W	250.48	200.337	2.20	0.83	10.62	
4639.50	12.450	207.230	4617.77	-206.55	-252.96	-93.94	1657918.30	14315161.81	39°25'14.951"N	80°56'16.899"W	269.84	200.373	3.10	1.03	14.15	
4733.50	10.570	210.160	4709.88	-219.03	-269.42	-102.91	1657909.33	14315145.35	39°25'14.788"N	80°56'17.014"W	288.41	200.904	2.09	-2.00	3.11	
4827.50	8.360	212.310	4802.59	-228.80	-282.66	-110.89	1657901.35	14315132.12	39°25'14.657"N	80°56'17.115"W	303.63	201.421	2.38	-2.35	2.30	
4921.50	7.060	202.700	4895.75	-237.28	-293.76	-116.77	1657895.47	14315121.02	39°25'14.547"N	80°56'17.191"W	316.12	201.678	1.94	-1.38	-10.22	
5015.50	7.120	198.180	4989.03	-246.14	-304.63	-120.82	1657891.43	14315110.16	39°25'14.440"N	80°56'17.242"W	327.71	201.634	0.60	0.06	-4.81	
5109.50	7.190	201.270	5082.30	-255.19	-315.64	-124.77	1657887.48	14315099.15	39°25'14.331"N	80°56'17.293"W	339.41	201.569	0.42	0.07	3.29	
5203.50	7.210	197.290	5175.56	-264.34	-326.76	-128.66	1657883.59	14315088.04	39°25'14.221"N	80°56'17.342"W	351.17	201.492	0.53	0.02	-4.23	
5298.50	7.460	205.020	5269.78	-273.49	-338.04	-133.04	1657879.21	14315076.76	39°25'14.110"N	80°56'17.398"W	363.28	201.483	1.07	0.26	8.14	
5392.50	7.350	211.840	5363.00	-281.57	-348.68	-138.79	1657873.46	14315066.13	39°25'14.005"N	80°56'17.472"W	375.28	201.705	0.94	-0.12	7.26	

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Field	Tyler	Wellbore	Jack Unit 1H AWB
Facility	Neat Pad		

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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
5486.50	6.690	218.820	5456.29	-288.17	-358.05	-145.40	1657866.86	14315056.76	39°25'13.912"N	80°56'17.556"W	386.45	202.101	1.15	-0.70	7.43	
5580.50	6.900	217.770	5549.63	-294.07	-366.78	-152.29	1657859.97	14315048.03	39°25'13.826"N	80°56'17.644"W	397.14	202.548	0.26	0.22	-1.12	
5643.50	9.400	249.700	5612.02	-296.16	-371.56	-159.43	1657852.83	14315043.26	39°25'13.779"N	80°56'17.735"W	404.32	203.224	8.06	3.97	50.68	
5705.50	12.500	279.850	5672.94	-292.91	-372.17	-170.81	1657841.46	14315042.65	39°25'13.773"N	80°56'17.880"W	409.49	204.653	10.33	5.00	48.63	
5768.50	14.520	306.630	5734.25	-282.97	-366.28	-183.88	1657828.40	14315048.53	39°25'13.831"N	80°56'18.046"W	409.85	206.657	10.33	3.21	42.51	
5831.50	13.640	318.850	5795.37	-269.48	-355.98	-195.10	1657817.17	14315058.83	39°25'13.933"N	80°56'18.199"W	405.94	208.726	4.91	-1.40	19.40	
5893.50	16.650	317.590	5855.21	-254.48	-343.91	-205.91	1657806.38	14315070.89	39°25'14.052"N	80°56'18.327"W	400.84	210.910	4.88	4.85	-2.03	
5956.50	21.990	312.630	5914.66	-235.73	-329.27	-220.65	1657791.63	14315085.52	39°25'14.197"N	80°56'18.515"W	396.77	213.827	8.74	8.35	-7.87	
6019.50	27.990	314.240	5971.75	-212.02	-310.98	-239.91	1657772.38	14315103.81	39°25'14.378"N	80°56'18.760"W	392.37	217.649	9.71	9.65	2.56	
6082.50	34.250	316.900	6025.66	-182.45	-287.70	-262.64	1657749.67	14315127.08	39°25'14.608"N	80°56'19.049"W	389.55	222.393	10.17	9.94	4.22	
6144.50	40.320	319.750	6074.97	-147.62	-259.62	-287.55	1657724.77	14315155.15	39°25'14.896"N	80°56'19.366"W	387.41	227.921	10.18	9.79	4.60	
6207.50	44.800	325.830	6121.46	-107.09	-225.74	-313.16	1657699.16	14315189.02	39°25'15.221"N	80°56'19.692"W	386.04	234.215	9.41	6.79	9.65	
6270.50	49.310	327.640	6164.45	-62.34	-187.24	-338.38	1657673.95	14315227.50	39°25'15.602"N	80°56'20.013"W	386.73	241.043	7.76	7.48	2.87	
6297.00*	51.662	326.120	6181.31	-42.46	-170.12	-349.56	1657662.78	14315244.61	39°25'15.771"N	80°56'20.156"W	388.75	244.049	9.92	8.87	-5.74	Middlesex: 6297' MD
6333.50	54.930	324.180	6203.13	-14.23	-146.12	-366.28	1657646.06	14315268.61	39°25'16.008"N	80°56'20.369"W	394.35	248.252	9.92	8.95	-5.31	
6396.50	62.440	323.290	6235.85	37.31	-102.76	-398.11	1657614.25	14315311.95	39°25'16.437"N	80°56'20.774"W	411.16	255.527	11.98	11.92	-1.41	
6458.50	68.170	327.100	6261.75	91.66	-56.52	-430.21	1657582.17	14315358.17	39°25'16.894"N	80°56'21.182"W	433.90	262.516	10.80	9.24	6.15	
6480.00*	68.866	329.136	6289.60	111.22	-39.52	-440.77	1657571.60	14315375.16	39°25'17.062"N	80°56'21.317"W	442.54	264.876	9.56	3.70	9.47	Burkett: 6480' MD
6482.50	69.440	330.310	6274.04	122.71	-29.43	-446.67	1657565.71	14315385.25	39°25'17.162"N	80°56'21.392"W	447.63	266.230	9.56	3.79	9.39	
6536.00	72.720	332.120	6288.15	163.34	6.63	-466.47	1657545.92	14315421.29	39°25'17.519"N	80°56'21.644"W	466.52	270.814	8.51	7.54	4.16	BH AT Curve <8-1/2"> (6492.5)(6536'-18180')
6553.00*	74.527	333.298	6292.94	179.50	21.13	-473.95	1657538.44	14315435.78	39°25'17.682"N	80°56'21.739"W	474.42	272.552	12.54	10.63	6.93	July: 6553' MD
6558.00	75.060	333.640	6294.25	184.29	25.44	-476.10	1657536.29	14315440.10	39°25'17.705"N	80°56'21.766"W	476.78	273.059	12.54	10.65	6.85	
6605.00	76.180	335.300	6305.92	229.58	66.52	-495.72	1657516.68	14315481.16	39°25'18.111"N	80°56'22.016"W	500.17	277.643	4.17	2.38	3.53	Marcellus POE: 6605' MD
6652.00	78.070	336.710	6316.40	275.27	108.38	-514.35	1657498.05	14315523.00	39°25'18.525"N	80°56'22.253"W	525.65	281.899	4.97	4.02	3.00	
6699.00	81.350	338.150	6324.79	321.44	151.08	-532.10	1657480.32	14315565.68	39°25'18.947"N	80°56'22.479"W	553.13	285.851	7.60	6.98	3.06	
6747.00	83.710	339.570	6331.03	369.02	195.48	-549.26	1657463.16	14315610.05	39°25'19.386"N	80°56'22.697"W	583.00	289.589	5.73	4.92	2.96	
6794.00	85.570	341.360	6335.42	415.81	239.56	-564.90	1657447.53	14315654.13	39°25'19.821"N	80°56'22.896"W	613.60	292.980	5.48	3.96	3.81	
6841.00	88.490	342.560	6337.86	462.72	284.18	-579.43	1657433.00	14315698.73	39°25'20.263"N	80°56'23.081"W	645.37	296.126	6.72	6.21	2.55	
6935.00	90.520	343.650	6338.67	556.60	374.12	-606.75	1657405.69	14315788.63	39°25'21.152"N	80°56'23.428"W	712.82	301.658	2.45	2.16	1.16	
7030.00	90.520	344.610	6337.81	651.38	465.49	-632.73	1657379.73	14315879.97	39°25'22.055"N	80°56'23.759"W	785.51	306.342	1.01	0.00	1.01	

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Actual Wellpath Report

Jack Unit 1H AWP Proj: 18204'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Tyler County, WV	Well	Jack Unit 1H
Field	Tyler	Wellbore	Jack Unit 1H AWB
Facility	Neat Pad		

WELLPATH DATA (209 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)	Bulld Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
7124.00	90.740	345.740	6336.77	745.04	556.35	-656.78	1657355.69	14315970.80	39°25'22.953"N	80°56'24.064"W	860.75	310.268	1.22	0.23	1.20	
7219.00	90.460	350.920	6335.78	839.07	649.35	-675.98	1657356.49	14316063.76	39°25'23.872"N	80°56'24.308"W	937.34	313.849	5.46	-0.29	5.45	
7313.00	90.580	353.830	6334.92	930.99	742.81	-688.46	1657324.02	14316156.88	39°25'24.793"N	80°56'24.466"W	1012.57	317.163	3.10	0.13	3.10	
7407.00	90.650	350.230	6333.92	1023.01	835.58	-701.49	1657311.00	14316249.91	39°25'25.713"N	80°56'24.632"W	1091.00	319.896	3.83	0.07	-3.83	
7502.00	90.820	344.420	6332.86	1117.25	928.22	-722.32	1657290.17	14316342.51	39°25'26.629"N	80°56'24.896"W	1176.15	322.111	6.12	-0.03	-6.12	
7597.00	90.180	338.980	6332.20	1212.19	1018.38	-752.14	1657260.36	14316432.64	39°25'27.520"N	80°56'25.275"W	1266.02	323.552	5.74	-0.46	-5.74	
7692.00	89.320	341.040	6332.61	1307.18	1107.65	-784.61	1657227.90	14316521.87	39°25'28.403"N	80°56'25.689"W	1357.39	324.888	2.35	-0.91	2.17	
7787.00	90.710	347.590	6332.59	1401.90	1199.06	-810.28	1657202.24	14316613.24	39°25'29.306"N	80°56'26.015"W	1447.17	325.951	7.05	1.46	6.89	
7881.00	91.050	347.760	6331.14	1495.11	1290.88	-830.34	1657182.19	14316705.03	39°25'30.214"N	80°56'26.270"W	1534.88	327.249	0.40	0.36	0.18	
7975.00	90.460	339.240	6329.90	1588.87	1380.92	-857.01	1657155.53	14316795.03	39°25'31.104"N	80°56'26.609"W	1625.24	328.176	9.08	-0.63	-9.08	
8069.00	90.400	335.430	6329.20	1682.72	1467.64	-893.23	1657119.33	14316881.72	39°25'31.961"N	80°56'27.070"W	1718.09	328.675	4.05	-0.06	-4.05	
8164.00	89.910	336.880	6328.94	1777.47	1554.53	-931.63	1657080.94	14316968.57	39°25'32.820"N	80°56'27.558"W	1812.32	329.066	1.61	-0.52	1.53	
8258.00	90.340	343.090	6328.74	1871.42	1642.81	-963.79	1657048.80	14317056.81	39°25'33.693"N	80°56'27.967"W	1904.66	329.601	6.62	0.46	6.61	
8352.00	90.370	342.880	6328.15	1965.32	1732.89	-991.30	1657021.30	14317146.66	39°25'34.582"N	80°56'28.317"W	1996.22	330.226	0.23	0.03	-0.22	
8447.00	90.460	341.590	6327.46	2060.26	1823.16	-1020.28	1656992.33	14317237.09	39°25'35.476"N	80°56'28.686"W	2089.23	330.768	1.36	0.09	-1.36	
8541.00	90.520	340.110	6326.66	2154.25	1911.95	-1051.11	1656961.51	14317325.85	39°25'36.354"N	80°56'29.076"W	2181.83	331.200	1.58	0.06	-1.57	
8635.00	90.400	339.180	6325.91	2248.24	2000.08	-1083.81	1656928.83	14317413.94	39°25'37.225"N	80°56'29.494"W	2274.85	331.547	1.00	-0.13	-0.99	
8731.00	90.430	338.980	6325.21	2344.21	2089.74	-1118.10	1656894.55	14317503.57	39°25'38.111"N	80°56'29.930"W	2370.06	331.851	0.23	0.03	-0.23	
8825.00	90.400	339.250	6324.53	2438.19	2177.56	-1151.63	1656861.04	14317591.35	39°25'38.979"N	80°56'30.357"W	2463.33	332.127	0.31	-0.03	0.31	
8920.00	90.400	342.400	6323.87	2533.17	2267.27	-1182.82	1656829.85	14317681.03	39°25'39.866"N	80°56'30.753"W	2557.26	332.449	3.32	0.00	3.32	
9015.00	90.090	344.950	6323.46	2628.00	2358.43	-1209.53	1656800.16	14317772.15	39°25'40.768"N	80°56'31.093"W	2650.50	332.849	2.70	-0.33	2.68	
9109.00	90.450	344.430	6323.01	2721.73	2449.10	-1234.34	1656778.35	14317862.78	39°25'41.664"N	80°56'31.409"W	2742.57	333.252	0.68	0.39	-0.55	
9204.00	90.430	340.420	6322.27	2816.64	2539.84	-1263.02	1656749.68	14317953.29	39°25'42.559"N	80°56'31.773"W	2836.37	333.558	4.22	-0.03	-4.22	
9299.00	90.120	337.450	6321.81	2911.60	2628.28	-1297.17	1656715.56	14318041.89	39°25'43.435"N	80°56'32.208"W	2930.96	333.732	3.14	-0.33	-3.13	
9394.00	90.430	339.590	6321.36	3006.55	2716.68	-1331.95	1656680.79	14318130.25	39°25'44.309"N	80°56'32.650"W	3025.63	333.882	2.28	0.33	2.25	
9488.00	90.400	342.630	6320.68	3100.52	2805.60	-1362.38	1656650.37	14318219.14	39°25'45.188"N	80°56'33.037"W	3118.89	334.099	3.23	-0.03	3.23	
9583.00	90.490	347.260	6319.94	3195.19	2897.31	-1387.05	1656625.71	14318310.81	39°25'46.095"N	80°56'33.351"W	3212.21	334.418	4.87	0.09	4.87	
9678.00	90.890	347.640	6318.80	3289.44	2990.04	-1407.69	1656600.08	14318403.50	39°25'47.011"N	80°56'33.613"W	3304.83	334.789	0.58	0.42	0.40	
9772.00	90.740	344.530	6317.46	3382.95	3081.26	-1430.29	1656582.49	14318494.68	39°25'47.913"N	80°56'33.900"W	3397.04	335.100	3.31	-0.16	-3.31	
9867.00	90.680	342.760	6316.28	3477.78	3172.40	-1457.04	1656555.75	14318585.79	39°25'48.814"N	80°56'34.241"W	3491.00	335.331	1.86	-0.06	-1.86	

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Actual Wellpath Report

Jack Unit 1H AWP Proj: 18204'
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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #06
Operator	ANTERO RESOURCES CORPORATION	Well	Jack Unit 1H
Area	Tyler County, WV	Wellbore	Jack Unit 1H AWB
Field	Tyler		
Facility	Neat Pad		

WELLPATH DATA (209 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 (F/100ft)	Build Rate (F/100ft)	Turn Rate (F/100ft)	Comments
9961.00	90.740	340.880	6315.12	3571.73	3261.70	-1486.36	1655626.44	14318675.05	39°25'49.697"N	80°56'34.614"W	3584.40	335.501	2.00	0.06	-2.00	
10056.00	90.710	339.840	6313.91	3666.72	3351.16	-1518.29	1656494.52	14318764.48	39°25'50.581"N	80°56'35.020"W	3679.06	335.626	1.10	-0.03	-1.09	
10151.00	90.650	339.980	6312.79	3761.72	3440.38	-1550.92	1656461.91	14318853.66	39°25'51.463"N	80°56'35.435"W	3773.80	335.734	0.16	-0.06	0.15	
10246.00	90.680	339.700	6311.68	3856.71	3529.55	-1583.66	1656429.18	14318942.80	39°25'52.345"N	80°56'35.851"W	3868.55	335.835	0.30	0.03	-0.29	
10340.00	90.580	338.580	6310.65	3950.68	3617.38	-1617.13	1656395.72	14319030.59	39°25'53.213"N	80°56'36.277"W	3962.39	335.913	1.20	-0.11	-1.19	
10435.00	90.740	336.720	6309.56	4045.56	3705.24	-1653.25	1656359.62	14319118.41	39°25'54.081"N	80°56'36.737"W	4057.34	335.954	1.96	0.17	-1.96	
10530.00	90.770	334.980	6308.30	4140.26	3791.91	-1692.11	1656320.77	14319205.05	39°25'54.938"N	80°56'37.231"W	4152.33	335.952	1.83	0.03	-1.83	
10624.00	90.490	335.520	6307.27	4233.89	3877.27	-1731.46	1656281.47	14319290.38	39°25'55.782"N	80°56'37.732"W	4248.31	335.936	0.65	-0.30	0.57	
10718.00	90.580	339.850	6306.39	4327.76	3964.21	-1767.14	1656245.73	14319377.28	39°25'56.642"N	80°56'38.166"W	4340.24	335.974	4.61	0.10	4.61	
10813.00	90.680	342.710	6305.35	4422.74	4054.17	-1797.63	1656215.30	14319467.20	39°25'57.531"N	80°56'38.574"W	4434.83	336.087	3.01	0.11	3.01	
10908.00	90.680	343.120	6304.22	4517.63	4144.97	-1825.53	1656187.40	14319557.97	39°25'58.429"N	80°56'38.929"W	4529.16	336.230	0.43	0.00	0.43	
11003.00	90.830	341.110	6302.97	4612.57	4235.36	-1854.71	1656158.24	14319648.33	39°25'59.322"N	80°56'39.300"W	4623.66	336.351	2.12	0.16	-2.12	
11098.00	90.710	339.340	6301.99	4707.56	4324.75	-1886.84	1656126.11	14319737.68	39°26'00.206"N	80°56'39.709"W	4718.44	336.429	1.87	-0.13	-1.86	
11192.00	90.580	337.320	6300.63	4801.49	4412.10	-1921.55	1656091.42	14319824.99	39°26'01.069"N	80°56'40.151"W	4812.37	336.466	2.15	-0.14	-2.15	
11287.00	90.520	337.100	6299.72	4896.35	4499.68	-1958.35	1656054.64	14319912.53	39°26'01.935"N	80°56'40.619"W	4907.36	336.480	0.24	-0.06	-0.23	
11382.00	90.650	339.120	6298.75	4991.27	4587.82	-1993.76	1656019.24	14320000.64	39°26'02.806"N	80°56'41.070"W	5002.31	336.511	2.13	0.14	2.13	
11477.00	90.620	340.410	6297.70	5086.25	4676.95	-2026.62	1655986.40	14320089.73	39°26'03.688"N	80°56'41.488"W	5097.16	336.572	1.36	-0.03	1.36	
11572.00	90.740	339.790	6296.57	5181.25	4766.27	-2058.95	1655954.08	14320179.02	39°26'04.571"N	80°56'41.899"W	5191.97	336.636	0.66	0.13	-0.65	
11667.00	90.550	338.640	6295.50	5276.22	4855.08	-2092.66	1655920.38	14320267.79	39°26'05.449"N	80°56'42.328"W	5286.87	336.683	1.23	-0.20	-1.21	
11762.00	90.490	338.720	6294.64	5371.18	4943.57	-2127.20	1655885.86	14320356.25	39°26'06.323"N	80°56'42.767"W	5381.81	336.718	0.11	-0.06	0.08	
11856.00	90.680	342.750	6293.68	5465.15	5032.29	-2158.20	1655854.86	14320444.93	39°26'07.200"N	80°56'43.162"W	5475.56	336.787	4.29	0.20	4.29	
11951.00	90.620	343.790	6292.60	5560.02	5123.26	-2185.55	1655827.53	14320535.86	39°26'08.100"N	80°56'43.510"W	5569.95	336.897	1.10	-0.06	1.09	
12045.00	90.710	344.720	6291.51	5653.79	5213.72	-2211.05	1655802.03	14320626.29	39°26'08.994"N	80°56'43.834"W	5663.19	337.019	0.99	0.10	0.99	
12140.00	90.680	346.580	6290.36	5748.37	5305.75	-2234.60	1655778.50	14320718.28	39°26'09.904"N	80°56'44.133"W	5757.12	337.161	1.96	-0.03	1.96	
12235.00	90.800	347.070	6289.13	5842.75	5398.24	-2256.25	1655756.86	14320810.74	39°26'10.818"N	80°56'44.409"W	5850.78	337.317	0.53	0.13	0.52	
12329.00	91.290	343.830	6287.42	5936.34	5489.20	-2279.85	1655733.26	14320901.66	39°26'11.717"N	80°56'44.709"W	5943.82	337.445	3.49	0.52	-3.45	
12424.00	90.770	338.960	6285.71	6031.28	5579.19	-2310.15	1655702.98	14320991.62	39°26'12.607"N	80°56'45.094"W	6038.56	337.507	5.15	-0.55	-5.13	
12518.00	90.740	336.390	6284.47	6125.17	5666.13	-2345.85	1655667.29	14321078.52	39°26'13.466"N	80°56'45.549"W	6132.54	337.510	2.73	-0.03	-2.73	
12614.00	90.680	333.580	6283.28	6220.73	5753.11	-2386.44	1655626.72	14321165.46	39°26'14.326"N	80°56'46.065"W	6228.43	337.471	2.93	-0.06	-2.93	
12707.00	90.460	331.860	6282.35	6312.91	5835.76	-2429.06	1655584.12	14321248.08	39°26'15.143"N	80°56'46.608"W	6321.11	337.401	1.86	-0.24	-1.85	

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Actual Wellpath Report

Jack Unit 1H AWP Proj: 18204'

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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #06
Operator	ANTERO RESOURCES CORPORATION	Well	Jack Unit 1H
Area	Tyler County, WV	Wellbore	Jack Unit 1H AWP
Field	Tyler		
Facility	Neat Pad		

WELLPATH DATA (209 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 (F/100ft)	Build Rate (F/100ft)	Turn Rate (F/100ft)	Comments
12802.00	89.290	336.860	6282.56	6407.36	5921.38	-2470.15	1655543.04	14321333.66	39°26'15.989"N	80°56'47.131"W	6415.94	337.356	5.41	-1.23	5.26	
12898.00	90.620	343.120	6282.64	6503.31	6011.53	-2502.99	1655510.22	14321423.78	39°26'16.881"N	80°56'47.549"W	6511.79	337.395	6.67	1.39	6.52	
12993.00	90.950	344.330	6281.33	6598.13	6102.72	-2529.61	1655483.61	14321514.93	39°26'17.782"N	80°56'47.887"W	6608.21	337.486	1.32	0.35	1.27	
13086.00	91.780	339.260	6279.12	6691.04	6191.01	-2558.64	1655454.58	14321603.18	39°26'18.655"N	80°56'48.257"W	6698.90	337.545	5.52	0.89	-5.45	
13181.00	90.650	336.850	6277.10	6785.94	6279.09	-2594.14	1655419.11	14321691.24	39°26'19.526"N	80°56'48.708"W	6793.86	337.553	2.80	-1.19	-2.54	
13276.00	90.650	343.890	6276.02	6880.87	6368.51	-2626.03	1655387.23	14321780.62	39°26'20.410"N	80°56'49.114"W	6888.68	337.591	7.41	0.00	7.41	
13372.00	90.620	347.200	6274.96	6976.46	6461.45	-2649.99	1655363.28	14321873.52	39°26'21.328"N	80°56'49.419"W	6983.75	337.700	3.45	-0.03	3.45	
13467.00	90.650	345.820	6273.91	7070.89	6553.82	-2672.15	1655341.13	14321965.86	39°26'22.241"N	80°56'49.701"W	7077.64	337.818	1.45	0.03	-1.45	
13562.00	90.710	345.780	6272.78	7165.45	6645.92	-2695.45	1655317.83	14322057.91	39°26'23.152"N	80°56'49.997"W	7171.72	337.924	0.08	0.06	-0.04	
13657.00	90.830	344.030	6271.50	7260.14	6737.63	-2720.19	1655293.11	14322149.59	39°26'24.058"N	80°56'50.312"W	7266.02	338.015	1.85	0.13	-1.84	
13752.00	91.110	339.710	6269.89	7355.07	6827.88	-2749.74	1655263.57	14322239.80	39°26'24.950"N	80°56'50.688"W	7360.77	338.064	4.56	0.29	-4.55	
13848.00	90.770	335.940	6268.32	7450.94	6916.75	-2785.96	1655227.36	14322328.63	39°26'25.829"N	80°56'51.149"W	7456.74	338.061	3.94	-0.35	-3.93	
13943.00	90.680	335.340	6267.12	7545.62	7003.28	-2825.14	1655189.20	14322415.13	39°26'26.685"N	80°56'51.647"W	7551.95	338.031	0.64	-0.09	-0.63	
14038.00	90.650	336.160	6266.01	7640.31	7089.89	-2864.15	1655149.20	14322501.71	39°26'27.541"N	80°56'52.144"W	7646.56	338.002	0.86	-0.03	0.86	
14132.00	90.430	337.740	6265.13	7734.14	7176.38	-2900.96	1655112.41	14322588.16	39°26'28.396"N	80°56'52.612"W	7740.54	337.990	1.70	-0.23	1.68	
14227.00	90.650	336.250	6264.23	7828.97	7263.82	-2938.08	1655075.30	14322675.57	39°26'29.260"N	80°56'53.085"W	7835.52	337.978	1.59	0.23	-1.57	
14322.00	90.550	339.090	6263.24	7923.86	7351.68	-2974.17	1655039.23	14322763.39	39°26'30.129"N	80°56'53.544"W	7930.50	337.974	2.99	-0.11	2.99	
14417.00	90.740	342.390	6262.17	8018.84	7441.35	-3005.50	1655007.91	14322853.02	39°26'31.015"N	80°56'53.943"W	8025.38	338.007	3.48	0.20	3.47	
14510.00	90.650	340.960	6261.04	8111.80	7529.62	-3034.74	1654978.68	14322941.26	39°26'31.888"N	80°56'54.315"W	8118.18	338.049	1.54	-0.10	-1.54	
14605.00	90.680	340.790	6259.94	8206.79	7619.37	-3065.86	1654947.57	14323030.98	39°26'32.775"N	80°56'54.711"W	8213.06	338.081	0.18	0.03	-0.18	
14700.00	90.520	342.430	6258.94	8301.76	7709.51	-3095.83	1654917.62	14323121.08	39°26'33.666"N	80°56'55.092"W	8307.87	338.122	1.73	-0.17	1.73	
14794.00	90.340	341.370	6258.24	8395.72	7798.86	-3125.03	1654888.43	14323210.39	39°26'34.549"N	80°56'55.464"W	8401.66	338.164	1.14	-0.19	-1.13	
14889.00	90.430	342.800	6257.60	8490.67	7889.25	-3154.25	1654859.22	14323300.74	39°26'35.443"N	80°56'55.836"W	8496.44	338.208	1.51	0.09	1.51	
14984.00	90.520	345.490	6256.81	8585.44	7980.62	-3180.20	1654833.28	14323392.08	39°26'36.346"N	80°56'56.166"W	8590.92	338.273	2.83	0.09	2.83	
15078.00	90.490	346.440	6255.98	8678.98	8071.81	-3203.00	1654810.49	14323483.23	39°26'37.247"N	80°56'56.456"W	8684.08	338.356	1.01	-0.03	1.01	
15173.00	90.460	344.650	6255.19	8773.58	8163.80	-3226.71	1654786.79	14323575.18	39°26'38.157"N	80°56'56.757"W	8778.34	338.434	1.88	-0.03	-1.88	
15268.00	91.110	340.400	6253.89	8868.48	8254.38	-3255.23	1654758.28	14323665.73	39°26'39.052"N	80°56'57.120"W	8873.07	338.478	4.53	0.68	-4.47	
15364.00	90.220	336.810	6252.78	8964.41	8343.74	-3290.24	1654729.28	14323755.06	39°26'39.936"N	80°56'57.566"W	8969.04	338.479	3.85	-0.93	-3.74	
15459.00	90.000	337.420	6252.59	9059.26	8431.27	-3327.18	1654686.35	14323842.55	39°26'40.801"N	80°56'58.036"W	9064.02	338.465	0.68	-0.23	0.64	
15554.00	89.940	338.290	6252.64	9154.18	8519.26	-3362.99	1654650.56	14323930.50	39°26'41.671"N	80°56'58.492"W	9159.01	338.458	0.92	-0.06	0.92	

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Jack Unit 1H AWP Proj: 18204'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot #06
Area	Tyler County, WV	Jack Unit 1H
Field	Tyler	Jack Unit 1H AWP
Facility	Neat Pad	

WELLPATH DATA (209 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 [°/100ft]	Comments
15648.00	90.090	337.880	6252.62	9248.10	8606.40	-3398.23	1654815.34	14324017.61	39°26'42.532"N	80°56'58.941"W	9253.01	338.453	0.67	0.16	-0.65	
15743.00	90.250	337.600	6252.34	9342.99	8694.26	-3434.37	1654579.21	14324105.43	39°26'43.401"N	80°56'59.401"W	9348.00	338.445	0.19	0.17	-0.08	
15838.00	90.030	335.130	6252.11	9437.76	8781.28	-3472.45	1654541.14	14324192.42	39°26'44.261"N	80°56'59.885"W	9442.93	338.424	2.61	-0.23	-2.60	
15932.00	90.060	335.250	6252.03	9531.38	8866.61	-3511.89	1654501.72	14324277.71	39°26'45.104"N	80°57'00.388"W	9536.78	338.392	0.13	0.03	0.13	
16027.00	90.830	339.150	6251.29	9626.22	8954.16	-3548.70	1654464.92	14324365.23	39°26'45.970"N	80°57'00.856"W	9631.74	338.381	4.18	0.81	4.11	
16122.00	89.690	340.530	6250.86	9721.21	9043.34	-3581.44	1654432.20	14324454.37	39°26'46.852"N	80°57'01.273"W	9726.70	338.395	1.88	-1.20	1.45	
16216.00	91.750	343.660	6249.68	9815.14	9132.76	-3610.33	1654403.32	14324543.76	39°26'47.736"N	80°57'01.640"W	9820.48	338.430	3.99	2.19	3.33	
16310.00	88.770	340.090	6249.25	9909.08	9222.07	-3639.57	1654374.09	14324633.04	39°26'48.618"N	80°57'02.013"W	9914.29	338.463	4.95	-3.17	-3.80	
16403.00	90.560	338.120	6248.78	10002.06	9310.09	-3669.58	1654344.09	14324721.01	39°26'49.488"N	80°57'02.394"W	10007.17	338.488	3.03	1.95	2.32	
16499.00	90.220	341.670	6249.11	10098.02	9401.36	-3699.31	1654314.38	14324812.25	39°26'50.391"N	80°57'02.773"W	10103.00	338.521	0.71	-0.38	-0.60	
16593.00	90.740	342.260	6248.32	10191.97	9490.75	-3728.39	1654285.30	14324901.60	39°26'51.274"N	80°57'03.143"W	10196.82	338.553	0.85	0.55	0.65	
16688.00	90.920	338.090	6246.95	10286.94	9580.09	-3760.59	1654253.12	14324990.91	39°26'52.158"N	80°57'03.553"W	10291.75	338.588	4.41	0.19	-4.41	
16784.00	90.490	338.120	6245.77	10382.86	9669.16	-3796.38	1654217.34	14325079.94	39°26'53.038"N	80°57'04.008"W	10387.74	338.564	0.45	-0.45	0.03	
16878.00	90.950	341.040	6244.59	10476.84	9757.24	-3829.17	1654184.56	14325167.98	39°26'53.909"N	80°57'04.426"W	10481.71	338.573	3.14	0.49	3.11	
16973.00	91.480	344.790	6242.57	10571.70	9848.01	-3857.07	1654156.68	14325258.72	39°26'54.806"N	80°57'04.781"W	10576.40	338.612	3.99	0.56	3.95	
17068.00	91.690	344.890	6239.94	10666.37	9939.67	-3881.91	1654131.84	14325350.34	39°26'55.712"N	80°57'05.097"W	10670.81	338.667	0.24	0.22	0.09	
17163.00	90.770	343.220	6237.90	10761.14	10030.98	-3908.01	1654105.76	14325441.62	39°26'56.615"N	80°57'05.429"W	10765.37	338.714	2.00	-0.97	-1.75	
17257.00	92.250	339.190	6235.43	10855.08	10119.92	-3938.28	1654075.50	14325530.52	39°26'57.494"N	80°57'05.814"W	10859.23	338.736	4.57	1.57	-4.29	
17352.00	91.460	337.460	6232.33	10949.96	10208.15	-3973.35	1654040.45	14325618.72	39°26'58.366"N	80°57'06.261"W	10954.17	338.732	1.99	-0.81	-1.82	
17446.00	91.570	336.660	6229.83	11043.78	10294.69	-4009.97	1654003.84	14325705.22	39°26'59.221"N	80°57'06.727"W	11048.10	338.718	0.86	0.10	-0.85	
17541.00	90.120	333.030	6228.43	11138.32	10380.65	-4050.34	1653963.48	14325791.15	39°27'00.071"N	80°57'07.241"W	11142.85	338.685	4.11	-1.53	-3.82	
17636.00	90.030	333.530	6228.31	11232.60	10465.50	-4093.06	1653920.79	14325875.97	39°27'00.910"N	80°57'07.785"W	11237.43	338.640	0.53	-0.09	0.53	
17731.00	89.970	337.230	6228.31	11327.23	10551.85	-4132.63	1653881.23	14325962.28	39°27'01.764"N	80°57'08.289"W	11332.26	338.612	3.90	-0.06	3.89	
17826.00	90.280	337.640	6228.10	11422.11	10639.58	-4169.08	1653844.79	14326049.97	39°27'02.631"N	80°57'08.753"W	11427.24	338.602	0.54	0.33	0.43	
17920.00	90.090	340.300	6227.79	11516.07	10727.31	-4202.81	1653811.08	14326137.67	39°27'03.498"N	80°57'09.182"W	11521.23	338.605	2.84	-0.20	2.83	
18015.00	91.200	341.510	6226.73	11611.06	10817.07	-4232.89	1653780.01	14326227.40	39°27'04.386"N	80°57'09.578"W	11616.15	338.624	1.73	1.17	1.27	
18110.00	91.290	341.930	6224.66	11706.01	10907.26	-4263.68	1653750.24	14326317.54	39°27'05.277"N	80°57'09.957"W	11710.99	338.649	0.45	0.09	0.44	
18180.00	90.370	341.260	6223.65	11775.98	10973.67	-4285.77	1653728.15	14326383.93	39°27'05.934"N	80°57'10.238"W	11780.89	338.667	1.63	-1.31	-0.96	
18204.00	90.370	341.260	6223.49	11799.98	10996.40	-4293.49	1653720.44	14326406.65	39°27'06.158"N	80°57'10.336"W	11804.86	338.672	0.00	0.00	0.00	Projected MD at TD: 18204'

HOLE & CASING SECTIONS - Ref Wellbore: Jack Unit 1H AWP Ref Wellpath: Jack Unit 1H AWP Proj: 18204'

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	24.50	104.50	80.00	80.00	24.50	104.50	0.00	0.00	-0.36
17.5in Open Hole	104.50	370.50	266.00	266.00	104.50	370.48	-0.36	-0.04	-0.55
13.375in Casing Surface	24.50	370.50	346.00	346.00	24.50	370.48	0.00	0.00	-0.55
12.25in Open Hole	370.50	2615.80	2245.30	2245.30	370.48	2615.47	-3.65	3.78	1.19
9.625in Casing Intermediate	24.50	2615.80	2591.30	2591.30	24.50	2615.47	0.00	0.00	1.19
8.75in Open Hole	2615.80	6560.50	3944.70	3944.70	2615.47	6294.89	3.78	27.61	-477.17
8.5in Open Hole	6560.50	18204.00	11643.50	6294.89	6223.49	27.61	-477.17	10996.40	-4293.49
5.5in Casing Production	24.50	18204.00	18179.50	18179.50	24.50	6223.49	0.00	10996.40	-4293.49

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TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Jack Unit 1H POE Rev-2	6308.00	89.68	-494.34	1657818.06	14315484.31	39°25'18.142"N	80°56'21.998"W	point
Jack Unit 1H BHL Rev-2	6340.00	11018.25	-4281.39	1653732.53	14326428.49	39°27'06.374"N	80°57'10.182"W	point
Jack Unit 1H LP Rev-2	6340.00	317.00	-574.47	1657437.96	14315731.53	39°25'20.587"N	80°56'23.017"W	point

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Tyler County, WV	Well	Jack Unit 1H
Field	Tyler	Wellbore	Jack Unit 1H AWB
Facility	Neat Pad		

WELLPATH COMPOSITION - Ref Wellbore: Jack Unit 1H AWB Ref Wellpath: Jack Unit 1H AWP Proj: 18204'			
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment
24.50	367.50	Gyrodata standard - Drop gyro or Multi-shot	01 Gyrodatta MS Gyro <17-1/2">(100'-358')
367.50	454.50	Gyrodata standard - Drop gyro or Multi-shot	02 Gyrodatta MS Gyro <12-1/4">(358')(445)
454.50	2542.50	ISCWSA MWD, Rev. 4 (Standard)	03 Directional ONE MWD <12-1/4">(445')(531'-2533')
2542.50	6492.50	ISCWSA MWD, Rev. 4 (Standard)	04 Directional ONE MWD <8-3/4">(2533')(2655'-6483')
6492.50	18180.00	BHI AutoTrak Curve (Short)	05 BH AT Curve <8-1/2">(6492.5')(6536'-18180')
18180.00	18204.00	Blind Drilling (std)	Projection to bit
			Wellbore

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot #06	Jack Unit 1H
Area	Tyler County, WV	Well	Jack Unit 1H AWB
Field	Tyler	Wellbore	
Facility	Neat Pad		

COMMENTS
<p>Wellpath general comments</p> <p>API: 47-095-02461-0000</p> <p>BHI Job #: 109443804</p> <p>Rig: Frontier 22</p> <p>Duration: 10/07/2018-10/11/2018</p> <p>Gyrodata MS Gyro <17-1/2">(100'-358')</p> <p>Gyrodata MS Gyro <12-1/4">(358')(445')</p> <p>Directional ONE MWD <12-1/4">(445')(531'-2533')</p> <p>Directional ONE MWD <8-3/4">(2533')(2655'-6483')</p> <p>BH AT Curve <8-1/2"> (6492.5')(6536'-18180')</p> <p>Middlesex: 6297' MD</p> <p>Burkett: 6480' MD</p> <p>Tully: 6553' MD</p> <p>Marcellus POE: 6605' MD</p> <p>Projected MD at TD: 18204'</p>

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