

Actual Wellpath Report

Jim Unit 1H AWP Proj: 18006'

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REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Neat Pad
Slot	Slot #09
Well	Jim Unit 1H
Wellbore	Jim Unit 1H AWB

REPORT SETUP INFORMATION	
Projection System	NAD27 / UTM Zone 17 North, US feet
North Reference	Grid
Scale	0.999600
Convergence at slot	0.04° East
Software System	WellArchitect® 5.1
User	Delaset
Report Generated	29/Oct/2018 at 14:01
Database/Source file	WA_MPL_EasternUS_Defn/Jim_Unit_1H_AWP_Proj_18006_.xml

WELLPATH LOCATION				
	Local coordinates		Grid coordinates	
	North[ft]	East[ft]	Northing[US ft]	Longitude
Slot Location	-24.29	-16.46	14315390.38	80°56'15.910"W
Facility Reference Pt			14315414.67	80°56'15.700"W
Field Reference Pt			0.00	0°00'00.000"

WELLPATH DATUM	
Calculation method	Minimum curvature
Horizontal Reference Pt	Slot
Vertical Reference Pt	Frontier 22 (RKB)
MD Reference Pt	Frontier 22 (RKB)
Field Vertical Reference	Mean Sea Level
	Frontier 22 (RKB) to Facility Vertical Datum
	Frontier 22 (RKB) to Mean Sea Level
	Frontier 22 (RKB) to Ground Level at Slot (Slot #09)
	Section Origin
	Section Azimuth
	1029.50ft
	1029.50ft
	24.50ft
	N 0.00, E 0.00 ft
	160.63°

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REFERENCE WELLPATH IDENTIFICATION				Slot	Slot #09
Operator	ANTERO RESOURCES CORPORATION			Well	Jim Unit 1H
Area	Tyler County, WV			Wellbore	Jim Unit 1H AWP
Field	Tyler				
Facility	Neat Pad				

WELLPATH DATA (216 stations) † = interpolated/extrapolated station																	
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (1/100ft)	Build Rate (1/100ft)	Turn Rate (1/100ft)	Comments	
0.00	0.00	155.160	0.00	0.00	0.00	0.00	1657995.74	14315390.38	39°25'17.210"N	80°56'15.910"W	0.00	0.000	0.00	0.00	0.00		
24.50	0.00	155.160	24.50	0.00	0.00	0.00	1657995.74	14315390.38	39°25'17.210"N	80°56'15.910"W	0.00	0.000	0.00	0.00	0.00		
109.50	0.150	155.160	109.50	0.11	-0.10	0.05	1657995.79	14315390.28	39°25'17.209"N	80°56'15.909"W	0.11	155.160	0.18	0.18	182.54	Gyrodata MS Gyro <17-1/2">(100'-348')	
209.50	0.250	197.030	209.50	0.42	-0.43	0.04	1657995.78	14315389.95	39°25'17.206"N	80°56'15.912"W	0.43	174.952	0.17	0.10	41.87		
309.50	0.180	245.820	309.50	0.61	-0.70	-0.17	1657995.57	14315389.68	39°25'17.203"N	80°56'15.914"W	0.72	193.576	0.19	-0.07	48.79		
357.50	0.210	296.970	357.50	0.55	-0.69	-0.32	1657995.43	14315389.69	39°25'17.203"N	80°56'15.914"W	0.78	204.571	0.38	0.06	108.56		
424.50	0.510	302.410	424.50	0.23	-0.48	-0.68	1657995.07	14315389.90	39°25'17.205"N	80°56'15.919"W	0.83	234.873	0.45	0.45	0.45	8.12	Gyrodata MS Gyro <12-1/4">(348')(415'-504')
513.50	2.390	281.390	513.46	-1.04	0.10	-2.83	1657992.91	14315390.48	39°25'17.211"N	80°56'15.946"W	2.83	272.064	2.16	2.11	-23.62		
568.50	4.080	279.480	568.38	-2.57	0.65	-5.89	1657989.86	14315391.03	39°25'17.216"N	80°56'15.985"W	5.92	276.310	3.08	3.07	-3.47	Directional ONE MWD <12-1/4">(504')(559'-2579')	
658.50	6.280	277.530	658.00	-6.34	1.82	-13.92	1657981.82	14315392.20	39°25'17.228"N	80°56'16.087"W	14.04	277.460	2.45	2.44	-2.17		
748.50	7.860	273.540	747.32	-10.96	2.85	-24.95	1657970.81	14315393.23	39°25'17.238"N	80°56'16.228"W	25.11	276.514	1.84	1.76	-4.43		
838.50	8.540	265.360	836.40	-15.06	2.69	-37.75	1657958.01	14315393.07	39°25'17.237"N	80°56'16.391"W	37.85	274.073	1.50	0.76	-9.09		
933.50	10.790	262.420	930.04	-18.67	0.94	-53.60	1657942.17	14315391.32	39°25'17.220"N	80°56'16.593"W	53.61	271.009	2.42	2.37	-3.09		
1028.50	12.430	261.450	1023.10	-22.40	-1.75	-72.53	1657923.25	14315388.63	39°25'17.193"N	80°56'16.834"W	72.55	268.618	1.74	1.73	-1.02		
1122.50	14.310	260.990	1114.55	-26.39	-5.07	-94.00	1657901.78	14315385.31	39°25'17.161"N	80°56'17.108"W	94.14	266.911	2.00	2.00	-0.49		
1218.50	15.630	267.980	1207.32	-32.36	-7.38	-118.57	1657877.22	14315383.00	39°25'17.138"N	80°56'17.421"W	118.80	266.436	2.26	1.27	7.28		
1312.50	17.180	270.210	1297.51	-40.76	-7.78	-145.03	1657850.77	14315382.61	39°25'17.134"N	80°56'17.758"W	145.24	266.931	1.88	1.76	2.37		
1407.50	18.500	267.490	1387.94	-49.84	-8.39	-174.12	1657821.69	14315382.00	39°25'17.129"N	80°56'18.129"W	174.32	267.243	1.64	1.39	-2.86		
1502.50	17.800	265.530	1478.21	-57.94	-10.18	-203.65	1657792.17	14315380.21	39°25'17.111"N	80°56'18.505"W	203.91	267.139	0.98	-0.74	-2.06		
1597.50	17.520	264.910	1568.74	-65.20	-12.58	-232.37	1657763.46	14315377.81	39°25'17.087"N	80°56'18.871"W	232.71	266.902	0.36	-0.29	-0.65		
1692.50	18.100	266.620	1659.18	-72.80	-14.72	-261.35	1657734.50	14315375.67	39°25'17.066"N	80°56'19.240"W	261.76	266.777	0.82	0.61	1.80		
1787.50	18.310	267.120	1749.43	-81.10	-16.34	-290.98	1657704.88	14315374.05	39°25'17.051"N	80°56'19.618"W	291.44	266.787	0.28	0.22	0.53		
1882.50	18.640	265.500	1839.53	-89.23	-18.28	-321.02	1657674.85	14315372.11	39°25'17.032"N	80°56'20.001"W	321.54	266.741	0.64	0.35	-1.71		
1977.50	20.790	263.080	1928.96	-96.76	-21.50	-352.90	1657642.99	14315368.89	39°25'17.000"N	80°56'20.407"W	353.55	266.514	2.42	2.26	-2.55		
2072.50	21.330	262.910	2017.62	-104.07	-25.66	-386.78	1657609.12	14315364.73	39°25'16.959"N	80°56'20.839"W	387.63	266.204	0.57	0.57	-0.18		
2167.50	21.110	262.500	2106.17	-111.27	-30.03	-420.89	1657575.02	14315360.36	39°25'16.916"N	80°56'21.273"W	421.96	265.919	0.28	-0.23	-0.43		
2262.50	19.560	263.110	2195.25	-118.22	-34.17	-453.64	1657542.29	14315356.22	39°25'16.875"N	80°56'21.691"W	454.92	265.692	1.65	-1.63	0.64		
2357.50	18.090	264.110	2285.17	-125.10	-37.59	-484.10	1657511.84	14315352.80	39°25'16.842"N	80°56'22.079"W	485.56	265.560	1.58	-1.55	1.05		
2451.50	18.750	263.630	2374.35	-131.90	-40.77	-513.63	1657482.32	14315349.63	39°25'16.811"N	80°56'22.455"W	515.25	265.452	0.72	0.70	-0.51		
2546.50	18.100	262.720	2464.48	-138.42	-44.33	-543.44	1657452.52	14315346.07	39°25'16.776"N	80°56'22.835"W	545.25	265.337	0.75	-0.68	-0.96		

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Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Tyler County, WV	Well	Jim Unit 1H
Field	Tyler	Wellbore	Jim Unit 1H AWB
Facility	Neat Pad		

WELLPATH DATA (216 stations)																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	VertSect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Dir (°)	DLS (ft/100ft)	Bulid Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
2688.50	17.060	282.960	2504.52	-141.10	-45.91	-586.03	1657439.93	14315344.49	39°25'16.760"N	80°56'22.996"W	557.92	265.280	2.48	-2.48	0.57	
2678.50	18.160	265.540	2590.30	-147.53	-48.62	-583.12	1657412.86	14315341.78	39°25'16.733"N	80°56'23.341"W	585.14	265.234	1.50	1.22	2.87	Directional ONE MWD <8-3/4"> (2579)/(2669-6300')
2774.50	19.860	265.170	2681.06	-155.48	-51.16	-614.28	1657381.71	14315339.24	39°25'16.709"N	80°56'23.738"W	616.41	265.239	1.78	1.77	-0.39	
2869.50	23.960	266.470	2769.18	-164.80	-53.70	-649.63	1657346.37	14315336.70	39°25'16.684"N	80°56'24.188"W	651.85	265.274	4.35	4.32	1.37	
2963.50	25.290	265.490	2854.63	-175.16	-56.46	-688.70	1657307.32	14315333.94	39°25'16.657"N	80°56'24.686"W	691.01	265.313	1.48	1.41	-1.04	
3058.50	23.200	262.580	2941.25	-184.24	-60.47	-727.49	1657268.54	14315329.93	39°25'16.617"N	80°56'25.180"W	730.00	265.248	2.53	-2.20	-3.06	
3153.50	22.060	259.840	3028.94	-190.97	-66.04	-763.61	1657232.44	14315324.37	39°25'16.562"N	80°56'25.641"W	766.46	265.057	1.63	-1.20	-2.88	
3248.50	24.000	264.220	3201.54	-207.06	-71.46	-800.38	1657195.70	14315318.95	39°25'16.509"N	80°56'26.109"W	803.54	264.898	2.48	2.04	3.58	
3342.50	26.040	264.220	3201.54	-207.06	-75.79	-839.88	1657156.20	14315314.63	39°25'16.467"N	80°56'26.613"W	843.29	264.844	2.21	2.17	1.04	
3437.50	28.340	266.060	3286.04	-217.96	-79.44	-883.12	1657112.97	14315310.98	39°25'16.431"N	80°56'27.164"W	886.69	264.860	2.58	2.42	1.94	
3532.50	31.080	266.740	3368.54	-230.77	-82.38	-930.11	1657066.01	14315308.03	39°25'16.402"N	80°56'27.763"W	933.75	264.938	2.91	2.88	0.72	
3627.50	33.840	267.580	3448.69	-245.29	-84.89	-981.03	1657015.11	14315305.52	39°25'16.377"N	80°56'28.411"W	984.69	265.054	2.94	2.91	0.88	
3721.50	34.300	264.570	3526.56	-259.30	-88.50	-1033.55	1656962.61	14315301.91	39°25'16.342"N	80°56'29.081"W	1037.33	265.106	1.86	0.49	-3.20	
3815.50	31.750	263.280	3605.37	-271.10	-93.91	-1084.49	1656911.69	14315296.51	39°25'16.289"N	80°56'29.730"W	1088.55	265.051	2.81	-2.71	-1.37	
3910.50	28.880	265.660	3687.38	-282.53	-98.57	-1132.20	1656864.00	14315291.85	39°25'16.243"N	80°56'30.338"W	1136.48	265.024	3.27	-3.02	2.51	
4005.50	28.660	268.670	3770.65	-295.53	-100.83	-1177.85	1656818.36	14315289.59	39°25'16.221"N	80°56'30.920"W	1182.16	265.107	1.54	-0.23	3.17	
4100.50	29.920	269.970	3853.51	-310.43	-101.37	-1224.32	1656771.91	14315289.05	39°25'16.216"N	80°56'31.512"W	1228.51	265.267	1.49	1.33	1.37	
4195.50	29.870	265.970	3935.87	-324.54	-103.05	-1271.62	1656724.64	14315287.37	39°25'16.200"N	80°56'32.114"W	1275.79	265.367	2.10	-0.05	-4.21	
4289.50	28.810	267.210	4017.82	-337.19	-105.80	-1317.59	1656678.68	14315284.63	39°25'16.173"N	80°56'32.700"W	1321.83	265.409	1.30	-1.13	1.32	
4383.50	28.220	268.280	4100.41	-350.40	-107.57	-1362.43	1656633.86	14315282.86	39°25'16.156"N	80°56'33.272"W	1366.67	265.486	0.83	-0.63	1.14	
4477.50	29.020	268.300	4182.93	-364.06	-108.91	-1407.43	1656588.87	14315281.52	39°25'16.143"N	80°56'33.845"W	1411.64	265.575	0.85	0.85	0.02	
4572.50	29.830	268.190	4265.67	-378.18	-110.34	-1454.08	1656542.24	14315280.09	39°25'16.129"N	80°56'34.439"W	1458.26	265.661	0.85	0.85	-0.12	
4666.50	32.410	267.610	4346.14	-392.59	-112.13	-1502.63	1656493.72	14315278.30	39°25'16.112"N	80°56'35.058"W	1506.81	265.732	2.76	2.74	-0.62	
4762.50	33.340	264.750	4426.77	-406.54	-115.62	-1554.61	1656441.76	14315274.81	39°25'16.077"N	80°56'35.720"W	1558.90	265.747	1.88	0.97	-2.98	
4857.50	32.850	262.220	4506.45	-418.06	-121.47	-1606.00	1656390.39	14315268.96	39°25'16.020"N	80°56'36.375"W	1610.59	265.675	1.62	-0.73	-2.66	
4952.50	31.940	263.310	4586.75	-428.72	-127.87	-1656.35	1656340.06	14315262.56	39°25'15.957"N	80°56'37.017"W	1661.28	265.586	0.97	-0.75	1.15	
5047.50	31.130	266.100	4667.73	-440.79	-132.47	-1705.81	1656290.62	14315257.97	39°25'15.912"N	80°56'37.647"W	1710.95	265.559	1.76	-0.85	2.94	
5142.50	30.330	264.140	4749.39	-452.95	-136.59	-1754.17	1656242.27	14315253.85	39°25'15.871"N	80°56'38.263"W	1759.48	265.548	1.35	-0.84	-2.06	
5235.50	30.670	264.660	4829.52	-464.18	-141.19	-1801.15	1656195.32	14315249.25	39°25'15.826"N	80°56'38.862"W	1806.67	265.518	0.46	0.37	0.56	
5331.50	31.580	266.190	4911.70	-476.86	-145.14	-1850.61	1656145.88	14315245.30	39°25'15.787"N	80°56'39.492"W	1856.29	265.516	1.26	0.95	1.59	

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Field	Tyler		
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
5425.50	31.420	263.790	4991.85	-489.04	-149.43	-1899.53	1656098.98	14315241.01	39°25'15.745"N	80°56'40.116"W	1905.40	265.502	1.34	-0.17	-2.55	
5519.50	30.470	265.890	5072.47	-500.89	-153.79	-1947.66	1656048.86	14315236.66	39°25'15.703"N	80°56'40.729"W	1953.72	265.485	1.53	-1.01	2.23	
5614.50	29.120	268.460	5154.92	-514.31	-156.13	-1994.80	1656001.75	14315234.31	39°25'15.680"N	80°56'41.330"W	2000.90	265.525	1.96	-1.42	2.71	
5709.50	30.400	266.430	5237.39	-527.94	-158.25	-2041.90	1655954.67	14315232.19	39°25'15.659"N	80°56'41.930"W	2048.02	265.568	1.71	1.35	-2.14	
5804.50	32.660	265.260	5318.36	-540.96	-161.87	-2091.44	1655905.14	14315228.58	39°25'15.624"N	80°56'42.561"W	2097.69	265.574	2.46	2.38	-1.23	
5899.50	31.690	263.540	5398.77	-553.01	-166.79	-2141.78	1655854.82	14315223.65	39°25'15.575"N	80°56'43.203"W	2149.27	265.547	1.40	-1.02	-1.81	
5994.50	30.850	262.130	5479.97	-563.44	-172.94	-2190.71	1655805.92	14315217.51	39°25'15.515"N	80°56'43.826"W	2197.52	265.486	1.17	-0.88	-1.48	
6057.50	30.530	261.810	5534.15	-569.76	-177.43	-2222.54	1655774.09	14315213.02	39°25'15.471"N	80°56'44.232"W	2229.62	265.438	0.57	-0.51	-0.51	
6099.50	30.050	268.860	5561.78	-572.48	-180.13	-2238.45	1655758.19	14315210.32	39°25'15.444"N	80°56'44.355"W	2245.69	265.399	4.89	-1.50	-9.22	
6121.50	28.270	251.190	5589.73	-573.71	-184.13	-2253.49	1655743.15	14315206.33	39°25'15.405"N	80°56'44.626"W	2261.00	265.329	12.93	-5.56	-23.97	
6184.50	27.770	242.880	5617.11	-572.80	-189.79	-2266.88	1655729.78	14315200.67	39°25'15.349"N	80°56'44.797"W	2274.81	265.214	12.69	-1.61	-26.81	
6216.50	29.320	233.500	5673.47	-566.21	-205.80	-2292.57	1655704.10	14315184.66	39°25'15.276"N	80°56'44.963"W	2288.40	265.057	7.10	0.78	-15.09	
6247.50	30.340	229.230	5700.37	-561.12	-215.43	-2304.60	1655692.07	14315175.03	39°25'15.095"N	80°56'45.278"W	2314.65	264.660	7.60	3.29	-13.77	
6278.50	30.570	227.000	5727.09	-555.10	-225.92	-2316.30	1655680.38	14315164.55	39°25'14.992"N	80°56'45.427"W	2327.29	264.429	3.72	0.74	-7.19	
6309.50	29.690	221.640	5753.91	-548.22	-237.04	-2327.16	1655669.51	14315153.44	39°25'14.882"N	80°56'45.566"W	2339.21	264.184	9.13	-2.84	-17.29	
6370.00	29.690	212.950	5808.49	-531.79	-260.82	-2345.28	1655651.41	14315129.67	39°25'14.847"N	80°56'45.796"W	2359.74	263.654	7.11	0.00	-14.36	BH AT Curve<8-1/2">(6309.50)-(6370-17982)
6424.00	30.930	207.330	5853.12	-514.10	-284.38	-2368.93	1655637.76	14315106.12	39°25'14.414"N	80°56'45.971"W	2376.01	263.126	5.73	2.30	-10.41	
6471.00	33.130	200.150	5892.98	-495.90	-307.18	-2388.90	1655627.79	14315083.33	39°25'14.189"N	80°56'46.098"W	2388.73	262.612	9.35	4.68	-15.28	
6518.00	35.320	194.030	5931.85	-474.64	-332.43	-2376.62	1655620.07	14315058.09	39°25'13.940"N	80°56'46.196"W	2399.76	262.038	8.68	4.66	-13.02	
6565.00	37.580	189.310	5969.66	-450.71	-359.76	-2382.24	1655614.46	14315030.77	39°25'13.689"N	80°56'46.268"W	2409.25	261.412	7.66	4.81	-10.04	
6612.00	39.890	184.340	6006.33	-424.34	-388.94	-2386.74	1655611.00	14315001.60	39°25'13.381"N	80°56'46.313"W	2417.19	260.741	8.23	4.89	-10.57	
6659.00	42.820	179.640	6041.62	-395.42	-419.95	-2386.74	1655609.96	14314970.60	39°25'13.075"N	80°56'46.326"W	2423.40	260.021	9.09	6.26	-10.00	
6708.00	45.760	175.640	6075.26	-364.05	-452.72	-2386.62	1655611.34	14314937.84	39°25'12.751"N	80°56'46.309"W	2427.94	259.254	8.63	6.26	-8.51	
6753.00	49.020	172.830	6107.08	-330.43	-487.13	-2381.86	1655614.84	14314903.45	39°25'12.411"N	80°56'46.264"W	2431.16	258.442	8.21	6.94	-5.98	
6800.00	52.450	169.540	6136.83	-294.67	-523.07	-2376.26	1655620.44	14314867.53	39°25'12.055"N	80°56'46.193"W	2433.15	257.586	9.09	7.30	-7.00	
6842.00†	55.995	167.075	6161.38	-260.91	-556.42	-2369.34	1655627.35	14314834.18	39°25'11.726"N	80°56'46.105"W	2433.80	256.784	9.69	8.44	-5.66	Middlesex, 6842' MD
6847.00	56.420	166.800	6164.16	-266.78	-560.47	-2368.40	1655628.29	14314830.14	39°25'11.686"N	80°56'46.093"W	2433.82	256.686	9.69	8.50	-5.58	
6894.00	59.410	165.120	6189.13	-217.14	-599.09	-2368.74	1655637.95	14314791.53	39°25'11.304"N	80°56'45.971"W	2433.63	255.749	7.05	6.36	-3.57	
6941.00	62.980	163.430	6211.77	-176.04	-638.72	-2347.57	1655649.12	14314751.91	39°25'10.912"N	80°56'45.829"W	2432.91	254.779	8.22	7.60	-3.60	

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Actual Wellpath Report

Jim Unit 1H AWP Proj: 18006'
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REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Neat Pad
Slot	Slot #09
Well	Jim Unit 1H
Wellbore	Jim Unit 1H AWB

WELLPATH DATA (216 stations) † = interpolated/extrapolated station																
MD ft	Inclination °	Azimuth °	TVD ft	Vert Sect ft	North ft	East ft	Grid East ft	Grid North ft	Latitude	Longitude	Closure Dist ft	Closure Dir °	DLS ft/100ft	Build Rate ft/100ft	Turn Rate °/100ft	Comments
6988.00	66.550	161.590	6231.81	-133.56	-679.26	-2334.78	1655661.90	14314711.39	39°25'10.511"N	80°56'45.666"W	2431.58	253.779	8.38	7.60	-3.91	
7035.00	69.540	160.110	6249.38	-89.97	-720.43	-2320.48	1655676.20	14314670.24	39°25'10.104"N	80°56'45.484"W	2429.74	252.752	7.00	6.36	-3.15	
7037.00†	69.555	160.045	6250.07	-88.10	-722.19	-2319.84	1655676.83	14314668.48	39°25'10.087"N	80°56'45.476"W	2429.66	252.708	6.41	5.73	-3.05	Burkett: 7037 MD
7082.00	72.240	158.700	6264.76	-45.58	-762.00	-2304.86	1655691.81	14314628.69	39°25'09.894"N	80°56'45.285"W	2427.55	251.706	6.41	5.75	-3.00	
7115.00†	74.240	157.804	6274.28	-14.01	-791.34	-2293.15	1655703.52	14314599.36	39°25'09.403"N	80°56'45.136"W	2425.85	250.961	6.59	6.06	-2.71	Tully: 7115 MD
7129.00	75.090	157.430	6277.98	-0.53	-803.83	-2288.01	1655708.66	14314586.88	39°25'09.280"N	80°56'45.071"W	2425.10	250.642	6.59	6.07	-2.67	
7162.00†	76.886	156.338	6285.97	31.42	-833.27	-2275.44	1655721.22	14314557.44	39°25'08.989"N	80°56'44.911"W	2423.21	249.887	6.32	5.44	-3.31	Marcellus POE: 7162 MD
7176.00	77.650	155.880	6289.06	45.03	-845.76	-2269.90	1655726.75	14314540.96	39°25'08.865"N	80°56'44.841"W	2422.35	249.565	6.32	5.45	-3.27	
7224.00	80.440	152.960	6298.18	91.87	-888.25	-2249.56	1655747.09	14314502.49	39°25'08.445"N	80°56'44.582"W	2418.57	248.453	8.33	5.81	-6.08	
7271.00	82.010	150.380	6305.35	137.75	-929.13	-2227.51	1655769.12	14314461.62	39°25'08.041"N	80°56'44.301"W	2413.53	247.358	6.37	3.34	-5.49	
7316.00	82.440	148.280	6311.71	183.41	-969.18	-2203.76	1655792.87	14314421.59	39°25'07.645"N	80°56'43.999"W	2407.46	246.261	4.52	0.91	-4.47	
7365.00	86.300	148.830	6316.32	228.96	-1008.65	-2178.67	1655817.95	14314382.14	39°25'07.255"N	80°56'43.679"W	2400.83	245.158	8.77	8.21	-3.09	
7412.00	88.950	144.400	6318.27	274.31	-1047.39	-2152.16	1655844.45	14314343.41	39°25'06.872"N	80°56'43.342"W	2393.49	244.049	7.65	5.64	-5.17	
7507.00	88.920	144.190	6320.03	365.46	-1124.52	-2096.72	1655899.86	14314266.31	39°25'06.109"N	80°56'42.636"W	2379.24	241.794	0.22	-0.03	-0.22	
7601.00	88.740	145.080	6321.95	455.80	-1201.16	-2042.33	1655954.24	14314189.70	39°25'05.351"N	80°56'41.944"W	2369.37	239.539	0.97	-0.19	0.95	
7695.00	89.050	146.120	6323.77	546.57	-1278.71	-1989.23	1656007.31	14314112.19	39°25'04.585"N	80°56'41.268"W	2364.77	237.266	1.15	0.33	1.11	
7789.00	88.830	147.050	6325.50	637.74	-1357.16	-1937.48	1656059.05	14314033.77	39°25'03.809"N	80°56'40.609"W	2365.52	234.990	1.02	-0.23	0.99	
7884.00	88.920	148.280	6327.37	730.30	-1437.41	-1886.67	1656109.83	14313953.55	39°25'03.016"N	80°56'39.962"W	2371.85	232.697	1.30	0.09	1.29	
7979.00	88.920	148.850	6329.16	823.18	-1518.45	-1837.14	1656159.34	14313872.54	39°25'02.214"N	80°56'39.332"W	2383.44	230.425	0.60	0.00	0.60	
8074.00	88.860	150.460	6331.00	916.42	-1600.42	-1789.15	1656207.31	14313790.61	39°25'01.404"N	80°56'38.721"W	2400.50	228.187	1.70	-0.06	1.69	
8169.00	88.860	152.110	6332.89	1010.14	-1683.71	-1743.52	1656252.92	14313707.34	39°25'00.580"N	80°56'38.140"W	2423.79	226.000	1.74	0.00	1.74	
8264.00	88.800	154.830	6334.83	1104.37	-1768.68	-1701.10	1656295.33	14313622.41	39°24'59.740"N	80°56'37.600"W	2453.97	223.884	2.86	-0.06	2.86	
8358.00	88.680	156.040	6336.90	1197.96	-1854.15	-1662.03	1656334.38	14313536.97	39°24'58.895"N	80°56'37.103"W	2490.03	221.873	1.29	-0.13	1.29	
8453.00	88.770	157.900	6339.01	1292.74	-1941.56	-1624.88	1656371.52	14313449.60	39°24'58.031"N	80°56'36.630"W	2531.77	219.926	1.96	0.09	1.96	
8549.00	88.710	159.020	6341.12	1388.65	-2030.83	-1589.64	1656406.74	14313360.37	39°24'57.149"N	80°56'36.182"W	2579.00	218.052	1.17	-0.06	1.17	
8644.00	88.740	159.680	6343.24	1483.60	-2119.70	-1556.15	1656440.22	14313271.53	39°24'56.270"N	80°56'35.756"W	2629.59	216.284	0.70	0.03	0.69	
8739.00	88.650	160.480	6345.40	1578.57	-2209.00	-1523.79	1656472.57	14313182.27	39°24'55.387"N	80°56'35.344"W	2683.58	214.598	0.85	-0.09	0.84	
8834.00	88.800	160.800	6347.51	1673.54	-2298.60	-1492.30	1656504.04	14313092.70	39°24'54.502"N	80°56'34.944"W	2740.54	212.993	0.37	0.16	0.34	
8929.00	88.860	161.680	6349.45	1768.52	-2388.54	-1461.76	1656534.57	14313002.80	39°24'53.612"N	80°56'34.556"W	2800.33	211.466	0.93	0.06	0.93	
9024.00	88.770	160.860	6351.42	1863.49	-2478.48	-1431.26	1656565.06	14312912.89	39°24'52.723"N	80°56'34.168"W	2862.06	210.005	0.87	-0.09	-0.86	

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Jim Unit 1H AWP Proj: 18006'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #09
ANTERO RESOURCES CORPORATION	Well	Jim Unit 1H
Tyler County, WV	Wellbore	Jim Unit 1H AWB
Tyler		
Neat Pad		

WELLPATH DATA (216 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 [ft]	DLS [ft/100ft]	Build Rate [ft/100ft]	Turn Rate [ft/100ft]	Comments
9119.00	88.580	161.350	63553.62	1958.46	-2568.34	-1400.50	1656595.80	14312823.07	39°24'51.835"N	80°56'33.777"W	2925.37	208.603	0.55	-0.20	0.52	
9213.00	88.680	161.250	63555.86	2052.43	-2657.35	-1370.37	1656625.92	14312734.10	39°24'50.955"N	80°56'33.393"W	2989.89	207.280	0.15	0.11	-0.11	
9308.00	88.550	162.330	6358.16	2147.38	-2747.87	-1340.70	1656655.59	14312643.92	39°24'50.063"N	80°56'33.016"W	3057.22	206.010	1.14	-0.14	1.14	
9403.00	89.010	163.030	6360.18	2242.30	-2838.24	-1312.42	1656683.85	14312553.28	39°24'49.167"N	80°56'32.656"W	3126.99	204.816	0.88	0.48	0.74	
9497.00	88.610	162.920	6362.13	2336.20	-2928.10	-1284.90	1656711.36	14312463.46	39°24'48.279"N	80°56'32.307"W	3197.62	203.893	0.44	-0.43	-0.12	
9591.00	89.110	162.340	6364.00	2430.12	-3017.79	-1256.85	1656739.40	14312373.80	39°24'47.392"N	80°56'31.950"W	3269.06	202.611	0.81	0.53	-0.62	
9685.00	89.690	162.700	6364.99	2524.06	-3107.45	-1228.61	1656767.62	14312284.18	39°24'46.506"N	80°56'31.591"W	3341.52	201.573	0.73	0.62	0.38	
9780.00	89.910	165.500	6365.32	2618.88	-3198.80	-1202.59	1656793.64	14312192.86	39°24'45.603"N	80°56'31.260"W	3417.39	200.604	2.96	0.23	2.95	
9875.00	89.780	164.750	6365.58	2713.59	-3290.62	-1178.20	1656818.01	14312101.08	39°24'44.695"N	80°56'30.950"W	3495.19	199.700	0.80	-0.14	-0.79	
9969.00	89.540	163.510	6366.14	2807.41	-3381.03	-1152.50	1656843.71	14312010.71	39°24'43.801"N	80°56'30.623"W	3572.06	198.823	1.34	-0.26	-1.32	
10063.00	89.750	163.930	6366.72	2901.27	-3471.26	-1126.15	1656870.05	14311920.51	39°24'42.909"N	80°56'30.288"W	3649.37	197.974	0.50	0.22	0.45	
10158.00	89.630	160.820	6367.23	2996.21	-3561.79	-1097.39	1656898.80	14311830.02	39°24'42.014"N	80°56'29.923"W	3727.01	197.124	3.28	-0.13	-3.27	
10253.00	89.780	157.540	6367.72	3091.17	-3650.57	-1063.63	1656932.54	14311741.27	39°24'41.137"N	80°56'29.493"W	3802.37	196.244	3.46	0.16	-3.45	
10347.00	89.630	157.160	6368.21	3185.01	-3737.32	-1027.43	1656968.73	14311654.56	39°24'40.279"N	80°56'29.033"W	3875.98	195.371	0.43	-0.16	-0.40	
10443.00	89.600	156.310	6368.85	3280.79	-3825.51	-989.51	1657006.63	14311566.40	39°24'39.407"N	80°56'28.550"W	3951.42	194.502	0.89	-0.03	-0.89	
10537.00	89.690	155.290	6369.43	3374.45	-3911.25	-950.98	1657045.15	14311480.70	39°24'38.559"N	80°56'28.060"W	4025.20	193.666	1.09	0.10	-1.09	
10631.00	89.750	156.180	6369.89	3468.11	-3996.94	-912.35	1657083.76	14311395.04	39°24'37.712"N	80°56'27.569"W	4099.75	192.858	0.95	0.06	0.95	
10725.00	89.570	157.430	6370.45	3561.89	-4083.34	-875.33	1657120.77	14311308.68	39°24'36.858"N	80°56'27.098"W	4176.11	192.099	1.34	-0.19	1.33	
10820.00	89.660	159.590	6371.09	3656.82	-4171.73	-840.53	1657155.55	14311220.33	39°24'35.984"N	80°56'26.655"W	4255.56	191.392	2.28	0.09	2.27	
10914.00	89.510	160.920	6371.77	3750.81	-4260.20	-808.77	1657187.29	14311131.89	39°24'35.110"N	80°56'26.251"W	4336.29	190.749	1.42	-0.16	1.41	
11008.00	89.630	162.710	6372.47	3844.79	-4349.50	-779.44	1657216.62	14311042.63	39°24'34.227"N	80°56'25.878"W	4418.79	190.160	1.91	0.13	1.90	
11102.00	89.510	162.770	6373.18	3938.72	-4439.26	-751.55	1657244.49	14310952.90	39°24'33.340"N	80°56'25.524"W	4502.43	189.609	0.14	-0.13	0.06	
11197.00	89.630	162.880	6373.89	4033.65	-4530.02	-723.50	1657272.54	14310862.18	39°24'32.442"N	80°56'25.167"W	4587.44	189.074	0.17	0.13	0.12	
11292.00	89.820	163.400	6374.35	4129.56	-4620.94	-695.95	1657300.08	14310771.30	39°24'31.544"N	80°56'24.817"W	4673.05	188.565	0.58	0.20	0.55	
11386.00	89.720	163.570	6374.73	4222.44	-4711.06	-669.22	1657326.79	14310681.21	39°24'30.653"N	80°56'24.477"W	4758.36	188.085	0.21	-0.11	0.18	
11481.00	89.630	163.270	6375.27	4317.32	-4802.11	-642.12	1657353.88	14310590.20	39°24'29.753"N	80°56'24.133"W	4844.85	187.616	0.33	-0.09	-0.32	
11576.00	89.880	162.940	6375.67	4412.23	-4893.01	-614.51	1657381.48	14310499.34	39°24'28.854"N	80°56'23.782"W	4931.44	187.158	0.44	0.26	-0.35	
11670.00	89.720	161.170	6376.00	4506.20	-4982.43	-585.55	1657410.43	14310409.95	39°24'27.970"N	80°56'23.414"W	5016.72	186.703	1.89	-0.17	-1.88	
11765.00	89.750	160.170	6376.44	4601.20	-5072.07	-554.10	1657441.86	14310320.34	39°24'27.084"N	80°56'23.014"W	5102.25	186.235	1.05	0.03	-1.05	
11859.00	89.630	158.200	6376.95	4695.16	-5159.93	-520.70	1657475.25	14310232.52	39°24'26.215"N	80°56'22.589"W	5186.14	185.762	2.10	-0.13	-2.10	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Tyler County, WV	Well	Jim Unit 1H
Field	Tyler	Wellbore	Jim Unit 1H AWB
Facility	Neat Pad		

WELLPATH DATA (216 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
11954.00	89.690	156.050	6377.51	4789.98	-5247.45	-483.78	1657512.16	14310145.03	39°24'25.350"N	80°56'22.119"W	5269.71	185.267	2.26	0.06	-2.26	
12049.00	89.690	156.530	6378.03	4884.70	-5334.43	-445.58	1657550.35	14310058.09	39°24'24.490"N	80°56'21.633"W	5353.01	184.775	0.51	0.00	0.51	
12144.00	89.690	157.810	6378.54	4979.53	-5421.99	-408.72	1657587.19	14309970.57	39°24'23.624"N	80°56'21.165"W	5437.37	184.311	1.35	0.00	1.35	
12238.00	89.660	158.660	6379.07	5073.44	-5509.29	-373.88	1657622.01	14309883.30	39°24'22.761"N	80°56'20.721"W	5521.96	183.882	0.93	-0.03	0.93	
12333.00	89.780	159.940	6379.54	5168.42	-5598.16	-340.31	1657655.56	14309794.47	39°24'21.883"N	80°56'20.295"W	5608.50	183.479	1.33	0.13	1.33	
12427.00	89.750	161.000	6379.92	5262.41	-5686.75	-308.89	1657686.98	14309705.91	39°24'21.007"N	80°56'19.895"W	5695.13	183.109	1.13	-0.03	1.13	
12522.00	89.720	161.400	6380.36	5357.41	-5776.68	-278.28	1657717.58	14309616.02	39°24'20.118"N	80°56'19.506"W	5783.38	182.758	0.42	-0.03	0.42	
12616.00	89.660	161.850	6380.87	5451.39	-5865.89	-248.64	1657747.20	14309526.85	39°24'19.236"N	80°56'19.129"W	5871.16	182.427	0.48	-0.06	0.48	
12710.00	89.750	162.340	6381.35	5545.36	-5955.33	-219.75	1657776.09	14309437.44	39°24'18.352"N	80°56'18.762"W	5959.39	182.113	0.53	0.10	0.52	
12805.00	89.720	162.190	6381.79	5640.32	-6045.82	-190.81	1657805.01	14309346.99	39°24'17.457"N	80°56'18.394"W	6048.83	181.808	0.16	-0.03	-0.16	
12900.00	89.510	162.470	6382.43	5735.27	-6136.33	-161.97	1657833.84	14309256.51	39°24'16.583"N	80°56'18.027"W	6138.47	181.512	0.37	-0.22	0.29	
12994.00	90.280	161.860	6382.80	5829.24	-6225.82	-133.18	1657862.61	14309167.07	39°24'15.678"N	80°56'17.661"W	6227.24	181.225	1.05	0.82	-0.65	
13089.00	90.180	161.900	6382.22	5924.22	-6316.10	-103.64	1657892.15	14309076.81	39°24'14.785"N	80°56'17.286"W	6316.95	180.940	0.11	-0.11	0.04	
13184.00	90.280	161.970	6381.84	6019.19	-6406.42	-74.18	1657921.59	14308986.53	39°24'13.893"N	80°56'16.911"W	6406.85	180.663	0.13	0.11	0.07	
13278.00	90.030	160.790	6381.59	6113.18	-6495.50	-44.17	1657951.59	14308897.49	39°24'13.012"N	80°56'16.530"W	6495.65	180.390	1.28	-0.27	-1.26	
13373.00	90.180	160.850	6381.41	6208.18	-6585.22	-12.96	1657982.79	14308807.80	39°24'12.125"N	80°56'16.133"W	6585.24	180.113	0.17	0.16	0.06	
13467.00	90.340	163.400	6380.99	6302.14	-6674.68	15.89	1658011.63	14308718.38	39°24'11.241"N	80°56'15.766"W	6674.70	179.864	2.72	0.17	2.71	
13561.00	90.490	166.050	6380.31	6395.89	-6765.35	40.66	1658036.38	14308627.75	39°24'10.344"N	80°56'15.452"W	6765.47	179.656	2.82	0.16	2.82	
13656.00	90.490	163.810	6379.49	6490.61	-6857.07	65.35	1658061.07	14308536.06	39°24'09.438"N	80°56'15.138"W	6857.38	179.454	2.36	0.00	-2.36	
13750.00	90.400	161.310	6378.76	6584.55	-6946.74	93.52	1658089.23	14308446.43	39°24'08.551"N	80°56'14.780"W	6947.37	179.229	2.66	-0.10	-2.66	
13844.00	90.460	159.420	6378.06	6678.54	-7035.27	125.11	1658120.80	14308357.94	39°24'07.676"N	80°56'14.378"W	7036.38	178.981	2.01	0.06	-2.01	
13939.00	90.090	157.870	6377.60	6773.48	-7123.77	159.62	1658155.30	14308269.47	39°24'06.801"N	80°56'13.939"W	7125.56	178.716	1.58	-0.39	-1.53	
14033.00	90.890	157.820	6376.80	6867.37	-7210.86	194.99	1658190.66	14308182.42	39°24'05.940"N	80°56'13.489"W	7213.49	178.451	0.87	0.85	-0.16	
14128.00	90.430	157.080	6375.70	6962.22	-7298.59	231.42	1658227.07	14308094.72	39°24'05.073"N	80°56'13.026"W	7302.26	178.184	0.92	-0.48	-0.78	
14222.00	90.400	156.960	6375.02	7056.03	-7385.13	268.12	1658263.75	14308008.22	39°24'04.217"N	80°56'12.559"W	7389.99	177.921	0.13	-0.03	-0.13	
14317.00	90.340	156.850	6374.41	7150.83	-7472.51	305.38	1658301.00	14307920.87	39°24'03.353"N	80°56'12.085"W	7478.75	177.660	0.13	-0.06	-0.12	
14412.00	90.220	155.780	6373.94	7245.55	-7559.51	343.54	1658339.15	14307833.91	39°24'02.493"N	80°56'11.600"W	7567.31	177.398	1.13	-0.13	-1.13	
14506.00	90.430	155.720	6373.41	7339.21	-7645.21	382.15	1658377.74	14307748.24	39°24'01.646"N	80°56'11.109"W	7654.76	177.138	0.23	0.22	-0.06	
14601.00	90.180	156.840	6372.91	7433.93	-7732.18	420.37	1658415.94	14307661.30	39°24'00.786"N	80°56'10.623"W	7743.60	176.888	1.21	-0.26	1.18	
14696.00	90.250	159.250	6372.55	7528.83	-7820.29	455.88	1658451.44	14307573.24	39°23'59.915"N	80°56'10.171"W	7833.56	176.664	2.54	0.07	2.54	

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Actual Wellpath Report

Jim Unit 1H AWP Proj: 18006'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #09
ANTERO RESOURCES CORPORATION	Well	Jim Unit 1H
Area	Wellbore	Jim Unit 1H AWP
Field		
Facility		

WELLPATH DATA (216 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 (°/100ft)	Comments
14791.00	90.280	160.160	6372.11	7623.82	-7909.39	488.83	1658484.38	14307484.17	39°23'59.034"N	80°56'09.753"W	7924.48	176.463	0.96	0.03	0.66	
14885.00	89.970	159.550	6371.90	7717.81	-7997.63	521.20	1658516.74	14307395.96	39°23'58.162"N	80°56'09.341"W	8014.60	176.271	0.73	-0.33	-0.65	
14980.00	90.120	159.920	6371.83	7812.79	-8086.75	554.11	1658549.63	14307306.87	39°23'57.281"N	80°56'08.923"W	8105.72	176.080	0.42	0.16	0.39	
15076.00	90.000	160.310	6371.73	7908.79	-8177.03	586.76	1658582.27	14307216.64	39°23'56.388"N	80°56'08.507"W	8198.06	175.896	0.43	-0.13	0.41	
15168.00	90.120	160.930	6371.63	8000.79	-8263.82	617.29	1658612.79	14307129.88	39°23'55.530"N	80°56'08.119"W	8286.94	175.728	0.69	0.13	0.67	
15263.00	90.120	162.390	6371.43	8095.77	-8353.99	647.18	1658642.66	14307039.75	39°23'54.639"N	80°56'07.739"W	8379.02	175.570	1.54	0.00	1.54	
15357.00	89.880	163.000	6371.43	8189.71	-8443.73	675.14	1658670.61	14306950.04	39°23'53.752"N	80°56'07.384"W	8470.68	175.428	0.70	-0.26	0.65	
15451.00	90.000	163.610	6371.53	8283.61	-8533.77	702.15	1658697.61	14306860.04	39°23'52.861"N	80°56'07.041"W	8562.61	175.286	0.66	0.13	0.65	
15545.00	89.880	164.110	6371.63	8377.46	-8624.07	728.28	1658723.73	14306769.78	39°23'51.969"N	80°56'06.709"W	8654.76	175.173	0.55	-0.13	0.53	
15639.00	89.940	164.650	6371.78	8471.26	-8714.59	753.59	1658749.03	14306679.29	39°23'51.074"N	80°56'06.387"W	8747.12	175.058	0.58	0.06	0.57	
15734.00	89.970	162.600	6371.85	8566.12	-8805.73	780.37	1658775.80	14306588.18	39°23'50.299"N	80°56'06.047"W	8840.25	174.936	2.16	0.03	-2.16	
15828.00	89.850	157.890	6372.00	8660.09	-8894.18	812.13	1658807.55	14306499.78	39°23'49.299"N	80°56'05.643"W	8931.18	174.783	5.01	-0.13	-5.01	
15922.00	89.820	158.480	6372.27	8753.92	-8980.82	848.58	1658843.98	14306413.17	39°23'48.442"N	80°56'05.180"W	9020.82	174.602	1.50	-0.03	-1.50	
16017.00	89.860	158.660	6372.55	8848.68	-9067.99	886.35	1658881.74	14306326.04	39°23'47.580"N	80°56'04.699"W	9111.20	174.417	0.19	0.03	0.19	
16111.00	89.910	159.240	6372.74	8942.57	-9155.10	921.64	1658917.01	14306238.95	39°23'46.719"N	80°56'04.251"W	9201.38	174.251	2.75	0.06	2.74	
16204.00	89.970	163.270	6372.84	9035.55	-9243.15	951.52	1658946.88	14306150.94	39°23'45.848"N	80°56'03.871"W	9292.00	174.122	4.33	0.06	4.33	
16299.00	89.720	166.230	6373.10	9130.29	-9330.29	976.50	1658971.86	14306059.33	39°23'44.943"N	80°56'03.554"W	9385.73	174.028	3.13	-0.26	3.12	
16393.00	90.090	163.780	6373.25	9224.01	-9425.59	1000.82	1658996.16	14305968.58	39°23'44.045"N	80°56'03.245"W	9478.57	173.939	2.64	0.39	-2.61	
16487.00	89.110	162.420	6373.91	9317.91	-9515.52	1028.15	1659023.48	14305878.68	39°23'43.156"N	80°56'02.897"W	9570.91	173.833	1.78	-1.04	-1.45	
16582.00	89.940	161.780	6374.70	9412.88	-9605.92	1057.35	1659052.66	14305788.32	39°23'42.262"N	80°56'02.526"W	9663.94	173.719	1.10	0.87	-0.67	
16677.00	89.940	161.550	6374.80	9507.86	-9696.12	1087.15	1659082.46	14305698.15	39°23'41.371"N	80°56'02.148"W	9756.88	173.603	0.14	0.00	-0.14	
16771.00	90.030	160.960	6374.82	9601.85	-9785.16	1117.28	1659112.58	14305609.15	39°23'40.490"N	80°56'01.765"W	9848.74	173.486	0.74	0.10	-0.73	
16865.00	90.090	160.760	6374.72	9695.85	-9873.97	1148.10	1659143.38	14305520.38	39°23'39.612"N	80°56'01.373"W	9940.49	173.368	0.22	0.06	-0.21	
16960.00	89.820	160.140	6374.80	9790.85	-9963.49	1179.89	1659175.16	14305430.89	39°23'38.727"N	80°56'00.969"W	10033.11	173.246	0.71	-0.28	-0.65	
17055.00	89.880	160.420	6375.05	9885.85	-10052.92	1211.95	1659207.20	14305341.50	39°23'37.843"N	80°56'00.561"W	10125.71	173.126	0.30	0.06	0.29	
17151.00	89.940	161.280	6375.20	9981.85	-10143.61	1243.44	1659238.68	14305250.85	39°23'36.947"N	80°56'00.161"W	10219.53	173.011	0.90	0.06	0.90	
17246.00	89.940	162.740	6375.30	10076.82	-10233.96	1272.78	1659268.01	14305160.53	39°23'36.054"N	80°55'59.788"W	10312.80	172.911	1.54	0.00	1.54	
17341.00	89.940	162.270	6375.40	10171.77	-10324.56	1301.34	1659296.56	14305069.96	39°23'35.158"N	80°55'59.425"W	10406.25	172.816	0.49	0.00	-0.49	
17435.00	90.120	161.610	6375.35	10265.74	-10413.93	1330.48	1659325.69	14304980.63	39°23'34.274"N	80°55'59.055"W	10498.58	172.719	0.73	0.19	-0.70	
17531.00	90.000	160.870	6375.25	10361.74	-10504.83	1361.35	1659356.55	14304889.77	39°23'33.376"N	80°55'58.663"W	10592.67	172.616	0.78	-0.13	-0.77	

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Actual Wellpath Report

Jim Unit 1H AWP Proj: 18006'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Tyler County, WV	Well	Jim Unit 1H
Field	Tyler	Wellbore	Jim Unit 1H AWB
Facility	Neat Pad		

WELLPATH DATA (216 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
17626.00	90.000	160.180	6375.25	10456.74	-10594.40	1393.02	1659388.21	14304800.24	39°23'32.490"N	80°55'58.260"W	10685.59	172.509	0.73	0.00	-0.73	
17721.00	90.000	159.320	6375.25	10551.72	-10683.52	1425.91	1659421.08	14304711.15	39°23'31.609"N	80°55'57.842"W	10778.26	172.398	0.91	0.00	-0.91	
17816.00	89.940	158.480	6375.30	10646.68	-10772.16	1460.10	1659455.25	14304622.55	39°23'30.733"N	80°55'57.407"W	10870.66	172.281	0.88	-0.06	-0.87	
17911.00	89.940	158.080	6375.40	10741.60	-10860.41	1495.25	1659490.39	14304534.33	39°23'29.860"N	80°55'56.960"W	10962.86	172.161	0.43	0.00	-0.43	
17982.00	90.060	157.310	6375.40	10812.51	-10926.10	1522.19	1659517.32	14304488.67	39°23'29.211"N	80°55'56.618"W	11031.62	172.069	1.10	0.17	-1.08	
18006.00	90.050	157.310	6375.37	10836.47	-10948.24	1531.45	1659526.58	14304446.53	39°23'28.992"N	80°55'56.500"W	11054.83	172.037	0.00	0.00	0.00	Projected MD at TD: 18006'

HOLE & CASING SECTIONS - Ref Wellbore: Jim Unit 1H AWB Ref Wellpath: Jim Unit 1H AWP Proj: 18006'													
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	End N/S [ft]	Start E/W [ft]	End E/W [ft]				
20in Conductor	24.50	104.50	80.00	24.50	104.50	0.00	0.00	0.00	0.00				
17.5in Open Hole	104.50	370.30	265.80	104.50	370.30	-0.09	-0.67	0.04	-0.36				
13.375in Casing Surface	24.50	370.30	345.80	24.50	370.30	0.00	-0.67	0.00	-0.36				
12.25in Open Hole	370.30	2659.10	2288.80	370.30	2571.85	-0.67	-48.13	-0.36	-577.13				
9.625in Casing Intermediate	24.50	2659.10	2634.60	24.50	2571.85	0.00	-48.13	0.00	-577.13				
8.75in Open Hole	2659.10	6393.50	3734.40	2571.85	5826.86	-48.13	-270.80	-577.13	-2351.44				
8.5in Open Hole	6393.50	18006.00	11612.50	5826.86	6375.37	-270.80	-10948.24	-2351.44	1531.45				
5.5in Casing Production	24.50	18006.00	17981.50	24.50	6375.37	0.00	-10948.24	0.00	1531.45				

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Slot	Slot #09	
ANTERO RESOURCES CORPORATION	Well	Jim Unit 1H	
Tyler County, WV	Wellbore	Jim Unit 1H AWB	
Tyler			
Facility	Neat Pad		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Jim Unit 1H POE Rev-2	6275.00	-766.37	-2296.30	1655700.37	14314624.32	39°25'09.650"N	80°56'45.176"W	point
Jim Unit 1H BHL Rev-2	6305.00	-10931.75	1523.34	1659518.47	14304463.02	39°23'29.155"N	80°55'56.603"W	point
Jim Unit 1H LP Rev-2	6305.00	-954.94	-2181.81	1655814.81	14314435.82	39°25'07.786"N	80°56'43.719"W	point

WELLPATH COMPOSITION - Ref Wellbore: Jim Unit 1H AWB			Ref Wellpath: Jim Unit 1H AWP Proj: 18006'	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
24.50	357.50	Gyrodatta standard - Drop gyro or Multi-shot	01 Gyrodatta MS Gyro <17-1/2">(100'-348')	Jim Unit 1H AWB
357.50	513.50	Gyrodatta standard - Drop gyro or Multi-shot	02 Gyrodatta MS Gyro <12-1/4">(348')(415'-504')	Jim Unit 1H AWB
513.50	2588.50	ISCWSA MWD, Rev. 4 (Standard)	03 Directional ONE MWD <12-1/4">(504')(559'-2579')	Jim Unit 1H AWB
2588.50	6309.50	ISCWSA MWD, Rev. 4 (Standard)	04 Directional ONE MWD <8-3/4">(2579')(2569'-6300')	Jim Unit 1H AWB
6309.50	17982.00	BHI AutoTrak Curve (Short)	05 BH AT Curve<8-1/2">(6309.50')(6370'-17982')	Jim Unit 1H AWB
17982.00	18006.00	Blind Drilling (std)	Projection to bit	Jim Unit 1H AWB

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Jim Unit 1H AWP Proj: 18006'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #09
Area	Tyler County, WV	Well	Jim Unit 1H
Field	Tyler	Wellbore	Jim Unit 1H AWB
Facility	Neat Pad		

COMMENTS
<p>Wellpath general comments API: 47-095-02408-0000 BHI Job #: 109465477 Rig: Frontier 22 Duration: 10/21/2018-10/24/2018 Gyrodatta MS Gyro <17-1/2">(100'-348') Gyrodatta MS Gyro <12-1/4">(348')(415'-504') Directional ONE MWD <12-1/4">(504')(559'-2579') Directional ONE MWD <8-3/4">(2579')(2669'-6300') BH AT Curve<8-1/2">(6309.50')(6370'-17982') Middlesex: 6842' MD Burkett: 7037' MD Tully: 7115' MD Marcellus POE: 7162' MD Projected MD at TD: 18006'</p>

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