

ANTERO RESOURCES CORPORATION

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

Slot: Slot #10
 Well: Jameson Unit 3H
 Wellbore: Jameson Unit 3H PWB

Plot reference wellpath is Jameson Unit 3H PWP 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
 Mean Sea Level to Ground level (At Slot, Slot #10) : 1005 feet
 Coordinates are in feet referenced to Slot

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Neat Pad	165012.200	1431514.665	39°25'17.450"N	80°56'15.700"W
Slot	Local E (ft)	Local N (ft)	Latitude	Longitude
Slot #10	-33.40	-22.74	39°25'17.207"N	80°56'15.990"W

Well Profile Data

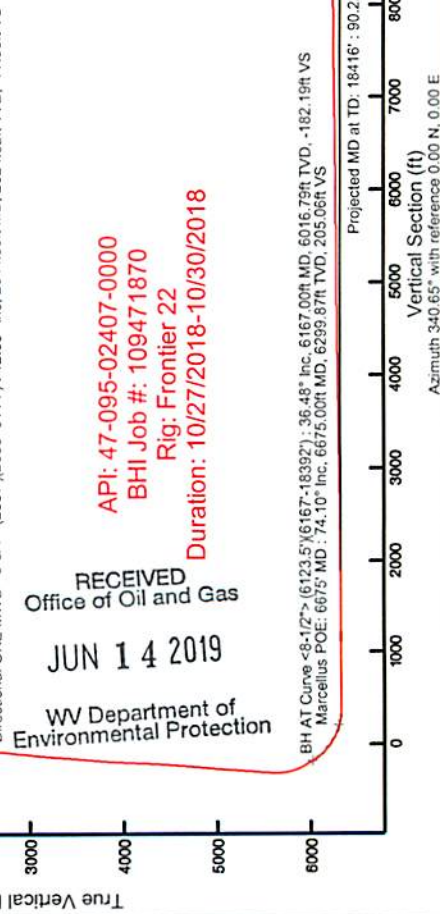
Design Comment	MD (ft)	Inc (")	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	6123.50	35.910	302.650	5981.66	-918.10	-502.36	2.11	-202.92
POE	6191.50	36.500	316.000	6036.64	-848.93	-116.35	11.35	-168.71
Landing Pt	6651.33	73.080	329.000	6268.00	-179.03	-1065.19	8.26	164.02
IP #1	6855.99	90.000	329.000	6328.00	-6.14	-1169.07	8.27	381.56
On Lateral AS	8734.77	90.000	340.653	6328.00	1640.25	-2066.49	1.50	2232.30
BHL	18448.64	90.000	340.653	6328.00	10803.68	-5293.93	0.00	11944.17

Well Data

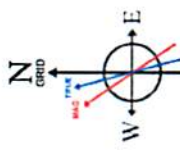
Slot	Wellbore	Wellpath
Slot #10	Jameson Unit 3H	Jameson Unit 3H AWP Proj. 18416
Slot #10	Jameson Unit 3H PWB	Jameson Unit 3H PWP Rev-A.0



Gyrodipole MS Gyro <17-1/2>(100-329) : 0.40° Inc, 109.50R MD, 109.50R TVD, -0.19R VS
 Gyrodipole MS Gyro <12-1/4>(329/417-507) : 0.69° Inc, 426.49R MD, 426.49R TVD, -0.49R VS
 Directional ONE MWD <12-1/4>(507/562-2537) : 4.14° Inc, 571.50R MD, 571.40R TVD, -3.17R VS
 Directional ONE MWD <8-1/2>(6167-18392) : 12.69° Inc, 2644.50R MD, 2624.62R TVD, -77.96R VS



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User specified (HDGM) Dip: 66.56° Field: 51828 nT
 Magnetic North is 7.67 degrees West of True North (at 25/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

Projected MD at TD: 18416' : 62.14-12R TVD, 10760.14R N, 5261.07R W
 Slot #10
 Marcellus POE: 6675' MD : 6299.87R TVD, 62.63R S, 1081.99R W
 BH AT Curve <8-1/2>(6123.5/6167-18392) : 6016.79R TVD, 487.82R S, 639.27R W
 Directional ONE MWD <8-3/4>(2537/2635-6114) : 2624.62R TVD, 127.45R S, 127.62R W
 Directional ONE MWD <12-1/4>(507/562-2537) : 571.40R TVD, 2.97R S, 1.10R E
 Gyrodipole MS Gyro <12-1/4>(329/417-507) : 426.49R TVD, 1.33R S, 2.91R W
 Gyrodipole MS Gyro <17-1/2>(100-329) : 109.50R TVD, 0.29R S, 0.16R W

Vertical Section (ft)
 Azimuth 340.65° with reference 0.00 N, 0.00 E



Actual Wellpath Report

Jameson Unit 3H AWP Proj: 18416'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #10
Area	Tyler County, WV	Well	Jameson Unit 3H
Field	Tyler	Wellbore	Jameson Unit 3H 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	31/Oct/2018 at 14:10
Convergence at slot	0.04° East	Database/Source file	WA_MPL_EasternUS_Defn/Jameson_Unit_3H_AWP_Proj_18416_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-33.40	-22.74	1657989.47	14315381.27	39°25'17.120"N	80°56'15.990"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	1029.50ft
Horizontal Reference Pt	Slot	Frontier 22 (RKB) to Mean Sea Level	1029.50ft
Vertical Reference Pt	Frontier 22 (RKB)	Frontier 22 (RKB) to Ground Level at Slot (Slot #10)	24.50ft
MD Reference Pt	Frontier 22 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	340.65°

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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #10
Operator	ANTERO RESOURCES CORPORATION	Well	Jameson Unit 3H
Area	Tyler County, WV	Wellbore	Jameson Unit 3H AWP
Field	Tyler		
Facility	Neat Pad		

WELLPATH DATA (221 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 (1/100ft)	Build Rate (1/100ft)	Turn Rate (1/100ft)	Comments
0.00	0.00	211.520	0.00	0.00	0.00	0.00	1657989.47	14315381.27	39°25'17.120"N	80°56'15.990"W	0.00	0.000	0.00	0.00	0.00	
24.50	0.00	211.520	24.50	0.00	0.00	0.00	1657989.47	14315381.27	39°25'17.120"N	80°56'15.990"W	0.00	0.000	0.00	0.00	0.00	
109.50	0.40	211.520	109.50	-0.19	-0.25	-0.16	1657989.32	14315381.02	39°25'17.118"N	80°56'15.992"W	0.30	211.520	0.47	0.47	-174.68	Syrodata MS Gyro <17-1/2">(100'-329')
209.50	0.50	219.270	209.50	-0.63	-0.89	-0.61	1657988.86	14315380.39	39°25'17.111"N	80°56'15.998"W	1.08	214.644	0.12	0.10	7.75	
309.50	0.51	233.390	309.49	-0.99	-1.49	-1.25	1657988.23	14315379.78	39°25'17.105"N	80°56'16.006"W	1.94	219.903	0.12	0.01	14.12	
338.50	0.47	271.910	338.49	-0.99	-1.56	-1.47	1657988.00	14315379.71	39°25'17.105"N	80°56'16.009"W	2.15	223.211	1.12	-0.14	132.83	
426.50	0.69	294.930	426.49	-0.49	-1.33	-2.31	1657987.16	14315379.95	39°25'17.107"N	80°56'16.019"W	2.67	240.095	0.36	0.25	26.16	Syrodata MS Gyro <12-1/4">(329')(417'-507')
516.50	1.85	115.690	516.47	-1.14	-1.73	-1.49	1657987.98	14315379.54	39°25'17.103"N	80°56'16.009"W	2.29	220.787	2.82	1.29	-199.16	
571.50	4.14	115.530	571.40	-3.17	-2.97	-1.10	1657990.57	14315378.30	39°25'17.091"N	80°56'15.976"W	3.17	159.705	4.16	4.16	-0.29	Directional ONE MWD <12-1/4">(507')(662'-2537')
661.50	5.63	113.670	661.07	-8.47	-6.14	8.07	1657997.54	14315375.13	39°25'17.059"N	80°56'15.887"W	10.15	127.269	1.66	1.66	-2.07	
751.50	6.02	107.330	750.60	-14.30	-9.32	16.62	1658006.09	14315371.96	39°25'17.028"N	80°56'15.778"W	19.06	119.284	0.84	0.43	-7.04	
840.50	5.23	105.080	839.17	-19.38	-11.77	24.99	1658014.46	14315369.51	39°25'17.004"N	80°56'15.672"W	27.63	115.211	0.92	-0.89	-2.53	
936.50	3.07	108.980	934.92	-23.45	-13.74	31.65	1658021.11	14315367.54	39°25'16.984"N	80°56'15.567"W	34.51	113.470	2.27	-2.25	4.06	
1030.50	1.04	206.620	1028.87	-25.61	-15.32	33.65	1658023.11	14315365.96	39°25'16.968"N	80°56'15.561"W	36.97	114.485	3.58	-2.16	103.87	
1126.50	1.68	214.390	1124.84	-27.05	-17.26	32.46	1658021.92	14315364.02	39°25'16.949"N	80°56'15.576"W	36.77	118.004	0.69	0.67	8.09	
1220.50	2.08	201.270	1218.79	-29.16	-19.99	31.07	1658020.53	14315361.29	39°25'16.922"N	80°56'15.594"W	36.94	122.760	0.62	0.43	-13.96	
1315.50	1.34	203.030	1313.75	-31.28	-22.62	30.01	1658019.47	14315358.66	39°25'16.896"N	80°56'15.608"W	37.58	127.009	0.78	-0.78	1.85	
1410.50	0.31	350.340	1408.74	-31.85	-23.39	29.53	1658018.99	14315357.89	39°25'16.889"N	80°56'15.614"W	37.67	128.381	1.69	-1.08	155.06	
1505.50	0.68	305.350	1503.74	-31.14	-22.81	29.03	1658018.49	14315358.47	39°25'16.894"N	80°56'15.620"W	36.92	128.160	0.54	0.39	-47.36	
1600.50	2.44	255.490	1598.70	-30.51	-22.99	26.61	1658016.07	14315356.29	39°25'16.893"N	80°56'15.651"W	35.16	130.827	2.18	1.85	-52.48	
1684.50	4.84	241.000	1682.51	-31.00	-25.41	21.20	1658010.67	14315355.87	39°25'16.889"N	80°56'15.720"W	33.10	140.162	2.71	2.55	-15.41	
1790.50	7.55	235.380	1787.94	-33.34	-30.96	12.47	1658001.94	14315350.32	39°25'16.814"N	80°56'15.831"W	33.38	158.065	2.89	2.82	-5.85	
1885.50	10.13	235.610	1881.80	-37.16	-39.23	0.44	1657989.91	14315342.06	39°25'16.732"N	80°56'15.985"W	39.23	179.363	2.72	2.72	0.24	
1980.50	12.45	238.280	1974.96	-41.52	-49.33	-15.17	1657974.31	14315331.96	39°25'16.633"N	80°56'16.184"W	51.61	197.094	2.50	2.44	2.81	
2075.50	12.92	238.150	2067.64	-46.01	-60.32	-32.90	1657956.68	14315320.98	39°25'16.524"N	80°56'16.410"W	68.71	208.611	0.50	0.49	-0.14	
2170.50	12.84	237.170	2160.25	-50.77	-71.65	-50.79	1657938.70	14315309.66	39°25'16.412"N	80°56'16.638"W	87.83	215.335	0.24	-0.08	-1.03	
2264.50	11.32	235.350	2252.16	-55.64	-82.56	-67.16	1657922.34	14315298.75	39°25'16.305"N	80°56'16.847"W	106.42	219.129	1.67	-1.62	-1.94	
2359.50	10.95	233.650	2345.38	-60.74	-93.21	-82.10	1657907.41	14315288.11	39°25'16.199"N	80°56'17.037"W	124.21	221.375	0.52	-0.39	-1.79	
2454.50	11.36	232.660	2438.58	-66.27	-104.23	-96.80	1657892.71	14315277.09	39°25'16.091"N	80°56'17.224"W	142.25	222.885	0.48	0.43	-1.04	
2546.50	11.39	232.630	2528.77	-71.87	-115.24	-111.23	1657878.29	14315266.08	39°25'15.982"N	80°56'17.408"W	160.16	223.886	0.03	0.03	-0.03	

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Actual Wellpath Report

Jameson Unit 3H AWP Proj: 18416'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Slot	Slot #10	
ANTERO RESOURCES CORPORATION	Well	Jameson Unit 3H	
Tyler County, WV	Wellbore	Jameson Unit 3H AWB	
Tyler			
Neat Pad			

WELLPATH DATA (221 stations)																	
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure (ft)	Dist Closure (ft)	Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
2644.50	12.690	233.960	2824.62	-77.96	-127.45	-127.62	1657861.90	14315253.88	39°25'15.861"N	80°56'17.617"W	180.36	225.040	1.36	1.33	1.36	Directional ONE MWD <8-3/4" >(2537')(2635'-6114')	
2744.50	12.550	226.770	2722.21	-85.51	-141.35	-144.42	1657845.11	14315239.98	39°25'15.724"N	80°56'17.832"W	202.08	225.616	1.58	-0.14	-7.19		
2839.50	12.570	223.400	2814.93	-94.42	-155.93	-159.04	1657830.49	14315225.41	39°25'15.580"N	80°56'18.018"W	222.73	225.567	0.77	0.02	-3.55		
2933.50	13.840	220.310	2906.45	-104.79	-171.94	-173.35	1657816.20	14315209.41	39°25'15.422"N	80°56'18.200"W	244.15	225.234	1.55	1.35	-3.29		
3028.50	14.740	224.990	2998.51	-115.76	-189.15	-189.24	1657800.31	14315192.20	39°25'15.252"N	80°56'18.403"W	267.56	225.014	1.54	0.95	4.93		
3123.50	14.530	227.590	3090.43	-125.66	-205.73	-206.59	1657782.97	14315175.62	39°25'15.088"N	80°56'18.624"W	291.55	225.118	0.73	-0.22	2.74		
3218.50	14.870	231.890	3182.32	-134.25	-221.29	-224.98	1657764.59	14315160.07	39°25'14.934"N	80°56'18.859"W	315.57	225.473	1.20	0.36	4.53		
3313.50	13.910	236.070	3274.34	-141.05	-235.19	-244.04	1657745.53	14315146.18	39°25'14.797"N	80°56'19.102"W	338.93	226.058	1.49	-1.01	4.40		
3409.50	13.800	232.170	3367.55	-147.58	-248.66	-262.66	1657726.92	14315132.72	39°25'14.664"N	80°56'19.339"W	361.69	226.569	0.98	-0.11	-4.06		
3503.50	13.330	229.680	3458.93	-155.01	-262.54	-279.78	1657709.81	14315118.84	39°25'14.527"N	80°56'19.557"W	383.67	226.820	0.80	-0.50	-2.65		
3598.50	12.970	229.000	3551.44	-162.86	-276.62	-296.17	1657693.42	14315104.76	39°25'14.388"N	80°56'19.766"W	405.27	226.955	0.41	-0.38	-0.72		
3692.50	13.170	229.580	3643.00	-170.81	-290.49	-312.29	1657677.31	14315090.90	39°25'14.251"N	80°56'19.972"W	426.51	227.071	0.25	0.21	0.62		
3787.50	12.870	227.070	3735.56	-178.73	-304.71	-328.27	1657661.33	14315076.68	39°25'14.111"N	80°56'20.176"W	447.90	227.132	0.67	-0.32	-2.64		
3882.50	14.500	233.440	3827.87	-186.48	-319.00	-345.58	1657644.04	14315062.40	39°25'13.969"N	80°56'20.396"W	470.30	227.290	2.33	1.72	6.71		
3977.50	15.410	234.910	3919.65	-193.42	-333.34	-365.46	1657624.16	14315048.06	39°25'13.828"N	80°56'20.650"W	494.65	227.631	1.04	0.96	1.55		
4072.50	14.200	235.630	4011.49	-199.87	-347.18	-385.40	1657604.22	14315034.23	39°25'13.691"N	80°56'20.904"W	518.72	227.987	1.29	-1.27	0.76		
4167.50	12.530	240.880	4103.92	-204.84	-368.77	-404.03	1657585.61	14315022.65	39°25'13.577"N	80°56'21.141"W	540.33	228.395	2.17	-1.76	5.53		
4261.50	12.190	238.010	4195.74	-208.54	-368.99	-421.35	1657568.29	14315012.43	39°25'13.476"N	80°56'21.362"W	560.08	228.790	0.75	-0.36	-3.05		
4355.50	11.930	236.290	4287.67	-213.12	-379.64	-437.85	1657551.80	14315000.78	39°25'13.371"N	80°56'21.573"W	579.52	229.073	0.47	-0.28	-1.83		
4449.50	11.800	233.410	4379.66	-218.38	-390.76	-453.65	1657536.01	14314990.67	39°25'13.261"N	80°56'21.774"W	598.74	229.259	0.64	-0.14	-3.06		
4544.50	11.900	230.530	4472.64	-224.63	-402.78	-469.01	1657520.65	14314978.66	39°25'13.142"N	80°56'21.970"W	618.23	229.344	0.63	0.11	-3.03		
4638.50	12.540	227.660	4564.51	-231.95	-415.81	-484.04	1657505.63	14314965.63	39°25'13.014"N	80°56'22.161"W	638.12	229.335	0.94	0.68	-3.05		
4733.50	13.000	233.980	4657.16	-239.04	-429.05	-500.30	1657489.37	14314952.40	39°25'12.883"N	80°56'22.369"W	659.08	229.384	1.55	0.48	6.65		
4828.50	13.230	229.840	4749.69	-245.97	-442.34	-517.25	1657472.43	14314939.11	39°25'12.752"N	80°56'22.585"W	680.60	229.464	1.02	0.24	-4.36		
4923.50	13.030	227.780	4842.20	-253.99	-456.55	-533.49	1657456.20	14314924.91	39°25'12.611"N	80°56'22.792"W	702.17	229.444	0.54	-0.21	-2.17		
5018.50	13.650	230.520	4934.64	-262.01	-470.87	-550.07	1657439.62	14314910.59	39°25'12.470"N	80°56'23.003"W	724.09	229.436	0.93	0.65	2.88		
5112.50	13.940	227.410	5025.93	-270.30	-485.59	-566.97	1657422.73	14314895.88	39°25'12.325"N	80°56'23.219"W	746.49	229.421	0.85	0.31	-3.31		
5207.50	12.560	226.760	5118.40	-279.00	-500.41	-582.92	1657406.79	14314881.07	39°25'12.178"N	80°56'23.422"W	768.25	229.356	1.46	-1.45	-0.68		
5302.50	13.030	233.040	5211.04	-286.42	-513.92	-599.01	1657390.71	14314867.56	39°25'12.045"N	80°56'23.627"W	789.26	229.372	1.54	0.49	6.61		
5397.50	12.820	231.320	5303.64	-293.15	-526.95	-615.79	1657373.93	14314854.54	39°25'11.916"N	80°56'23.841"W	810.48	229.445	0.46	-0.22	-1.81		

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #10
Area	Tyler County, WV	Well	Jameson Unit 3H
Field	Tyler	Wellbore	Jameson Unit 3H AWB
Facility	Neat Pad		

WELLPATH DATA (221 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
5492.50	12.770	228.830	5396.28	-300.54	-540.45	-631.92	1657357.81	14314841.04	39°25'11.783"N	80°56'24.047"W	831.51	229.461	0.58	-0.05	-2.62	
5586.50	12.890	232.010	5487.93	-307.75	-553.74	-648.01	1657341.73	14314827.76	39°25'11.651"N	80°56'24.252"W	852.37	229.485	0.76	0.13	3.38	
5680.50	14.230	235.630	5579.31	-314.10	-566.72	-665.81	1657323.93	14314814.78	39°25'11.523"N	80°56'24.479"W	874.34	229.596	1.69	1.43	3.85	
5712.50	15.070	244.050	5610.28	-315.60	-570.76	-672.79	1657316.95	14314810.74	39°25'11.483"N	80°56'24.568"W	882.28	229.691	7.15	2.62	26.31	
5744.50	15.910	255.010	5641.12	-315.74	-573.71	-680.77	1657308.97	14314807.79	39°25'11.454"N	80°56'24.670"W	890.28	229.878	9.50	2.62	34.25	
5775.50	16.550	266.120	5670.89	-314.24	-575.11	-689.29	1657300.47	14314806.39	39°25'11.440"N	80°56'24.778"W	897.70	230.160	10.21	2.06	35.84	
5807.50	16.820	276.940	5701.55	-310.97	-574.86	-698.43	1657291.32	14314806.64	39°25'11.443"N	80°56'24.895"W	904.58	230.543	9.73	0.84	33.81	
5839.50	17.270	285.700	5732.15	-306.19	-573.02	-707.60	1657282.26	14314808.49	39°25'11.461"N	80°56'25.011"W	910.52	230.999	8.13	1.38	27.38	
5870.50	18.670	295.270	5761.65	-300.07	-569.65	-716.51	1657273.25	14314811.85	39°25'11.495"N	80°56'25.125"W	915.37	231.514	10.54	4.55	30.87	
5902.50	19.260	301.140	5791.91	-292.40	-564.74	-725.66	1657264.10	14314816.76	39°25'11.543"N	80°56'25.241"W	919.52	232.109	6.24	1.84	18.34	
5934.50	22.840	305.620	5821.77	-283.24	-558.39	-735.23	1657254.53	14314823.11	39°25'11.606"N	80°56'25.363"W	923.24	232.784	12.26	11.19	14.00	
5965.50	27.770	305.270	5849.79	-272.41	-550.71	-746.03	1657243.75	14314830.79	39°25'11.682"N	80°56'25.501"W	927.27	233.566	15.91	15.90	-1.13	
5997.50	31.730	304.110	5877.57	-259.57	-541.68	-759.09	1657230.69	14314839.81	39°25'11.771"N	80°56'25.667"W	932.54	234.488	12.50	12.37	-3.62	
6028.50	33.520	304.100	5903.68	-246.14	-532.31	-772.92	1657216.86	14314849.18	39°25'11.864"N	80°56'25.843"W	938.49	235.445	5.77	5.77	-0.03	
6060.50	34.390	303.750	5930.22	-231.82	-522.34	-787.76	1657202.03	14314859.15	39°25'11.963"N	80°56'26.032"W	945.20	236.453	2.79	2.72	-1.09	
6092.50	35.300	303.360	5956.48	-217.24	-512.23	-802.99	1657186.80	14314869.25	39°25'12.063"N	80°56'26.226"W	952.46	237.466	2.93	2.84	-1.22	
6123.50	35.910	302.950	5981.68	-202.92	-502.38	-818.10	1657171.70	14314879.11	39°25'12.160"N	80°56'26.419"W	960.03	238.448	2.11	1.97	-1.32	
6167.00	36.480	305.980	6016.79	-182.19	-487.82	-839.27	1657150.54	14314893.65	39°25'12.304"N	80°56'26.688"W	970.75	239.833	4.32	1.31	6.97	BH AT Curve <8-1/2"> (6123.5)/(6167-18392')
6186.00	37.150	308.200	6032.00	-172.70	-480.96	-848.35	1657141.46	14314900.51	39°25'12.372"N	80°56'26.804"W	975.20	240.450	7.84	3.53	11.68	
6233.00	39.900	311.000	6068.77	-147.62	-462.29	-870.89	1657118.93	14314919.17	39°25'12.557"N	80°56'27.091"W	985.98	242.040	6.93	5.85	5.96	
6280.00	44.240	314.250	6103.66	-119.81	-440.94	-894.02	1657095.81	14314940.51	39°25'12.768"N	80°56'27.386"W	996.85	243.747	10.33	9.23	6.91	
6327.00	47.690	316.840	6136.33	-89.22	-416.82	-917.66	1657072.18	14314964.62	39°25'13.006"N	80°56'27.687"W	1007.89	245.572	8.34	7.34	5.51	
6375.00	51.370	320.810	6167.48	-55.32	-389.32	-941.66	1657048.18	14314992.11	39°25'13.276"N	80°56'27.992"W	1018.97	247.538	9.92	7.67	8.27	
6394.00†	52.771	322.742	6179.16	-41.14	-377.55	-950.93	1657038.92	14315003.87	39°25'13.395"N	80°56'28.110"W	1023.14	248.345	10.89	7.37	10.17	Middlesex: 6394' MD
6422.00	54.890	325.460	6195.69	-19.48	-359.24	-964.18	1657025.68	14315022.18	39°25'13.576"N	80°56'28.279"W	1028.93	249.565	10.89	7.57	9.71	
6459.00	59.140	327.470	6221.27	18.74	-326.38	-985.94	1657003.93	14315055.03	39°25'13.901"N	80°56'28.556"W	1038.56	251.684	9.73	9.04	4.28	
6516.00	64.010	329.080	6243.64	59.10	-291.23	-1007.65	1656982.22	14315090.16	39°25'14.248"N	80°56'28.832"W	1048.90	253.880	10.79	10.36	3.43	
6553.00	68.080	329.780	6262.72	101.22	-254.25	-1029.49	1656960.40	14315127.12	39°25'14.614"N	80°56'29.110"W	1060.42	256.127	8.77	8.66	1.49	
6565.00†	68.151	329.790	6263.46	103.04	-252.65	-1030.43	1656959.46	14315128.73	39°25'14.630"N	80°56'29.122"W	1060.95	256.224	3.60	3.57	0.49	Burkett: 6565' MD
6610.00	69.760	330.010	6279.62	144.30	-216.31	-1051.49	1656938.41	14315165.05	39°25'14.989"N	80°56'29.390"W	1073.51	258.375	3.60	3.57	0.49	

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Jameson Unit 3H AWP Proj: 18416'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot #10
ANTERO RESOURCES CORPORATION	Jameson Unit 3H
Area	Well
Field	Wellbore
Facility	Jameson Unit 3H AWP

WELLPATH DATA (221 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 (F/100ft)	Build Rate (F/100ft)	Turn Rate (F/100ft)	Comments
6631.00†	71.082	330.236	6286.66	163.76	-199.16	-1061.34	1656928.56	14315182.20	39°25'15.159"N	80°56'29.516"W	1079.87	259.372	6.38	6.30	1.07	July: 6631' MD
6657.00	72.720	330.510	6294.74	188.07	-177.68	-1073.56	1656916.35	14315203.67	39°25'15.371"N	80°56'29.671"W	1088.16	260.603	6.38	6.30	1.06	
6675.00†	74.102	330.955	6299.87	205.06	-162.63	-1081.99	1656907.92	14315218.71	39°25'15.520"N	80°56'29.779"W	1094.15	261.452	8.03	7.88	2.47	Marcellus POE: 6675' MD
6704.00	76.330	331.660	6307.27	232.73	-138.03	-1095.45	1656894.46	14315243.30	39°25'15.763"N	80°56'29.950"W	1104.12	262.818	8.03	7.68	2.43	
6751.00	80.640	331.940	6316.65	278.23	-97.45	-1117.21	1656872.71	14315283.86	39°25'16.164"N	80°56'30.227"W	1121.45	265.015	9.19	9.17	0.60	
6798.00	84.300	332.170	6322.81	324.29	-56.30	-1139.04	1656850.89	14315325.00	39°25'16.571"N	80°56'30.505"W	1140.43	267.170	7.80	7.79	0.49	
6845.00	87.970	331.560	6325.98	370.62	-14.95	-1161.15	1656828.79	14315366.33	39°25'16.980"N	80°56'30.786"W	1161.25	269.262	7.92	7.81	-1.30	
6940.00	89.940	331.140	6327.71	464.35	68.40	-1206.69	1656783.27	14315449.64	39°25'17.804"N	80°56'31.366"W	1208.63	273.244	2.12	2.07	-0.44	
7033.00	90.120	329.650	6327.66	555.87	149.25	-1252.63	1656737.35	14315530.47	39°25'18.603"N	80°56'31.950"W	1261.49	276.795	1.61	0.19	-1.60	
7127.00	89.970	329.010	6327.59	648.04	230.10	-1300.58	1656689.42	14315611.29	39°25'19.403"N	80°56'32.561"W	1320.78	280.033	0.70	-0.16	-0.68	
7316.00	89.940	329.270	6327.71	833.46	392.93	-1396.53	1656593.50	14315774.05	39°25'21.013"N	80°56'33.782"W	1384.49	283.019	0.87	0.00	0.87	
7410.00	90.060	327.720	6327.71	925.35	473.07	-1445.65	1656544.16	14315854.16	39°25'21.805"N	80°56'34.407"W	1521.09	288.120	1.65	0.13	-1.65	
7505.00	89.660	325.880	6327.95	1017.58	552.56	-1497.67	1656492.41	14315933.62	39°25'22.591"N	80°56'35.069"W	1596.35	290.251	1.98	-0.42	-1.94	
7599.00	89.720	327.010	6328.45	1108.71	630.90	-1549.63	1656440.47	14316011.92	39°25'23.366"N	80°56'35.731"W	1673.13	292.153	1.20	0.06	1.20	
7693.00	90.150	326.610	6328.56	1199.98	709.56	-1601.08	1656389.03	14316090.55	39°25'24.143"N	80°56'36.386"W	1751.27	293.902	0.62	0.46	-0.43	
7788.00	90.490	328.290	6328.03	1292.46	789.63	-1652.19	1656337.94	14316170.59	39°25'24.935"N	80°56'37.037"W	1831.19	295.545	1.80	0.36	1.77	
7882.00	90.310	329.160	6327.37	1384.43	869.97	-1700.99	1656289.17	14316250.90	39°25'25.729"N	80°56'37.658"W	1910.56	297.087	0.95	-0.19	0.93	
7977.00	90.180	329.530	6326.97	1477.59	951.70	-1749.43	1656240.75	14316332.59	39°25'26.537"N	80°56'38.274"W	1991.54	298.546	0.41	-0.14	0.39	
8072.00	90.250	333.080	6326.61	1571.31	1035.01	-1795.03	1656195.16	14316415.87	39°25'27.361"N	80°56'38.855"W	2072.05	299.968	3.74	0.07	3.74	
8167.00	90.430	332.680	6326.05	1665.44	1119.57	-1838.34	1656151.87	14316500.39	39°25'28.197"N	80°56'39.406"W	2152.42	301.342	0.46	0.19	-0.42	
8262.00	90.980	332.470	6324.88	1759.49	1203.88	-1882.09	1656108.14	14316584.67	39°25'29.031"N	80°56'39.963"W	2234.19	302.605	0.62	0.58	-0.22	
8356.00	91.630	333.260	6322.74	1852.60	1287.51	-1924.95	1656065.29	14316668.27	39°25'29.858"N	80°56'40.508"W	2315.84	303.777	1.09	0.89	0.84	
8451.00	90.950	334.550	6320.60	1946.91	1372.81	-1966.73	1656023.54	14316753.53	39°25'30.701"N	80°56'41.040"W	2398.46	304.916	1.53	-0.72	1.36	
8547.00	90.650	338.580	6319.26	2042.64	1460.86	-2004.90	1655985.38	14316841.55	39°25'31.571"N	80°56'41.526"W	2480.67	306.079	4.21	-0.31	4.20	
8642.00	91.050	340.520	6317.85	2137.61	1549.86	-2038.08	1655952.21	14316930.51	39°25'32.451"N	80°56'41.948"W	2560.44	307.251	2.08	0.42	2.04	
8737.00	90.710	342.620	6316.39	2232.58	1639.97	-2068.11	1655922.19	14317020.59	39°25'33.342"N	80°56'42.330"W	2639.43	308.414	2.24	-0.36	2.21	
8832.00	90.770	341.540	6315.16	2327.54	1730.35	-2097.34	1655892.98	14317110.93	39°25'34.235"N	80°56'42.702"W	2719.00	309.523	1.14	0.06	-1.14	
8927.00	91.020	340.590	6313.68	2422.52	1820.20	-2128.16	1655862.17	14317200.74	39°25'35.124"N	80°56'43.094"W	2800.39	310.540	1.03	0.26	-1.00	
9022.00	90.920	339.840	6312.07	2517.51	1909.58	-2160.31	1655830.03	14317290.09	39°25'36.007"N	80°56'43.503"W	2883.31	311.475	0.80	-0.11	-0.79	

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Actual Wellpath Report

Jameson Unit 3H AWP Proj: 18416'

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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #10
Operator	ANTERO RESOURCES CORPORATION	Well	Jameson Unit 3H
Area	Tyler County, WV	Wellbore	Jameson Unit 3H AWB
Field	Tyler		
Facility	Neat Pad		

WELLPATH DATA (221 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
9117.00	90.890	339.880	6310.57	2612.49	1988.76	-2193.02	1655797.33	14317379.23	39°25'36.889"N	80°56'43.919"W	2967.22	312.347	0.05	-0.03	0.04	
9212.00	90.990	342.860	6309.01	2707.45	2088.76	-2223.36	1655767.01	14317469.20	39°25'37.778"N	80°56'44.305"W	3050.61	313.212	3.14	0.11	3.14	
9306.00	91.110	343.430	6307.29	2801.35	2178.71	-2250.61	1655739.77	14317559.11	39°25'38.688"N	80°56'44.652"W	3132.41	314.070	0.62	0.13	0.61	
9401.00	91.020	341.110	6305.52	2896.29	2269.17	-2279.53	1655710.85	14317649.54	39°25'39.562"N	80°56'45.019"W	3216.43	314.869	2.44	-0.09	-2.44	
9495.00	90.770	338.820	6304.05	2990.26	2357.47	-2311.73	1655678.67	14317737.79	39°25'40.435"N	80°56'45.429"W	3301.78	315.561	2.45	-0.27	-2.44	
9589.00	90.860	337.280	6302.72	3084.15	2444.64	-2346.86	1655643.55	14317824.93	39°25'41.297"N	80°56'45.876"W	3388.81	316.169	1.64	0.10	-1.64	
9684.00	90.830	336.010	6301.32	3178.91	2531.85	-2384.52	1655605.91	14317912.10	39°25'42.159"N	80°56'46.355"W	3477.96	316.716	1.34	-0.03	-1.34	
9778.00	90.520	334.920	6300.21	3272.52	2617.35	-2423.03	1655566.90	14317997.57	39°25'43.004"N	80°56'46.852"W	3567.09	317.202	1.21	-0.33	-1.16	
9873.00	90.580	335.970	6299.30	3367.12	2703.76	-2463.03	1655527.44	14318083.94	39°25'43.858"N	80°56'47.354"W	3657.43	317.668	1.11	0.06	1.11	
9967.00	90.740	337.580	6298.21	3460.90	2790.13	-2500.09	1655490.39	14318170.28	39°25'44.712"N	80°56'47.826"W	3746.37	318.138	1.72	0.17	1.71	
10062.00	90.550	338.150	6297.14	3555.78	2878.12	-2535.88	1655454.61	14318258.24	39°25'45.582"N	80°56'48.282"W	3835.92	318.617	0.63	-0.20	0.60	
10156.00	90.770	341.620	6296.06	3649.75	2966.37	-2588.20	1655422.30	14318346.45	39°25'46.454"N	80°56'48.693"W	3923.65	319.115	3.70	0.23	3.69	
10251.00	90.800	342.140	6294.76	3744.72	3056.65	-2597.75	1655392.77	14318435.69	39°25'47.347"N	80°56'49.069"W	4011.41	319.640	0.55	0.03	0.55	
10346.00	90.800	340.800	6293.43	3839.70	3146.71	-2627.93	1655362.59	14318526.72	39°25'48.237"N	80°56'49.453"W	4099.74	320.134	1.41	0.00	-1.41	
10441.00	90.680	341.100	6292.21	3934.69	3236.50	-2658.94	1655331.60	14318616.48	39°25'49.125"N	80°56'49.847"W	4188.66	320.595	0.34	-0.13	0.32	
10535.00	90.740	342.480	6291.04	4028.66	3325.79	-2688.31	1655302.24	14318705.72	39°25'50.007"N	80°56'50.221"W	4276.43	321.051	1.47	0.06	1.47	
10629.00	90.830	344.260	6289.75	4122.54	3415.84	-2715.21	1655275.35	14318795.74	39°25'50.898"N	80°56'50.563"W	4363.52	321.519	1.90	0.10	1.89	
10724.00	90.550	344.090	6288.61	4217.35	3507.23	-2741.11	1655249.46	14318887.10	39°25'51.801"N	80°56'50.892"W	4451.34	321.990	0.34	-0.29	-0.18	
10818.00	90.830	344.300	6287.48	4311.17	3597.67	-2766.71	1655223.87	14318977.50	39°25'52.695"N	80°56'51.218"W	4538.50	322.439	0.37	0.30	0.22	
10912.00	90.740	344.920	6286.19	4404.93	3688.29	-2791.66	1655198.94	14319068.09	39°25'53.591"N	80°56'51.535"W	4625.68	322.878	0.67	-0.10	0.66	
11007.00	90.770	345.570	6284.94	4499.62	3780.15	-2815.85	1655174.75	14319159.91	39°25'54.499"N	80°56'51.843"W	4713.66	323.317	0.68	0.03	0.68	
11101.00	90.860	344.180	6283.60	4593.35	3870.89	-2840.38	1655150.24	14319250.61	39°25'55.396"N	80°56'52.155"W	4801.20	323.730	1.48	0.10	-1.48	
11195.00	90.650	340.950	6282.36	4687.28	3960.55	-2868.53	1655122.09	14319340.23	39°25'56.282"N	80°56'52.513"W	4890.24	324.085	3.44	-0.22	-3.44	
11290.00	90.680	338.640	6281.26	4782.25	4049.69	-2901.34	1655098.30	14319429.34	39°25'57.163"N	80°56'52.930"W	4981.74	324.381	2.43	0.03	-2.43	
11384.00	90.310	338.400	6280.45	4876.19	4137.16	-2935.76	1655054.89	14319516.77	39°25'58.028"N	80°56'53.368"W	5072.94	324.640	0.47	-0.39	-0.26	
11479.00	90.370	339.520	6279.88	4971.14	4225.82	-2969.87	1655020.80	14319605.40	39°25'58.904"N	80°56'53.802"W	5165.04	324.901	1.18	0.06	1.18	
11574.00	90.340	340.170	6279.29	5066.13	4315.00	-3002.60	1654988.08	14319694.54	39°25'59.766"N	80°56'54.219"W	5256.88	325.168	0.68	-0.03	0.68	
11668.00	90.490	339.950	6278.61	5160.12	4403.36	-3034.65	1654956.04	14319782.87	39°26'00.659"N	80°56'54.627"W	5347.78	325.427	0.28	0.16	-0.23	
11763.00	90.340	339.890	6277.93	5255.11	4492.59	-3067.27	1654923.44	14319872.06	39°26'01.541"N	80°56'55.042"W	5439.80	325.677	0.17	-0.16	-0.06	
11857.00	90.430	340.830	6277.29	5349.11	4581.11	-3098.86	1654891.85	14319960.55	39°26'02.417"N	80°56'55.444"W	5530.78	325.924	1.00	0.10	1.00	

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Actual Wellpath Report

Jameson Unit 3H AWP Proj: 18416'

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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #10
Operator	ANTERO RESOURCES CORPORATION	Well	Jameson Unit 3H
Area	Tyler County, WV	Wellbore	Jameson Unit 3H AWB
Field	Tyler		
Facility	Neat Pad		

WELLPATH DATA (221 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
11952.00	90.400	341.290	6276.61	5444.10	4670.97	-3129.70	1654861.03	14320050.37	39°26'03.305"N	80°56'55.836"W	5622.54	326.177	0.49	-0.03	0.48	
12047.00	90.460	343.200	6275.89	5539.06	4761.44	-3158.67	1654832.08	14320140.80	39°26'04.199"N	80°56'56.205"W	5713.88	326.440	2.01	0.06	2.01	
12142.00	90.550	344.950	6275.05	5633.88	4852.78	-3184.73	1654806.02	14320232.11	39°26'05.102"N	80°56'56.536"W	5804.48	326.724	1.84	0.09	1.84	
12236.00	90.400	345.790	6274.28	5727.56	4943.73	-3208.47	1654782.29	14320323.02	39°26'06.001"N	80°56'56.838"W	5893.62	327.017	0.91	-0.16	0.89	
12331.00	90.520	343.990	6273.51	5822.29	5035.44	-3233.23	1654757.54	14320414.69	39°26'06.908"N	80°56'57.153"W	5984.10	327.296	1.90	0.13	-1.89	
12426.00	90.490	341.000	6272.68	5917.23	5126.03	-3261.80	1654728.98	14320505.24	39°26'07.803"N	80°56'57.517"W	6075.81	327.531	3.15	-0.03	-3.15	
12520.00	90.490	341.510	6271.87	6011.22	5215.04	-3292.01	1654698.79	14320594.22	39°26'08.683"N	80°56'57.901"W	6167.17	327.738	0.54	0.00	0.54	
12614.00	91.420	345.570	6270.30	6105.07	5305.15	-3318.63	1654672.17	14320684.22	39°26'09.574"N	80°56'58.240"W	6257.53	327.972	4.43	0.99	4.32	
12708.00	90.280	341.080	6268.91	6198.93	5395.17	-3345.60	1654645.22	14320774.27	39°26'10.464"N	80°56'58.583"W	6348.29	328.197	4.93	-1.21	-4.78	
12803.00	90.620	340.800	6268.16	6293.92	5484.95	-3376.62	1654614.21	14320864.03	39°26'11.351"N	80°56'58.977"W	6440.98	328.383	0.46	0.36	-0.29	
12898.00	91.110	340.410	6266.73	6388.91	5574.55	-3408.16	1654582.68	14320953.59	39°26'12.237"N	80°56'59.379"W	6533.85	328.559	0.66	0.52	-0.41	
12992.00	91.080	335.780	6264.93	6482.78	5661.73	-3443.22	1654547.64	14321040.73	39°26'13.099"N	80°56'59.825"W	6626.53	328.694	4.92	-0.03	-4.93	
13087.00	90.370	333.510	6263.73	6577.24	5747.56	-3483.89	1654506.98	14321126.53	39°26'13.947"N	80°57'00.343"W	6721.01	328.778	2.50	-0.75	-2.39	
13182.00	90.650	334.070	6262.88	6671.56	5832.79	-3525.85	1654465.04	14321211.72	39°26'14.790"N	80°57'00.877"W	6815.55	328.848	0.66	0.29	0.59	
13276.00	90.490	336.200	6261.95	6765.11	5918.07	-3565.37	1654425.54	14321296.96	39°26'15.633"N	80°57'01.380"W	6909.08	328.933	2.27	-0.17	2.27	
13371.00	90.990	338.880	6260.72	6859.95	6005.85	-3601.66	1654389.26	14321384.71	39°26'16.501"N	80°57'01.842"W	7003.01	329.049	2.87	0.53	2.82	
13465.00	90.710	338.410	6259.33	6953.89	6093.38	-3635.88	1654355.05	14321472.21	39°26'17.366"N	80°57'02.277"W	7095.70	329.178	0.58	-0.30	-0.50	
13560.00	90.370	338.590	6258.43	7048.81	6181.77	-3670.70	1654320.25	14321560.56	39°26'18.240"N	80°57'02.721"W	7189.46	329.298	0.40	-0.36	0.19	
13654.00	90.890	339.030	6257.40	7142.76	6289.41	-3704.67	1654286.29	14321648.16	39°26'19.106"N	80°57'03.153"W	7282.17	329.421	0.72	0.55	0.47	
13748.00	90.830	343.020	6255.99	7236.73	6358.27	-3735.23	1654255.75	14321736.99	39°26'19.985"N	80°57'03.542"W	7374.25	329.567	4.24	-0.06	4.24	
13842.00	90.550	345.750	6254.85	7330.51	6448.79	-3760.53	1654230.46	14321827.47	39°26'20.879"N	80°57'03.864"W	7465.14	329.752	2.92	-0.30	2.90	
13937.00	90.490	345.020	6253.99	7425.18	6540.71	-3784.49	1654206.50	14321919.35	39°26'21.788"N	80°57'04.168"W	7556.67	329.946	0.77	-0.06	-0.77	
14032.00	90.800	345.650	6252.92	7519.86	6632.61	-3808.54	1654182.46	14322011.22	39°26'22.696"N	80°57'04.474"W	7648.30	330.135	0.74	0.33	0.66	
14126.00	90.680	344.280	6251.71	7613.58	6723.38	-3832.93	1654158.09	14322101.95	39°26'23.594"N	80°57'04.784"W	7739.20	330.313	1.46	-0.13	-1.46	
14220.00	90.680	343.860	6250.59	7707.41	6813.76	-3858.72	1654132.30	14322192.30	39°26'24.487"N	80°57'05.113"W	7830.52	330.477	0.45	0.00	-0.45	
14315.00	90.430	341.860	6249.67	7802.33	6904.53	-3886.72	1654104.32	14322283.04	39°26'25.384"N	80°57'05.469"W	7923.33	330.624	2.12	-0.26	-2.11	
14410.00	90.460	341.710	6248.93	7897.31	6994.77	-3916.41	1654074.63	14322373.24	39°26'26.276"N	80°57'05.847"W	8016.55	330.755	0.16	0.03	-0.16	
14504.00	90.430	340.740	6248.20	7991.30	7083.77	-3946.67	1654044.39	14322462.19	39°26'27.156"N	80°57'06.232"W	8109.00	330.876	1.03	-0.03	-1.03	
14599.00	90.710	339.160	6247.26	8086.28	7173.00	-3979.23	1654011.94	14322551.39	39°26'28.038"N	80°57'06.646"W	8202.82	330.981	1.69	0.29	-1.66	
14694.00	90.520	338.750	6246.24	8181.24	7261.66	-4013.34	1653977.74	14322640.02	39°26'28.915"N	80°57'07.080"W	8296.90	331.072	0.48	-0.20	-0.43	

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Jameson Unit 3H AWP Proj: 18416'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot #10
ANTERO RESOURCES CORPORATION	Jameson Unit 3H
Area	Tyler County, WV
Field	Tyler
Facility	Neat Pad

WELLPATH DATA (221 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 (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
14789.00	91.020	337.800	6244.96	8276.14	7349.90	-4048.51	1653942.59	14322728.22	39°26'29.787"N	80°57'07.528"W	8391.15	331.153	1.13	0.53	-1.00	
14884.00	91.140	337.660	6243.17	8371.00	7437.80	-4084.50	1653906.61	14322816.09	39°26'30.656"N	80°57'07.986"W	8485.52	331.226	0.19	0.13	-0.15	
14978.00	92.280	337.310	6240.37	8484.82	7524.59	-4120.48	1653870.65	14322902.85	39°26'31.514"N	80°57'08.444"W	8578.92	331.295	1.27	1.21	-0.37	
15073.00	91.630	335.340	6237.13	8559.49	7611.54	-4158.60	1653832.54	14322989.76	39°26'32.374"N	80°57'08.930"W	8673.50	331.350	2.18	-0.68	-2.07	
15167.00	91.600	335.980	6234.48	8653.09	7697.15	-4197.33	1653793.83	14323075.34	39°26'33.220"N	80°57'09.423"W	8767.20	331.396	0.68	-0.03	0.68	
15261.00	90.740	335.010	6232.56	8746.69	7782.67	-4236.31	1653754.87	14323160.82	39°26'34.085"N	80°57'09.919"W	8860.94	331.439	1.38	-0.91	-1.03	
15355.00	90.460	336.780	6231.57	8840.36	7868.46	-4274.70	1653716.49	14323246.58	39°26'34.913"N	80°57'10.408"W	8954.65	331.486	1.91	-0.30	1.88	
15449.00	91.320	339.380	6230.11	8934.24	7955.65	-4309.78	1653681.42	14323332.73	39°26'35.775"N	80°57'10.854"W	9048.01	331.554	2.91	0.91	2.77	
15544.00	91.360	340.270	6227.99	9029.21	8044.79	-4342.54	1653648.68	14323422.84	39°26'36.656"N	80°57'11.271"W	9142.01	331.640	0.94	0.04	0.74	
15638.00	91.350	340.310	6225.67	9123.18	8133.26	-4374.23	1653617.00	14323511.27	39°26'37.531"N	80°57'11.675"W	9234.92	331.728	0.04	-0.01	0.04	
15732.00	90.220	341.820	6224.38	9217.16	8222.16	-4404.73	1653586.52	14323600.13	39°26'38.410"N	80°57'12.063"W	9327.68	331.821	2.01	-1.20	1.61	
15826.00	90.250	343.620	6223.99	9311.10	8311.92	-4432.65	1653558.61	14323689.85	39°26'39.297"N	80°57'12.418"W	9419.99	331.930	1.92	0.03	1.91	
15920.00	90.090	344.120	6223.72	9404.95	8402.21	-4458.76	1653532.50	14323780.11	39°26'40.190"N	80°57'12.750"W	9511.98	332.047	0.56	-0.17	0.53	
16015.00	90.150	345.240	6223.52	9499.71	8493.84	-4483.86	1653507.41	14323871.70	39°26'41.095"N	80°57'13.070"W	9604.70	332.171	1.18	0.06	1.18	
16109.00	90.400	346.070	6223.07	9593.35	8584.90	-4507.15	1653484.13	14323962.73	39°26'41.995"N	80°57'13.366"W	9696.13	332.300	0.92	0.27	0.88	
16203.00	90.280	342.290	6222.51	9687.15	8675.33	-4532.77	1653458.52	14324053.12	39°26'42.889"N	80°57'13.692"W	9788.12	332.413	4.02	-0.13	-4.02	
16297.00	90.280	341.250	6222.05	9781.13	8764.61	-4562.18	1653429.13	14324142.36	39°26'43.772"N	80°57'14.066"W	9880.88	332.502	1.11	0.00	-1.11	
16391.00	90.180	342.060	6221.67	9875.12	8853.83	-4591.76	1653399.56	14324231.54	39°26'44.654"N	80°57'14.443"W	9973.69	332.588	0.87	-0.11	0.86	
16485.00	90.310	342.840	6221.27	9969.07	8943.45	-4620.11	1653371.22	14324321.13	39°26'45.540"N	80°57'14.803"W	10066.31	332.680	0.84	0.14	0.83	
16580.00	90.310	342.280	6220.76	10064.02	9034.08	-4648.58	1653342.76	14324411.73	39°26'46.436"N	80°57'15.166"W	10159.92	332.771	0.59	0.00	-0.59	
16675.00	90.120	337.970	6220.40	10158.99	9123.40	-4680.87	1653310.49	14324501.01	39°26'47.319"N	80°57'15.577"W	10254.12	332.839	4.54	-0.20	-4.54	
16769.00	90.180	335.990	6220.15	10252.79	9209.91	-4717.62	1653273.74	14324587.49	39°26'48.174"N	80°57'16.045"W	10347.87	332.877	2.11	0.06	-2.11	
16864.00	90.220	335.000	6219.82	10347.40	9296.35	-4757.03	1653234.36	14324673.89	39°26'49.028"N	80°57'16.546"W	10442.77	332.901	1.04	0.04	-1.04	
16958.00	90.030	335.870	6219.62	10441.01	9381.84	-4796.10	1653195.30	14324759.35	39°26'49.873"N	80°57'17.044"W	10536.68	332.923	0.95	-0.20	0.93	
17054.00	90.060	338.850	6219.54	10536.85	9470.44	-4833.05	1653158.36	14324847.91	39°26'50.749"N	80°57'17.514"W	10632.38	332.963	3.10	0.03	3.10	
17149.00	90.180	342.180	6219.34	10631.83	9559.98	-4864.74	1653126.69	14324937.42	39°26'51.634"N	80°57'17.918"W	10726.55	333.030	3.51	0.13	3.51	
17244.00	90.120	343.490	6219.09	10726.76	9650.75	-4892.77	1653098.66	14325028.15	39°26'52.532"N	80°57'18.274"W	10820.17	333.116	1.38	-0.06	1.38	
17339.00	90.150	343.950	6218.87	10821.62	9741.94	-4919.41	1653072.04	14325119.30	39°26'53.433"N	80°57'18.613"W	10913.57	333.208	0.49	0.03	0.48	
17434.00	90.310	344.990	6218.49	10916.41	9833.47	-4944.84	1653046.62	14325210.79	39°26'54.338"N	80°57'18.937"W	11006.75	333.304	1.11	0.17	1.09	
17529.00	90.250	345.630	6218.02	11011.09	9925.36	-4968.93	1653022.54	14325302.65	39°26'55.246"N	80°57'19.244"W	11099.69	333.406	0.68	-0.06	0.67	

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Jameson Unit 3H AWP Proj: 18416'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot #10
ANTERO RESOURCES CORPORATION	Jameson Unit 3H
Area	Well
Field	Wellbore
Facility	Jameson Unit 3H AWB

WELLPATH DATA (221 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
17624.00	90.340	346.330	6217.53	11105.68	10017.53	-4991.94	1652999.53	14325394.78	39°26'56.157"N	80°57'19.536"W	11192.43	333.512	0.74	0.09	0.74	
17779.00	90.180	346.330	6217.10	11200.21	10109.84	-5014.40	1652977.09	14325487.05	39°26'57.070"N	80°57'19.822"W	11285.08	333.619	0.17	-0.17	0.00	
17814.00	90.150	344.870	6216.83	11284.86	10201.85	-5038.02	1652953.48	14325579.03	39°26'57.979"N	80°57'20.123"W	11378.02	333.718	1.54	-0.03	-1.54	
17909.00	90.250	341.880	6216.50	11389.74	10292.87	-5065.20	1652926.31	14325670.01	39°26'58.879"N	80°57'20.468"W	11471.68	333.798	3.15	0.11	-3.15	
18003.00	90.280	339.590	6216.06	11483.73	10381.60	-5096.21	1652895.31	14325758.70	39°26'59.756"N	80°57'20.863"W	11564.99	333.854	2.44	0.03	-2.44	
18097.00	90.370	337.620	6215.53	11577.66	10469.11	-5130.50	1652861.04	14325846.18	39°27'00.621"N	80°57'21.300"W	11658.66	333.892	2.10	0.10	-2.10	
18191.00	90.310	335.950	6214.97	11671.45	10555.50	-5167.54	1652824.01	14325932.54	39°27'01.475"N	80°57'21.771"W	11752.54	333.916	1.77	-0.06	-1.77	
18285.00	90.150	335.560	6214.59	11765.10	10641.21	-5206.13	1652785.43	14326018.21	39°27'02.322"N	80°57'22.263"W	11846.49	333.930	0.46	-0.17	-0.43	
18380.00	90.250	334.950	6214.26	11859.68	10727.49	-5245.89	1652745.69	14326104.46	39°27'03.175"N	80°57'22.769"W	11941.46	333.941	0.64	0.11	-0.63	
18392.00	90.220	335.080	6214.21	11871.62	10738.37	-5250.96	1652740.62	14326115.33	39°27'03.283"N	80°57'22.834"W	11953.46	333.942	1.03	-0.25	1.00	
18416.00	90.220	335.080	6214.12	11895.51	10760.14	-5261.07	1652730.52	14326137.09	39°27'03.498"N	80°57'22.962"W	11977.45	333.944	0.00	0.00	0.00	Projected MD at TD: 18416'

HOLE & CASING SECTIONS - Ref Wellbore: Jameson Unit 3H AWP Proj: 18416'

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	24.50	104.50	0.00	0.00	-0.22	-0.14
17.5in Open Hole	104.50	371.50	267.00	104.50	371.49	-0.22	-0.14	-1.53	-1.76
13.375in Casing Surface	24.50	371.50	347.00	24.50	371.49	0.00	0.00	-1.53	-1.76
12.25in Open Hole	371.50	2617.50	2246.00	371.49	2598.26	-1.53	-1.76	-123.99	-122.90
9.625in Casing Intermediate	24.50	2617.50	2593.00	24.50	2598.26	0.00	0.00	-123.99	-122.90
8.75in Open Hole	2617.50	6191.50	3574.00	2598.26	6036.38	-123.99	-122.90	-478.89	-850.97
8.5in Open Hole	6191.50	18416.00	12224.50	6036.38	6214.12	-478.89	-850.97	10760.14	-5261.07
5.5in Casing Production	24.50	18416.00	18391.50	24.50	6214.12	0.00	0.00	10760.14	-5261.07

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #10
Area	Tyler County, WV	Well	Jameson Unit 3H
Field	Tyler	Wellbore	Jameson Unit 3H AWB
Facility	Neat Pad		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Jameson Unit 3H POE Rev-2	6298.00	-179.03	-1065.19	1656924.71	14315202.32	39°25'15.358"N	80°56'29.565"W	point
Jameson Unit 3H BHL Rev-2	6328.00	10803.68	-5283.93	1652707.67	14326180.61	39°27'03.928"N	80°57'23.254"W	point
Jameson Unit 3H LP Rev-2	6328.00	-6.14	-1169.07	1656820.87	14315375.14	39°25'17.067"N	80°56'30.887"W	point

WELLPATH COMPOSITION - Ref Wellbore: Jameson Unit 3H AWB Ref Wellpath: Jameson Unit 3H AWP Proj: 18416'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
24.50	338.50	Gyrodata standard - Drop gyro or Multi-shot	01 Gyrodata MS Gyro <17-1/2">(100'-329')	Jameson Unit 3H AWB
338.50	516.50	Gyrodata standard - Drop gyro or Multi-shot	02 Gyrodata MS Gyro <12-1/4">(329')(417'-507')	Jameson Unit 3H AWB
516.50	2546.50	ISCWSA MWD, Rev. 4 (Standard)	03 Directional ONE MWD <12-1/4">(507')(562'-2537')	Jameson Unit 3H AWB
2546.50	6123.50	ISCWSA MWD, Rev. 4 (Standard)	04 Directional ONE MWD <8-3/4">(2537')(2635'-6114')	Jameson Unit 3H AWB
6123.50	18392.00	BHT AutoTrak Curve (Short)	05 BH AT Curve <8-1/2"> (6123.5')(6167'-18392')	Jameson Unit 3H AWB
18392.00	18416.00	Blind Drilling (std)	Projection to bit	Jameson Unit 3H AWB

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Actual Wellpath Report

Jameson Unit 3H AWP Proj: 18416'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	Slot	Slot #10	
ANTERO RESOURCES CORPORATION	Well	Jameson Unit 3H	
Tyler County, WV	Wellbore	Jameson Unit 3H AWB	
Tyler			
Neat Pad			

COMMENTS
<p>Wellpath general comments</p> <p>API: 47-095-02407-0000</p> <p>BHI Job #: 109471870</p> <p>Rig: Frontier 22</p> <p>Duration: 10/27/2018-10/30/2018</p> <p>Gyrodatta MS Gyro <17-1/2">(100'-329')</p> <p>Gyrodatta MS Gyro <12-1/4">(329')(417'-507')</p> <p>Directional ONE MWD <12-1/4">(507')(562'-2537')</p> <p>Directional ONE MWD <8-3/4">(2537')(2635'-6114')</p> <p>BH AT Curve <8-1/2"> (6123.5')(6167'-18392')</p> <p>Middlesex: 6394' MD</p> <p>Burkett: 6565' MD</p> <p>Tully: 6631' MD</p> <p>Marcellus POE: 6675' MD</p> <p>Projected MD at TD: 18416'</p>

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