



# ANTERO RESOURCES CORPORATION

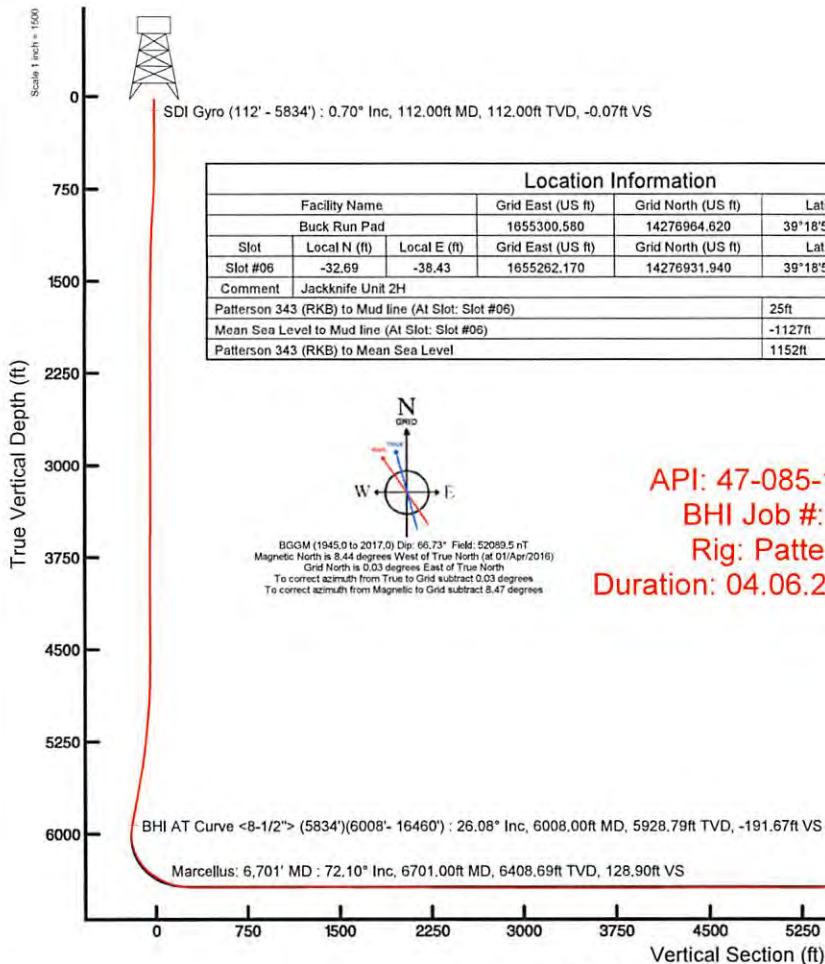
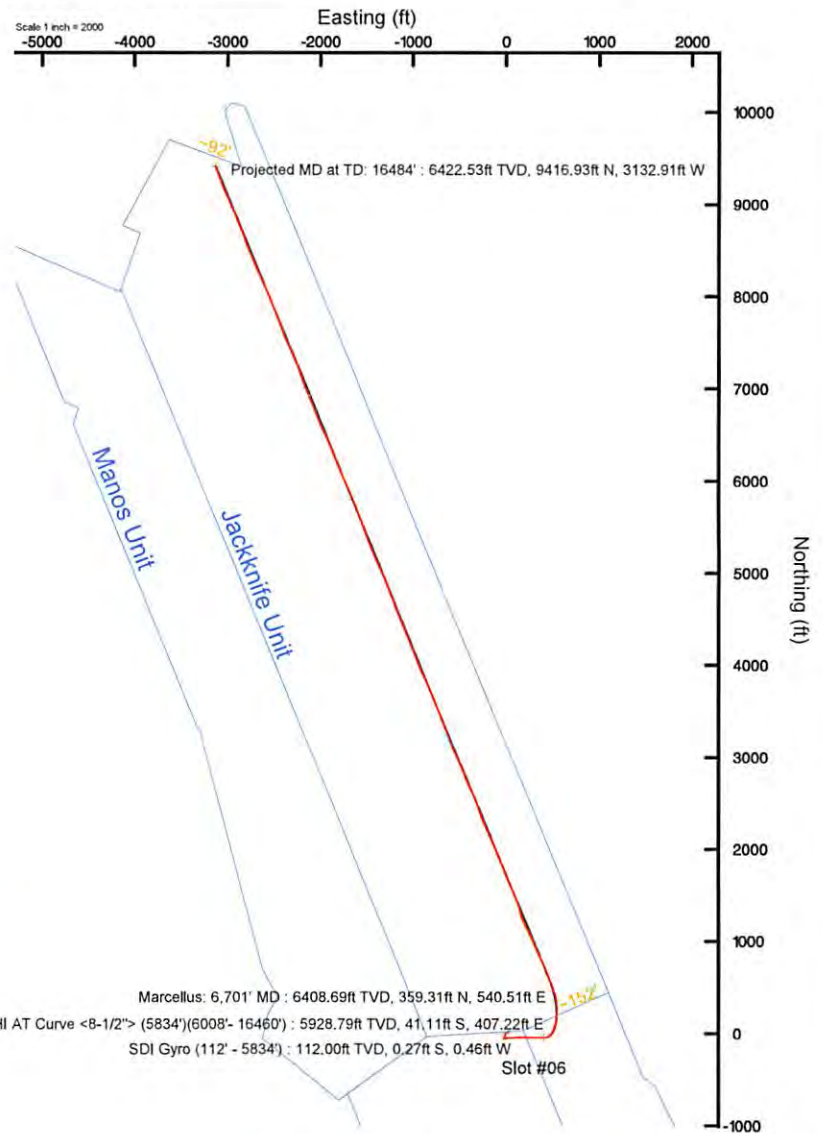
Location: Ritchie County, WV  
 Field: Ritchie  
 Facility: Buck Run Pad

Slot: Slot #06  
 Well: Jackknife Unit 2H  
 Wellbore: Jackknife Unit 2H PWB

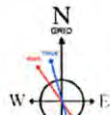


Plot reference wellpath is Jackknife Unit 2H PWP Rev-A.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to Patterson 343 (RKB)	* = Wellpath was transformed from a different geoid to datum
Measured depths are referenced to Patterson 343 (RKB)	North Reference: Grid north
Patterson 343 (RKB) to Mean Sea Level: 1152 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: Slot #06): -1127 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: harekuk on 2016-04-14
	Database: WA_MPL_EASTERNUS_Deft

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #06	Jackknife Unit 2H	Jackknife Unit 2H AWB	Jackknife Unit 2H AWP Proj: 16484'
Slot #06	Jackknife Unit 2H	Jackknife Unit 2H PWB	Jackknife Unit 2H PWP Rev-A.0



Location Information				
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Buck Run Pad	1655300.580	14276964.620	39°18'57.290"N	80°56'50.552"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
Slot #06	-32.69	-38.43	1655262.170	14276931.940
Comment	Jackknife Unit 2H			
Patterson 343 (RKB) to Mud line (At Slot: Slot #06)	25ft			
Mean Sea Level to Mud line (At Slot: Slot #06)	-1127ft			
Patterson 343 (RKB) to Mean Sea Level	1152ft			



BGGM (1945.0 to 2017.0) Dip: 66.73° Field: 52089.5 nT  
 Magnetic North is 8.44 degrees West of True North (at 01/Apr/2016)  
 Grid North is 0.03 degrees East of True North  
 To correct azimuth from True to Grid subtract 0.03 degrees  
 To correct azimuth from Magnetic to Grid subtract 8.47 degrees

API: 47-085-10179-0000  
 BHI Job #: 7885825  
 Rig: Patterson 343  
 Duration: 04.06.2016-04.12.2016

Azimuth 337.84° with reference 0.00 N, 0.00 E



# Actual Wellpath Report

Jackknife Unit 2H AWP Proj: 16484'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Ritchie County, WV	Well	Jackknife Unit 2H
Field	Ritchie	Wellbore	Jackknife Unit 2H AWB
Facility	Buck Run Pad		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Hareluk
Scale	0.999600	Report Generated	14/Apr/2016 at 16:52
Convergence at slot	0.04° East	Database/Source file	WA_MPL_EASTERNUS_Defn/Jackknife_Unit_2H_AWP_Proj_16484_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-32.69	-38.43	1655262.17	14276931.94	39°18'56.967"N	80°56'51.041"W
Facility Reference Pt			1655300.58	14276964.62	39°18'57.290"N	80°56'50.552"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Patterson 343 (RKB) to Facility Vertical Datum	25.00ft
Horizontal Reference Pt	Slot	Patterson 343 (RKB) to Mean Sea Level	1152.00ft
Vertical Reference Pt	Patterson 343 (RKB)	Patterson 343 (RKB) to Mud Line at Slot (Slot #06)	25.00ft
MD Reference Pt	Patterson 343 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	337.84°





# Actual Wellpath Report

Jackknife Unit 2H AWP Proj: 16484'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Ritchie County, WV	Well	Jackknife Unit 2H
Field	Ritchie	Wellbore	Jackknife Unit 2H AWP
Facility	Buck Run Pad		

WELLPATH DATA (359 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]	Comments
0.00†	0.000	239.940	0.00	0.00	0.00	0.00	1655262.17	14276931.94	39°18'56.967"N	80°56'51.041"W	0.00	0.000	0.00	
25.00	0.000	239.940	25.00	0.00	0.00	0.00	1655262.17	14276931.94	39°18'56.967"N	80°56'51.041"W	0.00	0.000	0.00	
112.00	0.700	239.940	112.00	-0.07	-0.27	-0.46	1655261.71	14276931.67	39°18'56.965"N	80°56'51.047"W	0.53	239.940	0.80	SDI Gyro (112' - 5834')
137.00	0.600	237.150	137.00	-0.12	-0.41	-0.70	1655261.47	14276931.53	39°18'56.963"N	80°56'51.050"W	0.81	239.492	0.42	
162.00	0.490	239.570	162.00	-0.16	-0.54	-0.90	1655261.27	14276931.40	39°18'56.962"N	80°56'51.053"W	1.05	239.209	0.45	
187.00	0.450	236.370	186.99	-0.19	-0.65	-1.08	1655261.09	14276931.29	39°18'56.961"N	80°56'51.055"W	1.26	239.018	0.19	
212.00	0.430	237.060	211.99	-0.23	-0.75	-1.24	1655260.93	14276931.19	39°18'56.960"N	80°56'51.057"W	1.45	238.712	0.08	
237.00	0.150	265.410	236.99	-0.24	-0.81	-1.35	1655260.82	14276931.13	39°18'56.959"N	80°56'51.058"W	1.57	239.149	1.23	
262.00	0.130	265.910	261.99	-0.22	-0.81	-1.41	1655260.76	14276931.13	39°18'56.959"N	80°56'51.059"W	1.63	240.109	0.08	
287.00	0.080	274.780	286.99	-0.20	-0.81	-1.46	1655260.71	14276931.13	39°18'56.959"N	80°56'51.060"W	1.67	240.874	0.21	
312.00	0.080	270.370	311.99	-0.19	-0.81	-1.49	1655260.68	14276931.13	39°18'56.959"N	80°56'51.060"W	1.70	241.493	0.02	
337.00	0.110	256.440	336.99	-0.18	-0.82	-1.53	1655260.64	14276931.12	39°18'56.959"N	80°56'51.061"W	1.74	241.975	0.15	
362.00	0.070	287.560	361.99	-0.16	-0.82	-1.57	1655260.60	14276931.12	39°18'56.959"N	80°56'51.061"W	1.77	242.523	0.25	
387.00	0.070	234.250	386.99	-0.16	-0.82	-1.60	1655260.57	14276931.12	39°18'56.959"N	80°56'51.062"W	1.80	242.797	0.25	
412.00	0.060	194.330	411.99	-0.17	-0.84	-1.61	1655260.56	14276931.10	39°18'56.959"N	80°56'51.062"W	1.82	242.417	0.18	
437.00	0.070	184.910	436.99	-0.20	-0.87	-1.62	1655260.55	14276931.07	39°18'56.959"N	80°56'51.062"W	1.84	241.711	0.06	
462.00	0.150	167.220	461.99	-0.24	-0.92	-1.61	1655260.56	14276931.02	39°18'56.958"N	80°56'51.062"W	1.85	240.342	0.34	
487.00	0.140	157.890	486.99	-0.30	-0.98	-1.59	1655260.58	14276930.96	39°18'56.957"N	80°56'51.061"W	1.87	238.453	0.10	
512.00	0.100	154.720	511.99	-0.36	-1.03	-1.57	1655260.60	14276930.91	39°18'56.957"N	80°56'51.061"W	1.88	236.871	0.16	
537.00	0.140	167.050	536.99	-0.41	-1.08	-1.56	1655260.62	14276930.87	39°18'56.957"N	80°56'51.061"W	1.89	235.348	0.19	
562.00	0.150	186.870	561.99	-0.47	-1.14	-1.55	1655260.62	14276930.80	39°18'56.956"N	80°56'51.061"W	1.92	233.773	0.20	
587.00	0.440	186.580	586.99	-0.58	-1.27	-1.57	1655260.60	14276930.68	39°18'56.955"N	80°56'51.061"W	2.01	231.090	1.16	
612.00	1.100	185.630	611.99	-0.88	-1.60	-1.60	1655260.57	14276930.34	39°18'56.951"N	80°56'51.062"W	2.26	225.047	2.64	
637.00	1.440	185.540	636.98	-1.37	-2.15	-1.66	1655260.51	14276929.79	39°18'56.946"N	80°56'51.062"W	2.71	217.592	1.36	
662.00	1.790	186.430	661.97	-1.99	-2.85	-1.73	1655260.44	14276929.09	39°18'56.939"N	80°56'51.063"W	3.34	211.244	1.40	
687.00	2.300	189.880	686.96	-2.76	-3.73	-1.86	1655260.31	14276928.21	39°18'56.930"N	80°56'51.065"W	4.17	206.478	2.10	
712.00	2.710	197.210	711.93	-3.64	-4.79	-2.12	1655260.05	14276927.15	39°18'56.920"N	80°56'51.068"W	5.24	203.870	2.08	
737.00	2.890	199.870	736.90	-4.56	-5.95	-2.51	1655259.66	14276925.99	39°18'56.908"N	80°56'51.073"W	6.46	202.872	0.89	
762.00	3.090	202.090	761.87	-5.51	-7.17	-2.98	1655259.19	14276924.78	39°18'56.896"N	80°56'51.079"W	7.76	202.560	0.92	
787.00	3.440	203.190	786.83	-6.52	-8.48	-3.53	1655258.65	14276923.46	39°18'56.883"N	80°56'51.086"W	9.18	202.577	1.42	





# Actual Wellpath Report

Jackknife Unit 2H AWP Proj: 16484  
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Operator	ANTERO RESOURCES CORPORATION
Area	Richie County, WV
Field	Richie
Facility	Buck Run Pad
Slot	Slot #06
Well	Jackknife Unit 2H
Wellbore	Jackknife Unit 2H AWB

WELLPATH DATA (359 stations)														
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Comments
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]
812.00	4.540	202.810	811.77	-7.75	-10.08	-4.21	1655257.97	14276921.86	39°18'56.868"N	80°56'51.095"W	10.92	202.640	4.40	
837.00	5.030	202.010	836.68	-9.24	-12.01	-5.00	1655257.17	14276919.93	39°18'56.848"N	80°56'51.105"W	13.01	202.600	1.98	
862.00	5.380	201.410	861.58	-10.87	-14.12	-5.84	1655256.33	14276917.83	39°18'56.828"N	80°56'51.116"W	15.28	202.466	1.42	
887.00	5.440	201.000	886.47	-12.59	-16.32	-6.69	1655255.48	14276915.63	39°18'56.806"N	80°56'51.126"W	17.63	202.298	0.29	
912.00	5.510	201.470	911.35	-14.32	-18.54	-7.55	1655254.62	14276913.41	39°18'56.784"N	80°56'51.137"W	20.02	202.171	0.33	
937.00	5.580	201.130	936.24	-16.07	-20.79	-8.43	1655253.74	14276911.16	39°18'56.762"N	80°56'51.149"W	22.43	202.077	0.31	
962.00	5.570	201.500	961.12	-17.84	-23.05	-9.31	1655252.86	14276908.90	39°18'56.739"N	80°56'51.160"W	24.86	202.003	0.15	
987.00	5.480	200.970	986.00	-19.58	-25.30	-10.19	1655251.99	14276906.65	39°18'56.717"N	80°56'51.171"W	27.27	201.935	0.41	
1012.00	5.240	200.900	1010.89	-21.29	-27.48	-11.02	1655251.15	14276904.47	39°18'56.696"N	80°56'51.182"W	29.60	201.856	0.96	
1037.00	4.930	200.360	1035.79	-22.92	-29.55	-11.80	1655250.37	14276902.40	39°18'56.675"N	80°56'51.192"W	31.82	201.772	1.25	
1062.00	4.630	200.980	1060.71	-24.44	-31.50	-12.54	1655249.64	14276900.45	39°18'56.656"N	80°56'51.201"W	33.90	201.703	1.22	
1087.00	4.360	200.470	1085.63	-25.88	-33.33	-13.23	1655248.94	14276898.62	39°18'56.638"N	80°56'51.210"W	35.86	201.650	1.09	
1112.00	3.990	200.500	1110.56	-27.22	-35.04	-13.87	1655248.31	14276896.92	39°18'56.621"N	80°56'51.218"W	37.68	201.594	1.48	
1137.00	3.820	201.170	1135.51	-28.46	-36.63	-14.47	1655247.70	14276895.33	39°18'56.605"N	80°56'51.226"W	39.38	201.561	0.70	
1162.00	3.600	201.440	1160.45	-29.64	-38.14	-15.06	1655247.12	14276893.82	39°18'56.590"N	80°56'51.233"W	41.00	201.448	0.88	
1187.00	3.250	201.440	1185.41	-30.72	-39.53	-15.60	1655246.57	14276892.43	39°18'56.577"N	80°56'51.240"W	42.49	201.542	1.40	
1212.00	2.840	201.830	1210.37	-31.68	-40.76	-16.09	1655246.08	14276891.20	39°18'56.564"N	80°56'51.246"W	43.82	201.545	1.64	
1237.00	2.620	203.380	1235.34	-32.53	-41.86	-16.55	1655245.63	14276890.10	39°18'56.554"N	80°56'51.252"W	45.01	201.572	0.93	
1262.00	2.530	203.830	1260.32	-33.31	-42.89	-17.00	1655245.18	14276889.07	39°18'56.543"N	80°56'51.258"W	46.14	201.621	0.37	
1287.00	2.200	203.840	1285.30	-34.03	-43.83	-17.42	1655244.76	14276888.12	39°18'56.534"N	80°56'51.263"W	47.17	201.670	1.32	
1312.00	2.020	203.450	1310.28	-34.67	-44.68	-17.79	1655244.39	14276887.28	39°18'56.526"N	80°56'51.268"W	48.09	201.708	0.72	
1337.00	1.940	203.770	1335.27	-35.27	-45.47	-18.13	1655244.05	14276886.49	39°18'56.518"N	80°56'51.272"W	48.95	201.741	0.32	
1362.00	1.700	202.280	1360.25	-35.83	-46.20	-18.44	1655243.73	14276885.76	39°18'56.511"N	80°56'51.276"W	49.74	201.762	0.98	
1387.00	1.520	205.740	1385.24	-36.32	-46.84	-18.73	1655243.45	14276885.12	39°18'56.504"N	80°56'51.280"W	50.45	201.792	0.82	
1412.00	1.290	210.540	1410.24	-36.71	-47.38	-19.01	1655243.16	14276884.58	39°18'56.499"N	80°56'51.283"W	51.05	201.866	1.03	
1437.00	1.180	215.290	1435.23	-37.02	-47.83	-19.31	1655242.87	14276884.13	39°18'56.494"N	80°56'51.287"W	51.58	201.980	0.60	
1462.00	1.060	220.670	1460.23	-37.26	-48.22	-19.61	1655242.57	14276883.74	39°18'56.491"N	80°56'51.291"W	52.05	202.126	0.64	
1487.00	0.880	223.280	1485.22	-37.45	-48.53	-19.89	1655242.29	14276883.43	39°18'56.488"N	80°56'51.295"W	52.45	202.282	0.74	
1512.00	0.880	219.460	1510.22	-37.62	-48.82	-20.14	1655242.04	14276883.14	39°18'56.485"N	80°56'51.298"W	52.81	202.418	0.23	
1537.00	0.850	218.820	1535.22	-37.80	-49.11	-20.38	1655241.80	14276882.84	39°18'56.482"N	80°56'51.301"W	53.18	202.536	0.13	





# Actual Wellpath Report

Jackknife Unit 2H AWP Proj: 16484'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION		Slot #06
Area	Ritchie County, WV	Well	Jackknife Unit 2H
Field	Ritchie	Wellbore	Jackknife Unit 2H AWP
Facility	Buck Run Pad		

WELLPATH DATA (359 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]	Comments
1562.00	0.840	217.640	1560.21	-37.98	-49.40	-20.61	1655241.57	14276882.56	39°18'56.479"N	80°56'51.304"W	53.53	202.642	0.08	
1587.00	0.800	219.820	1585.21	-38.16	-49.68	-20.83	1655241.35	14276882.28	39°18'56.476"N	80°56'51.307"W	53.87	202.748	0.20	
1612.00	0.900	224.120	1610.21	-38.32	-49.96	-21.08	1655241.10	14276882.00	39°18'56.473"N	80°56'51.310"W	54.22	202.877	0.47	
1637.00	0.780	226.020	1635.21	-38.46	-50.22	-21.34	1655240.84	14276881.74	39°18'56.471"N	80°56'51.313"W	54.56	203.022	0.49	
1662.00	0.730	223.180	1660.20	-38.59	-50.45	-21.57	1655240.61	14276881.51	39°18'56.469"N	80°56'51.316"W	54.87	203.149	0.25	
1687.00	0.620	230.000	1685.20	-38.70	-50.66	-21.78	1655240.40	14276881.31	39°18'56.467"N	80°56'51.319"W	55.14	203.269	0.54	
1712.00	0.540	223.630	1710.20	-38.79	-50.83	-21.97	1655240.21	14276881.13	39°18'56.465"N	80°56'51.321"W	55.37	203.374	0.41	
1737.00	0.310	219.740	1735.20	-38.87	-50.96	-22.09	1655240.09	14276881.00	39°18'56.464"N	80°56'51.323"W	55.55	203.436	0.93	
1762.00	0.220	204.020	1760.20	-38.93	-51.06	-22.16	1655240.02	14276880.90	39°18'56.463"N	80°56'51.323"W	55.66	203.456	0.46	
1787.00	0.260	213.730	1785.20	-39.00	-51.15	-22.21	1655239.97	14276880.81	39°18'56.462"N	80°56'51.324"W	55.76	203.467	0.23	
1812.00	0.400	211.980	1810.20	-39.08	-51.27	-22.28	1655239.89	14276880.69	39°18'56.461"N	80°56'51.325"W	55.91	203.491	0.56	
1837.00	0.220	216.430	1835.20	-39.16	-51.39	-22.36	1655239.82	14276880.58	39°18'56.459"N	80°56'51.326"W	56.04	203.515	0.73	
1862.00	0.320	213.120	1860.20	-39.22	-51.48	-22.43	1655239.75	14276880.48	39°18'56.458"N	80°56'51.327"W	56.15	203.538	0.40	
1887.00	0.330	220.660	1885.20	-39.29	-51.60	-22.51	1655239.67	14276880.37	39°18'56.457"N	80°56'51.328"W	56.29	203.571	0.18	
1912.00	0.250	224.430	1910.20	-39.35	-51.69	-22.60	1655239.58	14276880.27	39°18'56.456"N	80°56'51.329"W	56.41	203.612	0.33	
1937.00	0.340	216.600	1935.20	-39.41	-51.79	-22.68	1655239.50	14276880.17	39°18'56.455"N	80°56'51.330"W	56.54	203.649	0.39	
1962.00	0.230	223.270	1960.20	-39.47	-51.88	-22.76	1655239.42	14276880.08	39°18'56.454"N	80°56'51.331"W	56.65	203.683	0.46	
1987.00	0.170	228.690	1985.20	-39.50	-51.94	-22.82	1655239.36	14276880.02	39°18'56.454"N	80°56'51.332"W	56.74	203.716	0.25	
2012.00	0.100	222.470	2010.20	-39.52	-51.99	-22.86	1655239.32	14276879.98	39°18'56.453"N	80°56'51.332"W	56.79	203.738	0.29	
2037.00	0.220	209.520	2035.20	-39.56	-52.04	-22.90	1655239.28	14276879.92	39°18'56.453"N	80°56'51.333"W	56.86	203.750	0.50	
2062.00	0.140	209.100	2060.20	-39.61	-52.11	-22.94	1655239.24	14276879.85	39°18'56.452"N	80°56'51.333"W	56.94	203.758	0.32	
2087.00	0.120	212.170	2085.20	-39.64	-52.16	-22.97	1655239.21	14276879.80	39°18'56.452"N	80°56'51.334"W	56.99	203.765	0.08	
2112.00	0.170	218.240	2110.20	-39.68	-52.21	-23.00	1655239.18	14276879.75	39°18'56.451"N	80°56'51.334"W	57.05	203.778	0.21	
2137.00	0.150	234.620	2135.20	-39.70	-52.26	-23.05	1655239.13	14276879.70	39°18'56.451"N	80°56'51.335"W	57.12	203.804	0.20	
2162.00	0.100	243.940	2160.20	-39.71	-52.29	-23.10	1655239.08	14276879.67	39°18'56.450"N	80°56'51.335"W	57.16	203.835	0.22	
2187.00	0.110	251.960	2185.20	-39.71	-52.31	-23.14	1655239.04	14276879.66	39°18'56.450"N	80°56'51.336"W	57.20	203.867	0.07	
2212.00	0.060	288.660	2210.20	-39.70	-52.31	-23.18	1655239.00	14276879.65	39°18'56.450"N	80°56'51.336"W	57.21	203.898	0.29	
2237.00	0.120	233.640	2235.20	-39.70	-52.32	-23.21	1655238.97	14276879.64	39°18'56.450"N	80°56'51.337"W	57.24	203.924	0.39	
2262.00	0.120	221.740	2260.20	-39.72	-52.35	-23.25	1655238.93	14276879.61	39°18'56.450"N	80°56'51.337"W	57.29	203.945	0.10	
2287.00	0.070	210.910	2285.20	-39.74	-52.39	-23.27	1655238.90	14276879.57	39°18'56.449"N	80°56'51.338"W	57.33	203.955	0.21	





# Actual Wellpath Report

Jackknife Unit 2H AWP Proj: 16484'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Ritchie County, WV	Well	Jackknife Unit 2H
Field	Ritchie	Wellbore	Jackknife Unit 2H AWP
Facility	Buck Run Pad		

WELLPATH DATA (359 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]	Comments
2312.00	0.000	198.140	2310.20	-39.75	-52.40	-23.28	1655238.90	14276879.56	39°18'56.449"N	80°56'51.338"W	57.34	203.957	0.28	
2337.00	0.040	135.780	2335.20	-39.76	-52.41	-23.28	1655238.90	14276879.55	39°18'56.449"N	80°56'51.338"W	57.34	203.949	0.16	
2362.00	0.170	185.640	2360.20	-39.80	-52.45	-23.27	1655238.91	14276879.51	39°18'56.449"N	80°56'51.338"W	57.38	203.929	0.59	
2387.00	0.080	238.340	2385.20	-39.83	-52.50	-23.29	1655238.89	14276879.46	39°18'56.448"N	80°56'51.338"W	57.43	203.927	0.55	
2412.00	0.050	83.720	2410.20	-39.84	-52.50	-23.30	1655238.88	14276879.46	39°18'56.448"N	80°56'51.338"W	57.44	203.927	0.51	
2437.00	0.130	208.930	2435.20	-39.86	-52.53	-23.30	1655238.88	14276879.43	39°18'56.448"N	80°56'51.338"W	57.46	203.921	0.66	
2462.00	0.050	123.680	2460.20	-39.89	-52.56	-23.30	1655238.88	14276879.40	39°18'56.448"N	80°56'51.338"W	57.49	203.912	0.54	
2487.00	0.070	165.740	2485.20	-39.91	-52.58	-23.29	1655238.89	14276879.38	39°18'56.448"N	80°56'51.338"W	57.51	203.892	0.19	
2512.00	0.090	155.210	2510.20	-39.95	-52.61	-23.28	1655238.90	14276879.35	39°18'56.447"N	80°56'51.338"W	57.53	203.868	0.10	
2537.00	0.070	145.280	2535.20	-39.98	-52.64	-23.26	1655238.92	14276879.32	39°18'56.447"N	80°56'51.338"W	57.55	203.840	0.10	
2562.00	0.120	166.260	2560.20	-40.02	-52.68	-23.25	1655238.93	14276879.28	39°18'56.447"N	80°56'51.337"W	57.58	203.812	0.24	
2587.00	0.130	178.870	2585.20	-40.07	-52.73	-23.24	1655238.94	14276879.23	39°18'56.446"N	80°56'51.337"W	57.63	203.784	0.12	
2612.00	0.090	171.900	2610.20	-40.12	-52.78	-23.24	1655238.94	14276879.18	39°18'56.446"N	80°56'51.337"W	57.67	203.762	0.17	
2637.00	0.130	195.640	2635.19	-40.16	-52.83	-23.24	1655238.94	14276879.13	39°18'56.445"N	80°56'51.337"W	57.72	203.747	0.24	
2662.00	0.120	188.220	2660.19	-40.20	-52.88	-23.25	1655238.93	14276879.08	39°18'56.445"N	80°56'51.337"W	57.77	203.736	0.08	
2687.00	0.170	207.050	2685.19	-40.25	-52.94	-23.27	1655238.90	14276879.02	39°18'56.444"N	80°56'51.338"W	57.83	203.732	0.27	
2712.00	0.090	203.190	2710.19	-40.29	-52.99	-23.30	1655238.88	14276878.97	39°18'56.444"N	80°56'51.338"W	57.89	203.734	0.32	
2737.00	0.040	186.900	2735.19	-40.31	-53.02	-23.31	1655238.87	14276878.94	39°18'56.443"N	80°56'51.338"W	57.92	203.731	0.21	
2762.00	0.050	169.860	2760.19	-40.33	-53.04	-23.31	1655238.87	14276878.92	39°18'56.443"N	80°56'51.338"W	57.93	203.722	0.07	
2787.00	0.060	189.130	2785.19	-40.35	-53.06	-23.31	1655238.87	14276878.90	39°18'56.443"N	80°56'51.338"W	57.95	203.713	0.08	
2812.00	0.080	139.780	2810.19	-40.38	-53.09	-23.30	1655238.88	14276878.87	39°18'56.443"N	80°56'51.338"W	57.98	203.694	0.24	
2837.00	0.150	187.550	2835.19	-40.42	-53.13	-23.29	1655238.89	14276878.83	39°18'56.442"N	80°56'51.338"W	58.01	203.670	0.45	
2862.00	0.090	168.760	2860.19	-40.47	-53.19	-23.29	1655238.89	14276878.78	39°18'56.442"N	80°56'51.338"W	58.06	203.650	0.28	
2887.00	0.100	170.590	2885.19	-40.51	-53.23	-23.28	1655238.90	14276878.74	39°18'56.441"N	80°56'51.338"W	58.10	203.627	0.04	
2912.00	0.100	192.460	2910.19	-40.55	-53.27	-23.29	1655238.89	14276878.69	39°18'56.441"N	80°56'51.338"W	58.14	203.611	0.15	
2937.00	0.150	208.830	2935.19	-40.59	-53.32	-23.31	1655238.87	14276878.64	39°18'56.440"N	80°56'51.338"W	58.19	203.610	0.24	
2962.00	0.070	179.200	2960.19	-40.62	-53.36	-23.32	1655238.86	14276878.60	39°18'56.440"N	80°56'51.338"W	58.24	203.607	0.38	
2987.00	0.060	126.190	2985.19	-40.65	-53.39	-23.31	1655238.87	14276878.58	39°18'56.440"N	80°56'51.338"W	58.25	203.588	0.23	
3012.00	0.160	150.250	3010.19	-40.70	-53.42	-23.28	1655238.90	14276878.54	39°18'56.439"N	80°56'51.338"W	58.28	203.548	0.43	
3037.00	0.180	192.990	3035.19	-40.76	-53.49	-23.27	1655238.91	14276878.47	39°18'56.439"N	80°56'51.338"W	58.34	203.513	0.50	





# Actual Wellpath Report

Jackknife Unit 2H AWP Proj: 16484  
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Operator	ANTERO RESOURCES CORPORATION
Area	Richie County, WV
Field	Richie
Facility	Buck Run Pad
Slot	Slot #06
Jackknife Unit 2H	Jackknife Unit 2H
Wellbore	Jackknife Unit 2H AWB

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Comments
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]	[ft]	[ft]	[ft]	[°]	[ft/100ft]	
3062.00	0.130	173.550	3060.19	-40.82	-53.56	-23.28	1655238.90	14276878.40	39°18'56.438"N	80°56'51.338"W	58.40	203.492	0.29	
3087.00	0.190	198.280	3085.19	-40.88	-53.63	-23.29	1655238.89	14276878.33	39°18'56.437"N	80°56'51.338"W	58.47	203.475	0.36	
3112.00	0.040	233.060	3110.19	-40.91	-53.67	-23.31	1655238.87	14276878.29	39°18'56.437"N	80°56'51.338"W	58.51	203.475	0.64	
3137.00	0.160	192.860	3135.19	-40.95	-53.71	-23.32	1655238.86	14276878.25	39°18'56.436"N	80°56'51.338"W	58.56	203.473	0.53	
3162.00	0.090	220.940	3160.19	-40.98	-53.76	-23.34	1655238.83	14276878.20	39°18'56.436"N	80°56'51.339"W	58.61	203.473	0.36	
3187.00	0.140	202.660	3185.19	-41.01	-53.80	-23.37	1655238.81	14276878.16	39°18'56.436"N	80°56'51.339"W	58.66	203.478	0.25	
3212.00	0.020	20.240	3210.19	-41.03	-53.83	-23.38	1655238.80	14276878.14	39°18'56.435"N	80°56'51.339"W	58.68	203.478	0.64	
3237.00	0.060	121.920	3235.19	-41.04	-53.83	-23.37	1655238.81	14276878.13	39°18'56.435"N	80°56'51.339"W	58.68	203.465	0.27	
3262.00	0.040	101.160	3260.19	-41.05	-53.84	-23.35	1655238.83	14276878.12	39°18'56.435"N	80°56'51.339"W	58.68	203.444	0.11	
3287.00	0.100	170.760	3285.19	-41.08	-53.86	-23.34	1655238.84	14276878.10	39°18'56.435"N	80°56'51.338"W	58.70	203.425	0.38	
3312.00	0.220	190.970	3310.19	-41.14	-53.93	-23.34	1655238.84	14276878.03	39°18'56.434"N	80°56'51.339"W	58.76	203.403	0.52	
3337.00	0.100	156.400	3335.19	-41.20	-54.00	-23.34	1655238.84	14276877.96	39°18'56.434"N	80°56'51.339"W	58.83	203.377	0.60	
3362.00	0.080	167.360	3360.19	-41.24	-54.03	-23.33	1655238.85	14276877.93	39°18'56.433"N	80°56'51.338"W	58.85	203.352	0.11	
3387.00	0.160	200.090	3385.19	-41.29	-54.08	-23.34	1655238.84	14276877.88	39°18'56.433"N	80°56'51.339"W	58.90	203.340	0.41	
3412.00	0.110	197.820	3410.19	-41.33	-54.14	-23.36	1655238.82	14276877.82	39°18'56.432"N	80°56'51.339"W	58.96	203.336	0.20	
3437.00	0.140	195.790	3435.19	-41.37	-54.19	-23.37	1655238.81	14276877.77	39°18'56.432"N	80°56'51.339"W	59.02	203.330	0.12	
3462.00	0.060	180.410	3460.19	-41.41	-54.23	-23.38	1655238.80	14276877.73	39°18'56.431"N	80°56'51.339"W	59.06	203.321	0.33	
3487.00	0.060	154.240	3485.19	-41.43	-54.26	-23.37	1655238.80	14276877.70	39°18'56.431"N	80°56'51.339"W	59.08	203.306	0.11	
3512.00	0.160	166.870	3510.19	-41.48	-54.30	-23.36	1655238.82	14276877.66	39°18'56.431"N	80°56'51.339"W	59.12	203.277	0.41	
3537.00	0.080	159.050	3535.19	-41.53	-54.36	-23.35	1655238.83	14276877.61	39°18'56.430"N	80°56'51.339"W	59.16	203.245	0.33	
3562.00	0.150	139.400	3560.19	-41.58	-54.40	-23.32	1655238.86	14276877.57	39°18'56.430"N	80°56'51.338"W	59.18	203.205	0.32	
3587.00	0.130	175.840	3585.19	-41.64	-54.45	-23.30	1655238.88	14276877.51	39°18'56.429"N	80°56'51.338"W	59.22	203.164	0.36	
3612.00	0.120	141.590	3610.19	-41.69	-54.50	-23.28	1655238.90	14276877.46	39°18'56.429"N	80°56'51.338"W	59.26	203.129	0.30	
3637.00	0.190	174.730	3635.19	-41.76	-54.56	-23.26	1655238.92	14276877.40	39°18'56.428"N	80°56'51.338"W	59.31	203.087	0.44	
3662.00	0.150	172.500	3660.19	-41.83	-54.63	-23.25	1655238.93	14276877.33	39°18'56.427"N	80°56'51.337"W	59.37	203.052	0.16	
3687.00	0.110	136.410	3685.19	-41.88	-54.68	-23.23	1655238.95	14276877.28	39°18'56.427"N	80°56'51.337"W	59.41	203.015	0.36	
3712.00	0.140	153.900	3710.19	-41.94	-54.73	-23.20	1655238.98	14276877.23	39°18'56.426"N	80°56'51.337"W	59.44	202.972	0.19	
3737.00	0.090	161.570	3735.19	-41.99	-54.77	-23.18	1655239.00	14276877.19	39°18'56.426"N	80°56'51.337"W	59.48	202.937	0.21	
3762.00	0.090	199.230	3760.19	-42.02	-54.81	-23.18	1655239.00	14276877.15	39°18'56.426"N	80°56'51.337"W	59.51	202.923	0.23	
3787.00	0.150	200.950	3785.19	-42.06	-54.86	-23.20	1655238.98	14276877.10	39°18'56.425"N	80°56'51.337"W	59.56	202.921	0.24	





# Actual Wellpath Report

Jackknife Unit 2H AWP Proj: 16484  
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Operator	ANTERO RESOURCES CORPORATION
Area	Ritchie County, WV
Field	Ritchie
Facility	Buck Run Pad
Slot	Slot #06
Jackknife Unit 2H	Jackknife Unit 2H AWB

WELLPATH DATA (359 stations)														
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Comments
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[°]	[ft]	[ft]
3812.00	0.040	81.060	3810.19	-42.08	-54.89	-23.20	1655238.98	14276877.07	39°18'56.425"N	80°56'51.337"W	59.59	202.913	0.69	
3837.00	0.080	157.130	3835.19	-42.10	-54.90	-23.19	1655238.99	14276877.06	39°18'56.425"N	80°56'51.337"W	59.60	202.894	0.32	
3862.00	0.110	171.240	3860.19	-42.14	-54.94	-23.17	1655239.00	14276877.02	39°18'56.424"N	80°56'51.336"W	59.63	202.869	0.15	
3887.00	0.060	167.020	3885.19	-42.18	-54.98	-23.17	1655239.01	14276876.98	39°18'56.424"N	80°56'51.336"W	59.66	202.850	0.20	
3912.00	0.070	171.070	3910.19	-42.21	-55.01	-23.16	1655239.02	14276876.95	39°18'56.424"N	80°56'51.336"W	59.69	202.835	0.04	
3937.00	0.120	110.150	3935.19	-42.24	-55.03	-23.14	1655239.04	14276876.93	39°18'56.423"N	80°56'51.336"W	59.70	202.802	0.42	
3962.00	0.090	91.350	3960.19	-42.27	-55.04	-23.09	1655239.09	14276876.92	39°18'56.423"N	80°56'51.335"W	59.69	202.759	0.18	
3987.00	0.090	160.690	3985.19	-42.29	-55.06	-23.07	1655239.11	14276876.90	39°18'56.423"N	80°56'51.335"W	59.70	202.729	0.41	
4012.00	0.070	188.240	4010.19	-42.33	-55.09	-23.06	1655239.12	14276876.87	39°18'56.423"N	80°56'51.335"W	59.73	202.713	0.17	
4037.00	0.160	179.800	4035.19	-42.37	-55.14	-23.06	1655239.12	14276876.82	39°18'56.422"N	80°56'51.335"W	59.77	202.696	0.37	
4062.00	0.080	174.370	4060.19	-42.42	-55.20	-23.06	1655239.12	14276876.76	39°18'56.422"N	80°56'51.335"W	59.82	202.676	0.32	
4087.00	0.110	174.570	4085.19	-42.46	-55.24	-23.06	1655239.12	14276876.72	39°18'56.421"N	80°56'51.335"W	59.86	202.658	0.12	
4112.00	0.050	334.620	4110.19	-42.47	-55.25	-23.06	1655239.12	14276876.71	39°18'56.421"N	80°56'51.335"W	59.87	202.655	0.63	
4137.00	0.030	110.220	4135.19	-42.47	-55.25	-23.06	1655239.12	14276876.72	39°18'56.421"N	80°56'51.335"W	59.86	202.657	0.30	
4162.00	0.050	162.040	4160.19	-42.48	-55.26	-23.05	1655239.13	14276876.70	39°18'56.421"N	80°56'51.335"W	59.87	202.644	0.16	
4187.00	0.090	88.740	4185.19	-42.50	-55.27	-23.03	1655239.15	14276876.69	39°18'56.421"N	80°56'51.335"W	59.87	202.620	0.36	
4212.00	0.070	37.250	4210.19	-42.50	-55.26	-23.00	1655239.18	14276876.71	39°18'56.421"N	80°56'51.334"W	59.85	202.599	0.29	
4237.00	0.150	137.390	4235.19	-42.52	-55.27	-22.97	1655239.21	14276876.70	39°18'56.421"N	80°56'51.334"W	59.85	202.567	0.71	
4262.00	0.070	130.140	4260.19	-42.57	-55.30	-22.93	1655239.25	14276876.66	39°18'56.421"N	80°56'51.333"W	59.87	202.524	0.32	
4287.00	0.170	152.970	4285.19	-42.62	-55.34	-22.91	1655239.27	14276876.62	39°18'56.420"N	80°56'51.333"W	59.90	202.483	0.44	
4312.00	0.140	174.020	4310.19	-42.68	-55.41	-22.89	1655239.29	14276876.56	39°18'56.420"N	80°56'51.333"W	59.95	202.442	0.26	
4337.00	0.200	76.460	4335.19	-42.72	-55.43	-22.84	1655239.34	14276876.53	39°18'56.419"N	80°56'51.332"W	59.95	202.395	1.04	
4362.00	0.080	150.770	4360.19	-42.74	-55.43	-22.79	1655239.39	14276876.53	39°18'56.419"N	80°56'51.332"W	59.93	202.348	0.78	
4387.00	0.160	168.200	4385.19	-42.79	-55.48	-22.77	1655239.41	14276876.48	39°18'56.419"N	80°56'51.331"W	59.97	202.316	0.35	
4412.00	0.070	139.810	4410.19	-42.84	-55.53	-22.76	1655239.42	14276876.43	39°18'56.418"N	80°56'51.331"W	60.01	202.285	0.42	
4437.00	0.160	198.910	4435.19	-42.88	-55.57	-22.76	1655239.42	14276876.39	39°18'56.418"N	80°56'51.331"W	60.05	202.270	0.55	
4462.00	0.100	215.600	4460.19	-42.92	-55.62	-22.78	1655239.40	14276876.34	39°18'56.418"N	80°56'51.331"W	60.11	202.272	0.28	
4487.00	0.060	250.180	4485.19	-42.93	-55.65	-22.81	1655239.37	14276876.32	39°18'56.417"N	80°56'51.332"W	60.14	202.287	0.24	
4512.00	0.230	97.440	4510.19	-42.96	-55.66	-22.77	1655239.41	14276876.31	39°18'56.417"N	80°56'51.331"W	60.13	202.250	1.14	
4537.00	1.100	90.820	4535.19	-43.08	-55.67	-22.48	1655239.70	14276876.30	39°18'56.417"N	80°56'51.328"W	60.03	201.990	3.49	





# Actual Wellpath Report

Jackknife Unit 2H AWP Proj: 16484'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Ritchie County, WV	Well	Jackknife Unit 2H
Field	Ritchie	Wellbore	Jackknife Unit 2H AWB
Facility	Buck Run Pad		

WELLPATH DATA (359 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]	Comments
4562.00	2.440	86.470	4560.18	-43.34	-55.64	-21.71	1655240.47	14276876.33	39°18'56.417"N	80°56'51.318"W	59.72	201.315	5.38	
4587.00	3.630	81.260	4585.14	-43.69	-55.48	-20.39	1655241.78	14276876.48	39°18'56.419"N	80°56'51.301"W	59.11	200.182	4.88	
4612.00	4.780	79.050	4610.07	-44.08	-55.17	-18.59	1655243.59	14276876.80	39°18'56.422"N	80°56'51.278"W	58.21	198.623	4.64	
4637.00	5.790	77.290	4634.97	-44.49	-54.69	-16.34	1655245.84	14276877.27	39°18'56.427"N	80°56'51.249"W	57.08	196.632	4.09	
4662.00	6.800	74.990	4659.82	-44.88	-54.03	-13.68	1655248.50	14276877.93	39°18'56.433"N	80°56'51.216"W	55.73	194.206	4.16	
4687.00	7.250	71.720	4684.63	-45.17	-53.15	-10.75	1655251.42	14276878.81	39°18'56.442"N	80°56'51.178"W	54.23	191.434	2.41	
4712.00	7.410	70.620	4709.42	-45.36	-52.12	-7.73	1655254.44	14276879.84	39°18'56.452"N	80°56'51.140"W	52.69	188.437	0.85	
4737.00	7.610	70.180	4734.21	-45.50	-51.03	-4.65	1655257.52	14276880.94	39°18'56.463"N	80°56'51.101"W	51.24	185.210	0.83	
4762.00	7.950	71.470	4758.98	-45.68	-49.91	-1.46	1655260.71	14276882.05	39°18'56.474"N	80°56'51.060"W	49.94	181.671	1.53	
4787.00	8.420	73.060	4783.73	-45.95	-48.83	1.93	1655264.10	14276883.13	39°18'56.484"N	80°56'51.017"W	48.87	177.732	2.09	
4812.00	9.190	74.590	4808.43	-46.36	-47.77	5.61	1655267.78	14276884.19	39°18'56.495"N	80°56'50.970"W	48.10	173.303	3.22	
4837.00	9.990	76.520	4833.08	-46.92	-46.73	9.64	1655271.81	14276885.23	39°18'56.505"N	80°56'50.919"W	47.72	168.341	3.45	
4862.00	10.630	77.340	4857.68	-47.63	-45.72	14.00	1655276.17	14276886.24	39°18'56.515"N	80°56'50.863"W	47.82	162.974	2.63	
4887.00	10.930	79.140	4882.24	-48.47	-44.77	18.58	1655280.74	14276887.19	39°18'56.525"N	80°56'50.805"W	48.47	157.462	1.80	
4912.00	11.310	82.250	4906.77	-49.54	-43.99	23.34	1655285.50	14276887.97	39°18'56.532"N	80°56'50.745"W	49.80	152.057	2.84	
4937.00	11.630	85.800	4931.27	-50.93	-43.48	28.28	1655290.44	14276888.48	39°18'56.537"N	80°56'50.682"W	51.86	146.960	3.10	
4962.00	11.910	89.100	4955.74	-52.64	-43.25	33.37	1655295.53	14276888.71	39°18'56.539"N	80°56'50.617"W	54.63	142.349	2.92	
4987.00	12.200	91.530	4980.19	-54.64	-43.28	38.59	1655300.74	14276888.68	39°18'56.539"N	80°56'50.551"W	57.99	138.280	2.34	
5012.00	12.400	91.790	5004.62	-56.79	-43.44	43.91	1655306.07	14276888.52	39°18'56.538"N	80°56'50.483"W	61.77	134.687	0.83	
5037.00	12.570	91.630	5029.03	-58.98	-43.60	49.32	1655311.47	14276888.36	39°18'56.536"N	80°56'50.414"W	65.82	131.478	0.69	
5062.00	12.890	91.790	5053.41	-61.21	-43.76	54.82	1655316.97	14276888.20	39°18'56.534"N	80°56'50.344"W	70.15	128.599	1.29	
5087.00	13.300	91.110	5077.76	-63.48	-43.90	60.48	1655322.63	14276888.05	39°18'56.533"N	80°56'50.272"W	74.74	125.975	1.75	
5112.00	13.970	89.540	5102.06	-65.73	-43.94	66.38	1655328.52	14276888.02	39°18'56.533"N	80°56'50.197"W	79.60	123.501	3.06	
5137.00	14.860	87.410	5126.27	-67.92	-43.77	72.60	1655334.74	14276888.19	39°18'56.534"N	80°56'50.118"W	84.77	121.085	4.14	
5162.00	15.490	85.910	5150.40	-70.03	-43.38	79.13	1655341.27	14276888.57	39°18'56.538"N	80°56'50.035"W	90.24	118.734	2.97	
5187.00	16.200	85.220	5174.45	-72.10	-42.86	85.94	1655348.07	14276889.10	39°18'56.543"N	80°56'49.948"W	96.03	116.505	2.94	
5212.00	16.850	85.380	5198.42	-74.24	-42.27	93.02	1655355.15	14276889.68	39°18'56.549"N	80°56'49.858"W	102.18	114.439	2.61	
5237.00	17.490	86.010	5222.30	-76.50	-41.72	100.38	1655362.51	14276890.24	39°18'56.554"N	80°56'49.764"W	108.71	112.568	2.67	
5262.00	18.300	86.420	5246.09	-78.92	-41.21	108.05	1655370.17	14276890.74	39°18'56.559"N	80°56'49.667"W	115.64	110.879	3.28	
5287.00	18.610	86.390	5269.81	-81.44	-40.72	115.94	1655378.07	14276891.24	39°18'56.564"N	80°56'49.566"W	122.89	109.350	1.24	





# Actual Wellpath Report

Jackknife Unit 2H AWP Proj: 16484'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Ritchie County, WV	Well	Jackknife Unit 2H
Field	Ritchie	Wellbore	Jackknife Unit 2H AWP
Facility	Buck Run Pad		

WELLPATH DATA (359 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]	Comments
5312.00	19.280	86.900	5293.45	-84.06	-40.24	124.05	1655386.17	14276891.71	39°18'56.569"N	80°56'49.463"W	130.41	107.974	2.76	
5337.00	19.740	87.430	5317.02	-86.82	-39.83	132.39	1655394.50	14276892.13	39°18'56.573"N	80°56'49.357"W	138.25	106.745	1.97	
5362.00	20.270	87.790	5340.51	-89.72	-39.47	140.93	1655403.04	14276892.48	39°18'56.576"N	80°56'49.248"W	146.36	105.647	2.18	
5387.00	20.810	88.280	5363.92	-92.75	-39.17	149.70	1655411.81	14276892.78	39°18'56.579"N	80°56'49.137"W	154.74	104.665	2.27	
5412.00	21.320	88.520	5387.25	-95.90	-38.92	158.68	1655420.79	14276893.03	39°18'56.582"N	80°56'49.023"W	163.38	103.782	2.07	
5437.00	21.970	88.640	5410.48	-99.17	-38.69	167.90	1655430.00	14276893.26	39°18'56.584"N	80°56'48.905"W	172.30	102.978	2.61	
5462.00	22.650	89.260	5433.61	-102.59	-38.52	177.39	1655439.49	14276893.43	39°18'56.585"N	80°56'48.785"W	181.52	102.252	2.88	
5487.00	23.240	89.820	5456.63	-106.19	-38.44	187.13	1655449.23	14276893.51	39°18'56.586"N	80°56'48.661"W	191.04	101.609	2.52	
5512.00	23.690	90.490	5479.57	-109.97	-38.47	197.09	1655459.18	14276893.48	39°18'56.586"N	80°56'48.534"W	200.81	101.045	2.09	
5537.00	24.190	91.060	5502.42	-113.92	-38.61	207.23	1655469.32	14276893.35	39°18'56.584"N	80°56'48.405"W	210.80	100.554	2.20	
5562.00	24.050	91.350	5525.23	-117.97	-38.82	217.44	1655479.53	14276893.13	39°18'56.582"N	80°56'48.275"W	220.88	100.123	0.73	
5587.00	23.760	91.690	5548.09	-122.04	-39.09	227.57	1655489.65	14276892.86	39°18'56.579"N	80°56'48.146"W	230.90	99.747	1.28	
5612.00	23.690	91.680	5570.98	-126.11	-39.39	237.63	1655499.70	14276892.57	39°18'56.576"N	80°56'48.018"W	240.87	99.412	0.28	
5637.00	24.060	91.640	5593.84	-130.20	-39.68	247.74	1655509.81	14276892.27	39°18'56.574"N	80°56'47.889"W	250.90	99.100	1.48	
5662.00	24.520	91.800	5616.62	-134.36	-39.99	258.02	1655520.09	14276891.97	39°18'56.570"N	80°56'47.759"W	261.10	98.810	1.86	
5687.00	25.060	91.480	5639.32	-138.59	-40.29	268.50	1655530.56	14276891.67	39°18'56.567"N	80°56'47.625"W	271.50	98.534	2.23	
5712.00	25.070	91.200	5661.97	-142.81	-40.54	279.09	1655541.14	14276891.42	39°18'56.565"N	80°56'47.491"W	282.01	98.264	0.48	
5737.00	25.310	91.160	5684.59	-147.03	-40.76	289.72	1655551.78	14276891.20	39°18'56.563"N	80°56'47.355"W	292.58	98.007	0.96	
5762.00	25.450	90.820	5707.18	-151.24	-40.94	300.44	1655562.49	14276891.01	39°18'56.561"N	80°56'47.219"W	303.21	97.760	0.81	
5787.00	25.540	90.730	5729.74	-155.43	-41.09	311.20	1655573.24	14276890.87	39°18'56.559"N	80°56'47.082"W	313.90	97.521	0.39	
5812.00	25.570	90.560	5752.30	-159.61	-41.21	321.98	1655584.02	14276890.75	39°18'56.558"N	80°56'46.945"W	324.61	97.293	0.32	
5834.00	25.540	90.650	5772.14	-163.29	-41.31	331.47	1655593.51	14276890.65	39°18'56.557"N	80°56'46.824"W	334.04	97.104	0.22	
6008.00	26.080	89.060	5928.79	-191.67	-41.11	407.22	1655669.23	14276890.85	39°18'56.558"N	80°56'45.860"W	409.29	95.764	0.50	BHI AT Curve <8-1/2"> (5834')(6008'- 16460')
6043.00	25.310	87.010	5960.33	-196.91	-40.59	422.39	1655684.39	14276891.37	39°18'56.564"N	80°56'45.667"W	424.33	95.489	3.36	
6091.00	25.930	71.560	6003.66	-200.97	-36.73	442.61	1655704.60	14276895.22	39°18'56.602"N	80°56'45.410"W	444.13	94.744	13.94	
6138.00	28.130	55.090	6045.58	-199.19	-27.13	461.47	1655723.46	14276904.83	39°18'56.696"N	80°56'45.170"W	462.27	93.364	16.55	
6186.00	29.630	43.310	6087.64	-191.76	-12.00	478.91	1655740.89	14276919.94	39°18'56.846"N	80°56'44.948"W	479.06	91.436	12.24	
6232.00	31.630	34.230	6127.24	-180.35	6.26	493.50	1655755.47	14276938.19	39°18'57.026"N	80°56'44.762"W	493.54	89.274	10.94	
6280.00	34.840	26.600	6167.40	-164.34	28.94	506.73	1655768.70	14276960.87	39°18'57.250"N	80°56'44.594"W	507.56	86.732	10.97	
6327.00	39.000	20.240	6204.99	-144.55	54.84	517.87	1655779.83	14276986.76	39°18'57.506"N	80°56'44.452"W	520.76	83.955	12.01	





# Actual Wellpath Report

Jackknife Unit 2H AWP Proj: 16484'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Ritchie County, WV	Well	Jackknife Unit 2H
Field	Ritchie	Wellbore	Jackknife Unit 2H AWB
Facility	Buck Run Pad		

WELLPATH DATA (359 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]	Comments
6375.00	43.340	14.460	6241.12	-120.15	84.99	527.21	1655789.17	14277016.89	39°18'57.804"N	80°56'44.333"W	534.02	80.843	12.02	
6389.00†	44.864	12.810	6251.18	-112.25	94.45	529.51	1655791.47	14277026.36	39°18'57.898"N	80°56'44.303"W	537.87	79.886	13.63	Middlesex: 6.389' MD
6421.00	48.430	9.350	6273.14	-92.79	117.28	533.96	1655795.91	14277049.18	39°18'58.123"N	80°56'44.247"W	546.69	77.612	13.63	
6469.00	54.150	6.610	6303.15	-60.40	154.36	539.12	1655801.07	14277086.24	39°18'58.490"N	80°56'44.181"W	560.78	74.023	12.72	
6515.00	58.030	5.040	6328.81	-26.69	192.33	542.98	1655804.93	14277124.19	39°18'58.865"N	80°56'44.131"W	576.04	70.495	8.90	
6563.00	61.240	3.090	6353.07	10.46	233.63	545.90	1655807.85	14277165.48	39°18'59.273"N	80°56'44.094"W	593.80	66.830	7.55	
6571.00†	61.732	2.619	6356.89	16.83	240.65	546.25	1655808.20	14277172.50	39°18'59.342"N	80°56'44.089"W	596.92	66.224	8.04	Burkett: 6.571' MD
6610.00	64.150	0.380	6374.64	48.64	275.37	547.16	1655809.11	14277207.20	39°18'59.686"N	80°56'44.078"W	612.54	63.285	8.04	
6639.00†	66.535	357.274	6386.74	73.25	301.71	546.61	1655808.56	14277233.53	39°18'59.946"N	80°56'44.084"W	624.35	61.103	12.74	Tully: 6.639' MD
6658.00	68.130	355.300	6394.06	89.88	319.20	545.47	1655807.42	14277251.02	39°19'00.119"N	80°56'44.099"W	632.01	59.664	12.74	
6701.00†	72.099	350.646	6408.69	128.90	359.31	540.51	1655802.46	14277291.11	39°19'00.515"N	80°56'44.161"W	649.04	56.385	13.74	Marcellus: 6.701' MD
6704.00	72.380	350.330	6409.60	131.68	362.13	540.04	1655801.99	14277293.93	39°19'00.543"N	80°56'44.167"W	650.21	56.155	13.74	
6752.00	76.840	345.550	6422.35	177.22	407.36	530.35	1655792.31	14277339.13	39°19'00.990"N	80°56'44.290"W	668.74	52.473	13.36	
6799.00	82.000	341.490	6430.98	223.17	451.63	517.24	1655779.20	14277383.39	39°19'01.428"N	80°56'44.457"W	686.66	48.874	13.88	
6847.00	88.030	339.590	6435.15	270.91	496.69	501.31	1655763.28	14277428.43	39°19'01.873"N	80°56'44.659"W	705.71	45.265	13.17	
6893.00	89.750	339.370	6436.04	316.88	539.77	485.19	1655747.17	14277471.49	39°19'02.299"N	80°56'44.864"W	725.78	41.952	3.77	
6988.00	90.030	339.270	6436.22	411.85	628.64	451.64	1655713.63	14277560.33	39°19'03.178"N	80°56'45.290"W	774.06	35.695	0.31	
7082.00	90.090	336.150	6436.12	505.84	715.61	415.99	1655678.00	14277647.26	39°19'04.038"N	80°56'45.743"W	827.74	30.170	3.32	
7177.00	90.030	334.720	6436.02	600.75	802.01	376.50	1655638.52	14277733.63	39°19'04.892"N	80°56'46.245"W	885.99	25.148	1.51	
7271.00	90.060	335.620	6435.95	694.65	887.32	337.03	1655599.06	14277818.90	39°19'05.735"N	80°56'46.746"W	949.17	20.798	0.96	
7366.00	90.250	336.640	6435.69	789.61	974.19	298.59	1655560.64	14277905.74	39°19'06.594"N	80°56'47.235"W	1018.92	17.040	1.09	
7460.00	89.940	335.750	6435.53	883.57	1060.19	260.65	1655522.71	14277991.71	39°19'07.444"N	80°56'47.717"W	1091.76	13.812	1.00	
7555.00	89.970	332.520	6435.61	978.36	1145.67	219.21	1655481.29	14278077.14	39°19'08.289"N	80°56'48.244"W	1166.45	10.832	3.40	
7651.00	89.850	340.130	6435.76	1074.25	1233.52	180.69	1655442.78	14278164.97	39°19'09.158"N	80°56'48.733"W	1246.68	8.333	7.93	
7745.00	90.090	344.360	6435.81	1167.95	1323.02	152.03	1655414.14	14278254.43	39°19'10.043"N	80°56'49.097"W	1331.73	6.555	4.51	
7839.00	91.050	342.840	6434.87	1261.47	1413.19	125.49	1655387.61	14278344.56	39°19'10.934"N	80°56'49.434"W	1418.75	5.075	1.91	
7933.00	89.570	337.290	6434.37	1355.36	1501.52	93.46	1655355.59	14278432.86	39°19'11.807"N	80°56'49.841"W	1504.43	3.562	6.11	
8028.00	89.780	335.570	6434.90	1450.32	1588.59	55.47	1655317.62	14278519.89	39°19'12.668"N	80°56'50.324"W	1589.56	2.000	1.82	
8122.00	89.750	337.320	6435.29	1544.29	1674.75	17.91	1655280.07	14278606.02	39°19'13.520"N	80°56'50.801"W	1674.85	0.613	1.86	
8216.00	89.720	339.670	6435.72	1638.28	1762.20	-16.55	1655245.63	14278693.43	39°19'14.384"N	80°56'51.239"W	1762.28	359.462	2.50	





# Actual Wellpath Report

Jackknife Unit 2H AWP Proj: 16484'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Ritchie County, WV	Well	Jackknife Unit 2H
Field	Ritchie	Wellbore	Jackknife Unit 2H AWB
Facility	Buck Run Pad		

WELLPATH DATA (359 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]	Comments
8311.00	89.720	338.420	6436.19	1733.25	1850.92	-50.52	1655211.67	14278782.11	39°19'15.261"N	80°56'51.670"W	1851.61	358.436	1.32	
8405.00	89.750	337.280	6436.62	1827.25	1937.98	-85.96	1655176.24	14278869.14	39°19'16.122"N	80°56'52.121"W	1939.88	357.460	1.21	
8500.00	90.030	336.880	6436.81	1922.24	2025.48	-122.96	1655139.26	14278956.60	39°19'16.987"N	80°56'52.591"W	2029.20	356.526	0.51	
8594.00	89.780	336.570	6436.96	2016.22	2111.83	-160.10	1655102.13	14279042.92	39°19'17.841"N	80°56'53.063"W	2117.89	355.665	0.42	
8689.00	89.750	336.630	6437.35	2111.20	2199.01	-197.83	1655064.42	14279130.07	39°19'18.703"N	80°56'53.542"W	2207.89	354.859	0.07	
8784.00	89.690	336.320	6437.82	2206.17	2286.11	-235.75	1655026.51	14279217.14	39°19'19.564"N	80°56'54.024"W	2298.24	354.112	0.33	
8878.00	89.720	339.820	6438.30	2300.16	2373.30	-270.85	1654991.43	14279304.28	39°19'20.426"N	80°56'54.470"W	2388.70	353.489	3.72	
8973.00	89.910	342.950	6438.61	2394.96	2463.32	-301.17	1654961.12	14279394.27	39°19'21.315"N	80°56'54.855"W	2481.66	353.029	3.30	
9067.00	89.690	337.790	6438.94	2488.84	2551.82	-332.74	1654929.56	14279482.74	39°19'22.190"N	80°56'55.256"W	2573.42	352.571	5.49	
9161.00	90.060	333.340	6439.14	2582.74	2637.38	-371.62	1654890.70	14279568.26	39°19'23.036"N	80°56'55.750"W	2663.43	351.980	4.75	
9256.00	89.720	336.630	6439.32	2677.61	2723.46	-411.78	1654850.55	14279654.30	39°19'23.887"N	80°56'56.261"W	2754.41	351.402	3.48	
9351.00	89.720	340.020	6439.79	2772.59	2811.73	-446.86	1654815.49	14279742.54	39°19'24.760"N	80°56'56.707"W	2847.02	350.970	3.57	
9445.00	89.750	338.380	6440.22	2866.56	2899.60	-480.24	1654782.12	14279830.37	39°19'25.629"N	80°56'57.131"W	2939.10	350.596	1.74	
9540.00	89.720	335.710	6440.66	2961.54	2987.06	-517.29	1654745.09	14279917.80	39°19'26.493"N	80°56'57.601"W	3031.53	350.175	2.81	
9634.00	89.660	335.420	6441.17	3055.47	3072.64	-556.17	1654706.22	14280003.35	39°19'27.339"N	80°56'58.096"W	3122.57	349.740	0.32	
9729.00	89.750	339.280	6441.66	3150.44	3160.30	-592.75	1654669.66	14280090.97	39°19'28.206"N	80°56'58.560"W	3215.41	349.377	4.06	
9823.00	89.780	339.800	6442.04	3244.40	3248.37	-625.61	1654636.81	14280179.00	39°19'29.076"N	80°56'58.978"W	3308.06	349.099	0.55	
9918.00	90.150	340.000	6442.10	3339.34	3337.58	-658.25	1654604.18	14280268.18	39°19'29.958"N	80°56'59.393"W	3401.88	348.843	0.44	
10012.00	90.090	338.250	6441.91	3433.31	3425.41	-691.75	1654570.70	14280355.97	39°19'30.827"N	80°56'59.818"W	3494.56	348.583	1.86	
10107.00	90.220	338.570	6441.65	3528.31	3513.74	-726.70	1654535.76	14280444.27	39°19'31.700"N	80°57'00.263"W	3588.10	348.315	0.36	
10201.00	90.060	338.810	6441.42	3622.30	3601.32	-760.87	1654501.61	14280531.81	39°19'32.566"N	80°57'00.697"W	3680.81	348.070	0.31	
10296.00	90.150	338.550	6441.25	3717.28	3689.81	-795.40	1654467.08	14280620.27	39°19'33.440"N	80°57'01.136"W	3774.57	347.835	0.29	
10390.00	90.090	335.680	6441.05	3811.27	3776.41	-831.96	1654430.55	14280706.83	39°19'34.297"N	80°57'01.600"W	3866.96	347.576	3.05	
10484.00	90.090	333.730	6440.90	3905.12	3861.39	-872.12	1654390.40	14280791.78	39°19'35.137"N	80°57'02.111"W	3958.65	347.273	2.07	
10579.00	90.120	336.420	6440.73	4000.00	3947.53	-912.15	1654350.39	14280877.89	39°19'35.988"N	80°57'02.619"W	4051.55	346.989	2.83	
10673.00	90.120	338.430	6440.53	4093.99	4034.33	-948.23	1654314.32	14280964.64	39°19'36.846"N	80°57'03.078"W	4144.26	346.773	2.14	
10767.00	90.120	338.700	6440.33	4187.99	4121.82	-982.59	1654279.98	14281052.11	39°19'37.711"N	80°57'03.514"W	4237.32	346.592	0.29	
10862.00	90.150	338.300	6440.11	4282.98	4210.21	-1017.40	1654245.18	14281140.46	39°19'38.585"N	80°57'03.957"W	4331.40	346.415	0.42	
10956.00	90.090	337.640	6439.91	4376.98	4297.35	-1052.66	1654209.93	14281227.56	39°19'39.447"N	80°57'04.405"W	4424.40	346.236	0.71	
11051.00	90.090	338.120	6439.76	4471.98	4385.36	-1088.43	1654174.17	14281315.53	39°19'40.317"N	80°57'04.860"W	4518.41	346.061	0.51	





# Actual Wellpath Report

Jackknife Unit 2H AWP Proj: 16484'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Ritchie County, WV	Well	Jackknife Unit 2H
Field	Ritchie	Wellbore	Jackknife Unit 2H AWP
Facility	Buck Run Pad		

WELLPATH DATA (359 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]	Comments
11146.00	90.180	337.430	6439.54	4566.98	4473.30	-1124.37	1654138.25	14281403.44	39°19'41.186"N	80°57'05.316"W	4612.44	345.891	0.73	
11240.00	90.120	338.140	6439.29	4660.98	4560.32	-1159.91	1654102.73	14281490.43	39°19'42.046"N	80°57'05.768"W	4705.52	345.730	0.76	
11335.00	90.120	338.320	6439.09	4755.97	4648.54	-1195.14	1654067.51	14281578.62	39°19'42.918"N	80°57'06.216"W	4799.72	345.582	0.19	
11429.00	90.090	339.860	6438.92	4849.95	4736.35	-1228.69	1654033.98	14281666.39	39°19'43.786"N	80°57'06.642"W	4893.13	345.457	1.64	
11524.00	90.090	338.630	6438.77	4944.92	4825.18	-1262.35	1654000.32	14281755.18	39°19'44.665"N	80°57'07.070"W	4987.58	345.339	1.29	
11618.00	90.120	337.220	6438.60	5038.92	4912.29	-1297.68	1653965.01	14281842.26	39°19'45.526"N	80°57'07.519"W	5080.80	345.202	1.50	
11713.00	90.150	336.160	6438.38	5133.90	4999.53	-1335.27	1653927.44	14281929.47	39°19'46.388"N	80°57'07.997"W	5174.77	345.047	1.12	
11807.00	90.060	335.390	6438.20	5227.83	5085.26	-1373.84	1653888.88	14282015.15	39°19'47.236"N	80°57'08.487"W	5267.57	344.882	0.82	
11902.00	90.030	336.940	6438.13	5322.79	5172.15	-1412.23	1653850.51	14282102.01	39°19'48.095"N	80°57'08.975"W	5361.49	344.728	1.63	
11997.00	90.120	337.860	6438.00	5417.79	5259.85	-1448.74	1653814.02	14282189.68	39°19'48.962"N	80°57'09.439"W	5455.72	344.601	0.97	
12091.00	90.060	339.810	6437.86	5511.77	5347.51	-1482.67	1653780.09	14282277.30	39°19'49.828"N	80°57'09.870"W	5549.25	344.503	2.08	
12185.00	90.120	339.720	6437.71	5605.71	5435.71	-1515.19	1653747.59	14282365.46	39°19'50.700"N	80°57'10.283"W	5642.93	344.424	0.12	
12280.00	90.030	340.390	6437.59	5700.64	5525.01	-1547.59	1653715.20	14282454.73	39°19'51.583"N	80°57'10.695"W	5737.66	344.352	0.71	
12375.00	90.090	339.770	6437.49	5795.57	5614.32	-1579.96	1653682.85	14282544.01	39°19'52.466"N	80°57'11.106"W	5832.40	344.283	0.66	
12469.00	90.120	338.940	6437.31	5889.54	5702.29	-1613.10	1653649.72	14282631.94	39°19'53.335"N	80°57'11.527"W	5926.06	344.205	0.88	
12564.00	90.060	337.910	6437.16	5984.53	5790.63	-1648.03	1653614.80	14282720.24	39°19'54.209"N	80°57'11.971"W	6020.58	344.113	1.09	
12658.00	90.090	336.720	6437.04	6078.52	5877.36	-1684.28	1653578.56	14282806.94	39°19'55.066"N	80°57'12.432"W	6113.93	344.009	1.27	
12752.00	90.090	336.040	6436.89	6172.49	5963.48	-1721.95	1653540.91	14282893.03	39°19'55.917"N	80°57'12.911"W	6207.11	343.894	0.72	
12847.00	90.120	335.980	6436.72	6267.44	6050.27	-1760.57	1653502.31	14282979.78	39°19'56.776"N	80°57'13.402"W	6301.22	343.776	0.07	
12941.00	90.060	336.990	6436.57	6361.42	6136.47	-1798.08	1653464.82	14283065.94	39°19'57.628"N	80°57'13.879"W	6394.47	343.669	1.08	
13036.00	90.220	338.960	6436.34	6456.41	6224.53	-1833.70	1653429.21	14283153.97	39°19'58.498"N	80°57'14.331"W	6489.01	343.585	2.08	
13130.00	90.000	337.280	6436.16	6550.41	6311.75	-1868.73	1653394.19	14283241.16	39°19'59.360"N	80°57'14.777"W	6582.58	343.507	1.80	
13225.00	90.090	337.530	6436.08	6645.40	6399.46	-1905.23	1653357.71	14283328.83	39°20'00.228"N	80°57'15.241"W	6677.05	343.421	0.28	
13319.00	90.250	334.550	6435.81	6739.35	6485.35	-1943.40	1653319.55	14283414.69	39°20'01.077"N	80°57'15.726"W	6770.27	343.319	3.17	
13414.00	90.400	334.640	6435.27	6834.19	6571.16	-1984.15	1653278.81	14283500.46	39°20'01.925"N	80°57'16.244"W	6864.19	343.198	0.18	
13508.00	90.250	338.190	6434.73	6928.15	6657.30	-2021.76	1653241.22	14283586.56	39°20'02.776"N	80°57'16.722"W	6957.52	343.107	3.78	
13602.00	90.490	338.460	6434.13	7022.14	6744.65	-2056.48	1653206.52	14283673.88	39°20'03.640"N	80°57'17.163"W	7051.20	343.043	0.38	
13697.00	90.460	338.510	6433.34	7117.13	6833.03	-2091.32	1653171.70	14283762.22	39°20'04.514"N	80°57'17.606"W	7145.90	342.983	0.06	
13791.00	90.550	337.070	6432.51	7211.13	6920.05	-2126.84	1653136.18	14283849.21	39°20'05.374"N	80°57'18.058"W	7239.51	342.915	1.53	
13886.00	90.650	337.890	6431.52	7306.12	7007.80	-2163.23	1653099.81	14283936.92	39°20'06.241"N	80°57'18.520"W	7334.08	342.845	0.87	





# Actual Wellpath Report

Jackknife Unit 2H AWP Proj: 16484'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Ritchie County, WV	Well	Jackknife Unit 2H
Field	Ritchie	Wellbore	Jackknife Unit 2H AWB
Facility	Buck Run Pad		

WELLPATH DATA (359 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]	Comments
13980.00	90.460	341.400	6430.60	7400.05	7095.91	-2195.92	1653067.13	14284025.00	39°20'07.112"N	80°57'18.936"W	7427.92	342.805	3.74	
14075.00	90.460	340.620	6429.84	7494.90	7185.74	-2226.83	1653036.23	14284114.79	39°20'08.000"N	80°57'19.329"W	7522.87	342.782	0.82	
14169.00	90.430	337.390	6429.11	7588.87	7273.48	-2260.50	1653002.57	14284202.50	39°20'08.868"N	80°57'19.757"W	7616.65	342.735	3.44	
14264.00	90.550	337.060	6428.30	7683.86	7361.07	-2297.28	1652965.81	14284290.05	39°20'09.734"N	80°57'20.224"W	7711.22	342.668	0.37	
14358.00	90.340	336.330	6427.57	7777.84	7447.40	-2334.47	1652928.64	14284376.35	39°20'10.587"N	80°57'20.697"W	7804.71	342.596	0.81	
14453.00	90.460	335.810	6426.91	7872.79	7534.23	-2373.00	1652890.13	14284463.14	39°20'11.445"N	80°57'21.187"W	7899.10	342.518	0.56	
14548.00	90.520	340.070	6426.09	7967.76	7622.25	-2408.67	1652854.47	14284551.13	39°20'12.316"N	80°57'21.640"W	7993.77	342.463	4.48	
14642.00	90.460	340.370	6425.29	8061.68	7710.70	-2440.48	1652822.67	14284639.54	39°20'13.190"N	80°57'22.044"W	8087.70	342.437	0.33	
14737.00	90.400	338.480	6424.58	8156.63	7799.64	-2473.86	1652789.30	14284728.44	39°20'14.069"N	80°57'22.469"W	8182.56	342.402	1.99	
14831.00	90.550	338.550	6423.80	8250.63	7887.10	-2508.29	1652754.89	14284815.87	39°20'14.934"N	80°57'22.906"W	8276.34	342.358	0.18	
14926.00	90.490	337.890	6422.93	8345.62	7975.31	-2543.54	1652719.66	14284904.05	39°20'15.806"N	80°57'23.354"W	8371.09	342.311	0.70	
15020.00	90.800	336.550	6421.88	8439.60	8061.97	-2579.93	1652683.28	14284990.68	39°20'16.662"N	80°57'23.817"W	8464.72	342.255	1.46	
15115.00	90.340	336.640	6420.93	8534.58	8149.15	-2617.66	1652645.56	14285077.82	39°20'17.524"N	80°57'24.297"W	8559.26	342.192	0.49	
15210.00	89.910	335.280	6420.72	8629.52	8235.91	-2656.36	1652606.87	14285164.54	39°20'18.382"N	80°57'24.789"W	8653.70	342.124	1.50	
15304.00	89.910	337.070	6420.87	8723.48	8321.90	-2694.33	1652568.92	14285250.49	39°20'19.232"N	80°57'25.271"W	8747.19	342.060	1.90	
15398.00	90.030	336.680	6420.92	8817.47	8408.34	-2731.25	1652532.02	14285336.91	39°20'20.087"N	80°57'25.741"W	8840.81	342.005	0.43	
15493.00	89.820	338.110	6421.05	8912.46	8496.04	-2767.76	1652495.52	14285424.57	39°20'20.954"N	80°57'26.205"W	8935.51	341.956	1.52	
15587.00	90.180	340.360	6421.05	9006.43	8583.93	-2801.09	1652462.21	14285512.42	39°20'21.822"N	80°57'26.629"W	9029.40	341.928	2.42	
15682.00	89.940	340.290	6420.95	9101.34	8673.39	-2833.07	1652430.23	14285601.84	39°20'22.707"N	80°57'27.035"W	9124.36	341.911	0.26	
15776.00	89.910	337.950	6421.07	9195.31	8761.21	-2866.57	1652396.75	14285689.63	39°20'23.575"N	80°57'27.461"W	9218.24	341.882	2.49	
15870.00	89.910	337.560	6421.22	9289.31	8848.21	-2902.16	1652361.18	14285776.59	39°20'24.435"N	80°57'27.913"W	9312.00	341.841	0.41	
15965.00	89.880	336.620	6421.39	9384.30	8935.71	-2939.14	1652324.21	14285864.06	39°20'25.300"N	80°57'28.384"W	9406.68	341.793	0.99	
16059.00	89.880	336.100	6421.59	9478.27	9021.83	-2976.83	1652286.53	14285950.14	39°20'26.151"N	80°57'28.863"W	9500.26	341.739	0.55	
16153.00	89.910	336.060	6421.76	9572.22	9107.75	-3014.95	1652248.43	14286036.03	39°20'27.001"N	80°57'29.347"W	9593.80	341.684	0.05	
16248.00	89.780	338.530	6422.02	9667.21	9195.38	-3051.61	1652211.78	14286123.63	39°20'27.867"N	80°57'29.814"W	9688.52	341.641	2.60	
16342.00	89.940	340.150	6422.25	9761.17	9283.33	-3084.78	1652178.63	14286211.55	39°20'28.736"N	80°57'30.235"W	9782.44	341.619	1.73	
16437.00	89.850	340.250	6422.42	9856.09	9372.72	-3116.96	1652146.47	14286300.89	39°20'29.620"N	80°57'30.644"W	9877.41	341.605	0.14	
16460.00	89.880	340.120	6422.47	9879.07	9394.36	-3124.75	1652138.67	14286322.52	39°20'29.834"N	80°57'30.743"W	9900.40	341.602	0.58	
16484.00	89.880	340.120	6422.53	9903.05	9416.93	-3132.91	1652130.51	14286345.08	39°20'30.057"N	80°57'30.847"W	9924.40	341.598	0.00	Projected MD at TD: 16484'

HOLE & CASING SECTIONS - Ref Wellbore: Jackknife Unit 2H AWB Ref Wellpath: Jackknife Unit 2H AWP Proj: 16484'									
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 Open Hole	25.00	65.00	40.00	25.00	65.00	0.00	0.00	-0.06	-0.10
13.375in Open Hole	25.00	576.00	551.00	25.00	575.99	0.00	0.00	-1.19	-1.56
9.625in Open Hole	25.00	2520.00	2495.00	25.00	2518.20	0.00	0.00	-52.62	-23.27

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Jackknife Unit 2H POE Rev-1	6420.00	645.05	442.21	1655704.20	14277576.73	39°19'03.340"N	80°56'45.410"W	point



TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Jackknife Unit 2H BHL Rev2	6431.00	9405.10	-3125.28	1652138.15	14286333.27	39°20'29.940"N	80°57'30.750"W	point
Jackknife Unit 2H LP Rev2	6431.00	473.30	504.61	1655766.58	14277405.04	39°19'01.642"N	80°56'44.617"W	point
Jackknife Unit 2H BHL Rev-1	6444.00	9405.10	-3125.28	1652138.15	14286333.27	39°20'29.940"N	80°57'30.750"W	point

WELLPATH COMPOSITION - Ref Wellbore: Jackknife Unit 2H AWB Ref Wellpath: Jackknife Unit 2H AWP Proj: 16484'				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	5834.00	BHI Generic gyro - northseeking (Standard)	01_SDI Gyro (100' - 5822')	Jackknife Unit 2H AWB
5834.00	16460.00	NaviTrak (AT Curve Short Spaced)	02_BHI AT Curve <8-1/2"> (5834')(6008'- 16460')	Jackknife Unit 2H AWB
16460.00	16484.00	Blind Drilling (std)	Projection to bit	Jackknife Unit 2H AWB





# Actual Wellpath Report

Jackknife Unit 2H AWP Proj: 16484'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #06
Area	Ritchie County, WV	Well	Jackknife Unit 2H
Field	Ritchie	Wellbore	Jackknife Unit 2H AWB
Facility	Buck Run Pad		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
112.00	0.700	239.940	112.00	SDI Gyro (112' - 5834')	
6008.00	26.080	89.060	5928.79	BHI AT Curve <8-1/2"> (5834')(6008' - 16460')	
6389.00	44.864	12.810	6251.18	Middlesex: 6,389' MD	
6571.00	61.732	2.619	6356.89	Burkett: 6,571' MD	
6639.00	66.535	357.274	6386.74	Tully: 6,639' MD	
6701.00	72.099	350.646	6408.69	Marcellus: 6,701' MD	
16484.00	89.880	340.120	6422.53	Projected MD at TD: 16484'	

COMMENTS
Wellpath general comments API: 47-085-10179-0000 BHI Job #: 7885825 Rig: Patterson 343 Duration: 04.06.2016-04.12.2016 SDI Gyro (112' - 5834') BHI AT Curve <8-1/2"> (5834')(6008' - 16460') Middlesex: 6,389' MD Burkett: 6,571' MD Tully: 6,639' MD Marcellus: 6,701' MD Projected MD at TD: 16484'