

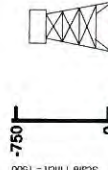
ANTERO RESOURCES CORPORATION

Location: Ritchie County, WV
 Field: Ritchie
 Facility: Mulvey Pad

Slot: Slot #03
 Well: Niley Unit 1H
 Wellbore: Niley Unit 1H PWB



API: 47-085-10250-0000
 BHI Job #: 8588758
 Rig: Frontier 22
 Duration: 06/05/2017-06/06/2017



Gyrodatta MS Gyro <8-3/4"> (100°-6188°) : 0.31° Inc, 109.50ft MD, 109.50ft TVD, -0.18ft VS

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Mulvey Pad	1668944.745	14279379.196	39°19'21.050"N	80°53'56.850"W
Slot	Local N (ft)	Local E (ft)	Grid North (US ft)	Grid East (US ft)
Slot #03	29.33	-7.11	1668937.642	14279408.518
Comment	Niley Unit 1H			
Frontier 22 (RKB) to Mud line (At Slot Slot #03)	24.5ft			
Mean Sea Level to Mud line (At Slot Slot #03)	-1029ft			
Frontier 22 (RKB) to Mean Sea Level	-1053.5ft			

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local E (ft)	Local N (ft)	DLS (°/100ft)	VS (ft)
Tie On	6313.50	36.070	348.680	6168.70	24.81	1018.87	0.00	-290.57
Proj. To Bottom	6396.50	39.650	344.310	6234.23	74.29	1006.91	5.39	-239.81
POE	6667.16	72.147	340.068	6384.00	284.24	937.73	12.07	-18.77
Landing Pt.	6815.99	90.000	340.052	6407.00	421.88	887.78	12.00	127.57
On Azimuth	6682.40	90.000	342.044	6407.00	484.69	866.22	3.00	193.97
BHL	14297.81	90.000	342.044	6407.00	7538.93	-1419.85	0.00	7609.38

Well Data

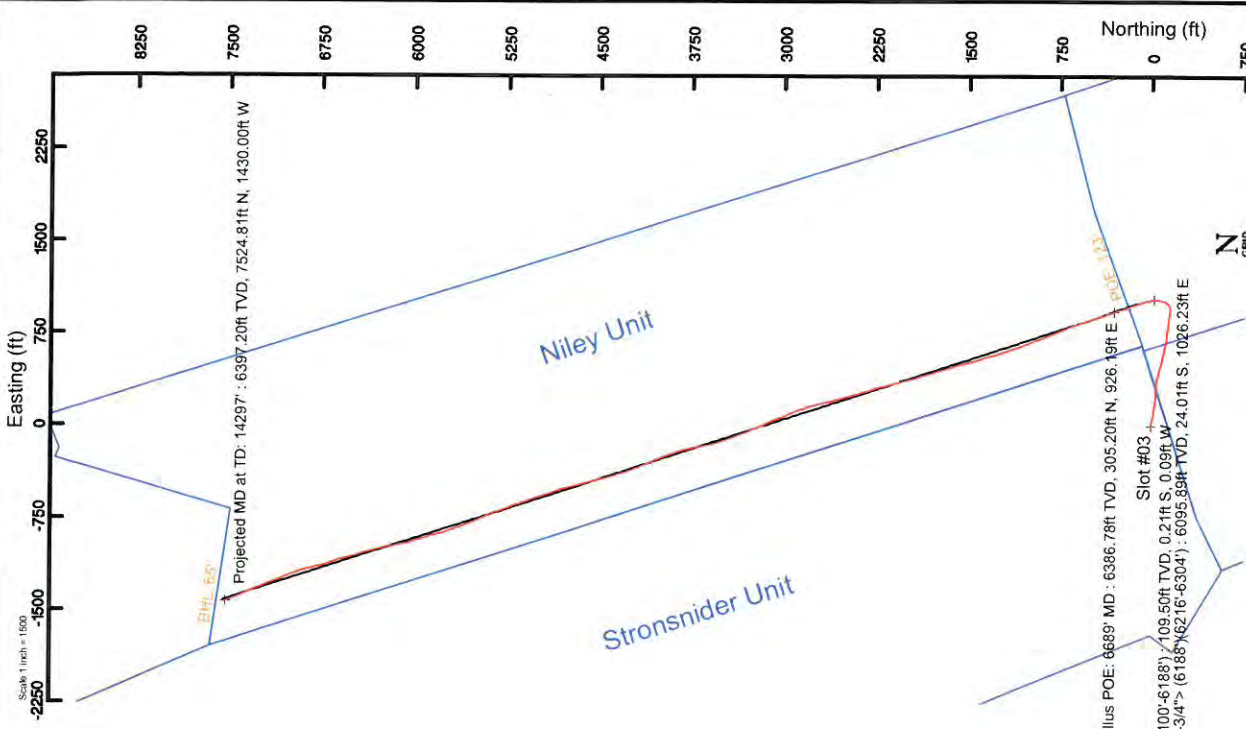
Slot	Well	Wellbore	Wellpath
Slot #03	Niley Unit 1H	Niley Unit 1H AWP	Niley Unit 1H AWP Proj: 14297
Slot #03	Niley Unit 1H	Niley Unit 1H PWB	Niley Unit 1H PWP Rev-A.0

Directional ONE MWD <8-3/4"> (6188°/6216°-6304°) : 32.20° Inc, 6225.50ft MD, 6095.89ft TVD, -339.28ft VS
 BHI AT Curve <8-1/2"> (6313.50°/6371°-14253°) : Middlesex: 6371° MD, 39.93° Inc, 6371.00ft MD, 6214.32ft TVD, -255.71ft VS
 Marcellus POE: 6689° MD : 74.38° Inc, 6689.00ft MD, 6386.78ft TVD, 4.74ft VS

Projected MD at TD: 14297' : 89.63° Inc, 14297.00ft MD, 6397.20ft TVD, 7599.08ft VS

Vertical Section (ft)

Azimuth 342.04° with reference 0.00 N, 0.00 E



User specified (HDMI) Dip: 66.60° Field: 52015 NT
 Magnetic North is 7.68 degrees West of True North (at 02/Jan/2017)
 The 0.00 degrees East of True North
 To correct azimuth from Magnetic to Grid subtract 7.74 degrees
 To correct azimuth from Magnetic to Grid subtract 7.74 degrees

Scale 1 inch = 1500



Actual Wellpath Report

Niley Unit 1H AWP Proj: 14297
Page 1 of 15



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Ritchie County, WV	Well	Niley Unit 1H
Field	Ritchie	Wellbore	Niley Unit 1H AWB
Facility	Mulway Pad		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Delaset
Scale	0.999601	Report Generated	08/Jun/2017 at 13:31
Convergence at slot	0.06° East	Database/Source file	WA_MPL_EasternUS_Defn/Niley_Unit_1H_AWP_Proj_14297_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	29.33	-7.11	1668937.64	14279408.52	39°19'21.340"N	80°53'56.940"W
Facility Reference Pt			1668944.75	14279379.20	39°19'21.050"N	80°53'56.850"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM		
Calculation method	Minimum curvature	Frontier 22 (RKB) to Facility Vertical Datum
Horizontal Reference Pt	Slot	24.50ft
Vertical Reference Pt	Frontier 22 (RKB)	1053.50ft
MD Reference Pt	Frontier 22 (RKB)	24.50ft
Field Vertical Reference	Mean Sea Level	N 0.00, E 0.00 ft
		342.04°



Actual Wellpath Report

Niley Unit 1H AWP Proj: 14297

Page 2 of 15



04/05/2019

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Ritchie County, WV	Well	Niley Unit 1H
Field	Ritchie	Wellbore	Niley Unit 1H AWB
Facility	Mulvay Pad		

WELLPATH DATA (344 stations) † = interpolated/extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
0.00H	0.000	202.010	0.00	0.00	0.00	0.00	1668937.64	14279408.52	39°19'21.340"N	80°53'56.940"W	0.00	0.000	0.00	0.00	0.00	
24.50	0.000	202.010	24.50	0.00	0.00	0.00	1668937.64	14279408.52	39°19'21.340"N	80°53'56.940"W	0.00	0.000	0.00	0.00	0.00	
109.50	0.310	202.010	109.50	-0.18	-0.21	-0.09	1668937.56	14279408.30	39°19'21.338"N	80°53'56.941"W	0.23	202.010	0.36	0.36	-185.87	Cyrodota MS Gyro --8-3/4"-- (100'-6.188')
134.50	0.290	203.090	134.50	-0.28	-0.33	-0.14	1668937.51	14279408.18	39°19'21.337"N	80°53'56.942"W	0.36	202.199	0.08	-0.08	4.32	
159.50	0.330	199.470	159.50	-0.38	-0.46	-0.19	1668937.46	14279408.06	39°19'21.335"N	80°53'56.942"W	0.50	201.917	0.18	0.16	-14.48	
184.50	0.320	195.970	184.50	-0.50	-0.60	-0.23	1668937.41	14279407.92	39°19'21.334"N	80°53'56.943"W	0.64	200.991	0.09	-0.04	-14.00	
209.50	0.280	194.530	209.50	-0.61	-0.72	-0.26	1668937.38	14279407.80	39°19'21.333"N	80°53'56.943"W	0.77	200.022	0.16	-0.16	-5.76	
259.50	0.100	178.210	259.50	-0.74	-0.88	-0.29	1668937.35	14279407.64	39°19'21.331"N	80°53'56.944"W	0.87	199.140	0.45	-0.44	-24.44	
284.50	0.100	194.210	284.50	-0.78	-0.92	-0.29	1668937.35	14279407.60	39°19'21.331"N	80°53'56.944"W	0.96	197.693	0.11	0.00	64.00	
309.50	0.070	213.630	309.50	-0.81	-0.95	-0.31	1668937.34	14279407.57	39°19'21.331"N	80°53'56.944"W	1.00	197.857	0.16	-0.12	77.68	
334.50	0.080	202.990	334.50	-0.83	-0.98	-0.32	1668937.32	14279407.54	39°19'21.330"N	80°53'56.944"W	1.03	198.174	0.07	0.04	-42.56	
359.50	0.110	176.820	359.50	-0.87	-1.02	-0.33	1668937.31	14279407.50	39°19'21.330"N	80°53'56.944"W	1.07	197.785	0.21	0.12	-104.68	
384.50	0.250	149.870	384.50	-0.95	-1.09	-0.30	1668937.34	14279407.43	39°19'21.329"N	80°53'56.944"W	1.13	195.303	0.64	0.56	-107.80	
409.50	0.340	147.120	409.50	-1.07	-1.20	-0.23	1668937.41	14279407.32	39°19'21.328"N	80°53'56.943"W	1.22	190.892	0.36	0.36	-11.00	
434.50	0.400	149.720	434.50	-1.23	-1.34	-0.15	1668937.49	14279407.18	39°19'21.327"N	80°53'56.942"W	1.35	186.263	0.25	0.24	10.40	
459.50	0.430	148.140	459.50	-1.41	-1.49	-0.05	1668937.59	14279407.02	39°19'21.325"N	80°53'56.941"W	1.50	182.050	0.13	0.12	-6.32	
484.50	0.430	148.970	484.50	-1.59	-1.65	0.04	1668937.69	14279406.86	39°19'21.324"N	80°53'56.939"W	1.66	178.463	0.02	0.00	3.32	
509.50	0.500	146.850	509.49	-1.78	-1.83	0.15	1668937.79	14279406.69	39°19'21.322"N	80°53'56.938"W	1.83	175.230	0.29	0.28	-8.48	
534.50	0.470	144.490	534.49	-1.99	-2.00	0.27	1668937.91	14279406.52	39°19'21.320"N	80°53'56.937"W	2.02	172.271	0.14	-0.12	-9.44	
559.50	0.490	142.100	559.49	-2.19	-2.17	0.40	1668938.04	14279406.35	39°19'21.319"N	80°53'56.935"W	2.21	169.632	0.11	0.08	-9.56	
584.50	0.700	119.880	584.49	-2.38	-2.32	0.57	1668938.21	14279406.20	39°19'21.317"N	80°53'56.933"W	2.38	166.162	0.88	0.32	-88.88	
609.50	0.700	101.220	609.49	-2.55	-2.41	0.83	1668938.47	14279406.04	39°19'21.316"N	80°53'56.929"W	2.55	161.018	0.97	0.52	-74.64	
634.50	1.350	82.090	634.49	-2.67	-2.40	1.27	1668938.91	14279406.12	39°19'21.316"N	80°53'56.924"W	2.71	152.087	2.90	2.60	-76.52	
659.50	1.590	81.010	659.48	-2.78	-2.30	1.90	1668939.54	14279406.22	39°19'21.317"N	80°53'56.916"W	2.99	140.440	0.93	0.92	-4.32	
684.50	2.260	82.400	684.46	-2.92	-2.18	2.73	1668940.37	14279406.34	39°19'21.318"N	80°53'56.905"W	3.50	128.638	2.73	2.72	5.60	
709.50	2.580	83.800	709.44	-3.12	-2.06	3.78	1668941.42	14279406.46	39°19'21.320"N	80°53'56.892"W	4.30	118.561	1.30	1.28	5.60	
734.50	3.380	86.010	734.41	-3.41	-1.94	5.07	1668942.71	14279406.57	39°19'21.321"N	80°53'56.875"W	5.43	110.974	3.23	3.20	8.84	
759.50	3.650	86.560	759.36	-3.79	-1.85	6.60	1668944.24	14279406.67	39°19'21.322"N	80°53'56.856"W	6.86	105.618	1.09	1.08	2.20	
784.50	4.060	88.040	784.30	-4.24	-1.77	8.28	1668945.92	14279406.76	39°19'21.322"N	80°53'56.835"W	8.47	102.049	1.69	1.64	5.92	



Actual Wellpath Report

Niley Unit 1H AWP Proj: 14297'

Page 3 of 15



04/05/2019

REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #03
Operator	ANTERO RESOURCES CORPORATION	Well	Niley Unit 1H
Area	Ritchie County, WV	Wellbore	Niley Unit 1H AWB
Field	Ritchie		
Facility	Mulvay Pad		

WELLPATH DATA (344 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
809.50	4.680	90.650	809.23	-4.80	-1.75	10.19	1668947.82	14279406.77	39°19'21.323"N	80°53'56.810"W	10.33	99.743	2.60	2.48	10.44	
834.50	5.030	91.630	834.14	-5.50	-1.79	12.30	1668949.94	14279406.73	39°19'21.322"N	80°53'56.783"W	12.43	98.287	1.44	1.40	3.92	
859.50	5.660	94.340	859.03	-6.33	-1.92	14.63	1668952.26	14279406.60	39°19'21.321"N	80°53'56.754"W	14.75	97.464	2.71	2.52	10.84	
884.50	5.810	94.590	883.91	-7.29	-2.11	17.12	1668954.75	14279406.41	39°19'21.319"N	80°53'56.722"W	17.25	97.030	0.61	0.60	1.00	
909.50	6.090	96.610	908.77	-8.32	-2.36	19.70	1668957.33	14279406.16	39°19'21.316"N	80°53'56.689"W	19.84	96.846	1.40	1.12	8.08	
934.50	6.220	98.040	933.63	-9.47	-2.71	22.35	1668959.99	14279405.81	39°19'21.313"N	80°53'56.656"W	22.52	96.904	0.80	0.52	5.72	
959.50	6.540	100.650	958.47	-10.74	-3.16	25.09	1668962.73	14279405.36	39°19'21.308"N	80°53'56.621"W	25.29	97.176	1.73	1.28	10.44	
984.50	6.890	102.670	983.30	-12.19	-3.75	27.96	1668965.59	14279404.77	39°19'21.303"N	80°53'56.584"W	28.21	97.643	1.69	1.40	8.08	
1009.50	7.120	103.560	1008.12	-13.76	-4.44	30.93	1668968.55	14279404.08	39°19'21.296"N	80°53'56.547"W	31.24	98.177	1.02	0.92	3.56	
1034.50	7.480	104.580	1032.91	-15.45	-5.22	34.01	1668971.63	14279403.30	39°19'21.288"N	80°53'56.507"W	34.40	98.721	1.53	1.44	4.08	
1059.50	7.640	104.330	1057.70	-17.21	-6.04	37.19	1668974.82	14279402.48	39°19'21.280"N	80°53'56.467"W	37.68	99.221	0.65	0.64	-1.00	
1084.50	8.280	105.260	1082.45	-19.09	-6.92	40.54	1668978.16	14279401.60	39°19'21.271"N	80°53'56.424"W	41.12	99.681	2.61	2.56	3.72	
1109.50	8.380	105.600	1107.19	-21.08	-7.89	44.03	1668981.55	14279400.64	39°19'21.262"N	80°53'56.380"W	44.73	100.155	0.45	0.40	1.36	
1134.50	8.610	105.830	1131.92	-23.13	-8.89	47.58	1668985.21	14279399.64	39°19'21.252"N	80°53'56.335"W	48.41	100.578	0.93	0.92	0.92	
1159.50	8.940	105.140	1156.62	-25.23	-9.90	51.26	1668988.88	14279398.82	39°19'21.242"N	80°53'56.288"W	52.21	100.936	1.39	1.32	-2.76	
1184.50	9.230	104.990	1181.31	-27.38	-10.93	55.07	1668992.69	14279397.99	39°19'21.231"N	80°53'56.239"W	56.15	101.226	1.16	1.16	-0.60	
1209.50	9.620	104.220	1205.97	-29.58	-11.96	59.03	1668996.65	14279396.56	39°19'21.221"N	80°53'56.189"W	60.23	101.455	1.84	1.56	-3.08	
1234.50	9.710	103.970	1230.62	-31.81	-12.98	63.10	1669000.72	14279395.54	39°19'21.211"N	80°53'56.137"W	64.43	101.627	0.40	0.36	-1.00	
1259.50	10.070	102.790	1255.25	-34.04	-13.98	67.28	1669004.90	14279394.55	39°19'21.201"N	80°53'56.084"W	68.72	101.736	1.65	1.44	-4.72	
1284.50	10.160	102.810	1279.96	-36.29	-14.95	71.56	1669009.18	14279393.57	39°19'21.191"N	80°53'56.030"W	73.11	101.800	0.36	0.36	0.08	
1309.50	10.380	101.100	1304.46	-38.51	-15.87	75.92	1669013.53	14279392.65	39°19'21.182"N	80°53'55.974"W	77.56	101.808	1.50	0.88	-6.84	
1334.50	10.730	99.900	1329.03	-40.69	-16.71	80.43	1669018.04	14279391.82	39°19'21.174"N	80°53'55.917"W	82.14	101.734	1.65	1.40	-4.80	
1359.50	11.200	98.560	1353.58	-42.86	-17.47	85.12	1669022.73	14279391.06	39°19'21.166"N	80°53'55.857"W	86.89	101.597	2.14	1.88	-5.36	
1384.50	11.680	97.040	1378.08	-45.02	-18.14	90.03	1669027.64	14279390.39	39°19'21.160"N	80°53'55.795"W	91.84	101.391	2.27	1.92	-6.08	
1409.50	11.820	96.620	1402.56	-47.15	-18.74	95.09	1669032.69	14279389.78	39°19'21.154"N	80°53'55.730"W	96.92	101.152	0.66	0.56	-1.68	
1434.50	11.810	96.900	1427.03	-49.29	-19.35	100.17	1669037.77	14279389.18	39°19'21.148"N	80°53'55.666"W	102.02	100.931	0.23	-0.04	1.12	
1459.50	11.860	96.990	1451.50	-51.45	-19.97	105.26	1669042.86	14279388.56	39°19'21.141"N	80°53'55.601"W	107.14	100.741	0.21	0.20	0.36	
1484.50	11.910	97.050	1475.96	-53.63	-20.60	110.37	1669047.97	14279387.93	39°19'21.135"N	80°53'55.536"W	112.28	100.570	0.21	0.20	0.24	
1509.50	11.950	96.990	1500.42	-55.81	-21.23	115.50	1669053.09	14279387.30	39°19'21.129"N	80°53'55.471"W	117.43	100.414	0.17	0.16	-0.24	
1534.50	11.930	96.750	1524.88	-57.98	-21.85	120.63	1669058.23	14279386.68	39°19'21.123"N	80°53'55.405"W	122.60	100.265	0.21	-0.08	-0.98	



Actual Wellpath Report

Niley Unit 1H AWP Proj: 14297'

Page 4 of 15



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Ritchie County, WV	Well	Niley Unit 1H
Field	Ritchie	Wellbore	Niley Unit 1H AWB
Facility	Mulvay Pad		

WELLPATH DATA (344 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
1559.50	11.720	97.230	1549.35	-60.14	-22.47	125.72	1669063.31	14279386.06	39°19'21.117"N	80°53'55.341"W	127.71	100.133	0.93	-0.84	1.92	
1584.50	11.630	97.400	1573.83	-62.30	-23.11	130.74	1669068.33	14279385.41	39°19'21.110"N	80°53'55.277"W	132.76	100.026	0.39	-0.36	0.68	
1609.50	11.220	97.070	1598.34	-64.41	-23.74	135.65	1669073.24	14279384.79	39°19'21.104"N	80°53'55.214"W	137.71	99.926	1.66	-1.64	-1.32	
1634.50	11.190	96.490	1622.86	-66.44	-24.31	140.47	1669078.06	14279384.22	39°19'21.098"N	80°53'55.153"W	142.56	99.819	0.47	-0.12	-2.32	
1659.50	11.170	97.360	1647.39	-68.48	-24.90	145.29	1669082.87	14279383.63	39°19'21.092"N	80°53'55.092"W	147.40	99.724	0.68	-0.08	3.48	
1684.50	11.210	97.360	1671.91	-70.56	-25.52	150.10	1669087.68	14279383.01	39°19'21.086"N	80°53'55.030"W	152.25	99.648	0.16	0.16	0.00	
1709.50	11.280	97.700	1696.43	-72.65	-26.16	154.93	1669092.51	14279382.37	39°19'21.080"N	80°53'54.969"W	157.12	99.583	0.39	0.28	1.36	
1734.50	11.760	97.840	1720.93	-74.82	-26.83	159.88	1669097.45	14279381.70	39°19'21.073"N	80°53'54.906"W	162.11	99.527	1.92	1.92	0.56	
1759.50	12.070	97.660	1745.39	-77.06	-27.53	164.99	1669102.57	14279381.00	39°19'21.066"N	80°53'54.841"W	167.27	99.472	1.25	1.24	-0.72	
1784.50	12.100	98.370	1769.83	-79.35	-28.26	170.17	1669107.75	14279380.27	39°19'21.059"N	80°53'54.775"W	172.50	99.428	0.61	0.12	2.84	
1809.50	12.090	98.490	1794.28	-81.68	-29.02	175.36	1669112.93	14279379.50	39°19'21.051"N	80°53'54.709"W	177.74	99.388	0.11	-0.04	0.48	
1834.50	11.830	98.250	1818.74	-83.98	-29.78	180.48	1669118.05	14279378.75	39°19'21.044"N	80°53'54.644"W	182.92	99.369	1.06	-1.04	-0.98	
1859.50	11.880	97.900	1843.20	-86.23	-30.50	185.57	1669123.13	14279378.03	39°19'21.036"N	80°53'54.579"W	188.06	99.334	0.35	0.20	-1.40	
1884.50	11.870	97.530	1867.67	-88.46	-31.19	190.66	1669128.23	14279377.34	39°19'21.030"N	80°53'54.514"W	193.20	99.291	0.31	-0.04	-1.48	
1909.50	11.940	97.780	1892.13	-90.69	-31.88	195.78	1669133.34	14279376.65	39°19'21.023"N	80°53'54.449"W	198.35	99.248	0.35	0.28	1.00	
1934.50	12.100	97.450	1916.58	-92.94	-32.57	200.94	1669138.50	14279375.96	39°19'21.016"N	80°53'54.384"W	203.56	99.207	0.70	0.64	-1.32	
1959.50	12.430	97.420	1941.01	-95.22	-33.26	206.20	1669143.76	14279375.28	39°19'21.009"N	80°53'54.317"W	208.87	99.161	1.32	1.32	-0.12	
1984.50	12.520	97.820	1965.42	-97.55	-33.97	211.55	1669149.11	14279374.56	39°19'21.002"N	80°53'54.249"W	214.26	99.123	0.50	0.36	1.60	
2009.50	12.600	97.120	1989.82	-99.88	-34.68	216.94	1669154.50	14279373.85	39°19'20.995"N	80°53'54.180"W	219.70	99.082	0.69	0.32	-2.80	
2034.50	12.620	97.390	2014.22	-102.21	-35.37	222.36	1669159.91	14279373.17	39°19'20.988"N	80°53'54.111"W	225.15	99.037	0.25	0.08	1.08	
2059.50	12.670	97.750	2038.61	-104.57	-36.09	227.78	1669165.33	14279372.44	39°19'20.981"N	80°53'54.042"W	230.62	99.003	0.37	0.20	1.44	
2084.50	12.560	97.030	2063.01	-106.91	-36.79	233.20	1669170.75	14279371.74	39°19'20.974"N	80°53'53.973"W	236.08	98.965	0.77	-0.44	-2.88	
2109.50	12.320	96.460	2087.42	-109.16	-37.42	238.55	1669176.09	14279371.11	39°19'20.967"N	80°53'53.905"W	241.46	98.916	1.08	-0.96	-2.28	
2134.50	11.800	95.380	2111.87	-111.27	-37.96	243.74	1669181.29	14279370.57	39°19'20.962"N	80°53'53.836"W	246.68	98.853	2.27	-2.08	-4.32	
2159.50	11.610	95.130	2136.35	-113.27	-38.43	248.79	1669186.33	14279370.11	39°19'20.957"N	80°53'53.775"W	251.74	98.780	0.79	-0.76	-1.00	
2184.50	11.070	93.260	2160.86	-115.13	-38.79	253.69	1669191.23	14279369.74	39°19'20.954"N	80°53'53.712"W	256.64	98.693	2.61	-2.16	-7.48	
2209.50	10.940	92.470	2185.40	-116.82	-39.03	258.46	1669196.00	14279369.51	39°19'20.951"N	80°53'53.652"W	261.39	98.587	0.80	-0.52	-3.16	
2234.50	10.370	90.990	2209.97	-118.38	-39.17	263.08	1669200.62	14279369.36	39°19'20.950"N	80°53'53.593"W	265.98	98.468	2.53	-2.28	-5.92	
2259.50	10.330	90.730	2234.57	-119.83	-39.24	267.57	1669205.11	14279369.30	39°19'20.949"N	80°53'53.536"W	270.43	98.342	0.25	-0.16	-1.04	
2284.50	10.330	90.190	2259.16	-121.25	-39.27	272.05	1669209.59	14279369.26	39°19'20.949"N	80°53'53.479"W	274.87	98.214	0.39	0.00	-2.16	



Actual Wellpath Report

Niley Unit 1H AWP Proj: 14297'

Page 5 of 15



REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #03
ANTERO RESOURCES CORPORATION	Well	Niley Unit 1H
Area	Wellbore	Niley Unit 1H AWB
Field		
Facility		

WELLPATH DATA (344 stations)

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (°/100ft)	Comments
2309.50	10.380	89.560	2283.75	-122.62	-39.26	276.55	1669214.08	14279369.27	39°19'20.949"N	80°53'53.422"W	279.32	98.081	0.50	0.20	-2.52	
2334.50	10.390	90.040	2308.34	-124.00	-39.25	281.05	1669218.58	14279369.29	39°19'20.949"N	80°53'53.364"W	283.78	97.949	0.35	0.04	1.92	
2359.50	10.810	92.890	2332.92	-125.53	-39.37	285.65	1669223.18	14279369.17	39°19'20.948"N	80°53'53.306"W	288.35	97.847	2.69	1.68	11.40	
2384.50	10.950	92.930	2357.47	-127.21	-39.61	290.36	1669227.89	14279368.93	39°19'20.945"N	80°53'53.246"W	293.05	97.677	0.56	0.56	0.16	
2409.50	10.950	92.630	2382.01	-128.89	-39.84	295.11	1669232.63	14279368.70	39°19'20.943"N	80°53'53.186"W	297.78	97.688	0.23	0.00	-1.20	
2434.50	10.790	92.400	2406.56	-130.54	-40.04	299.82	1669237.34	14279368.49	39°19'20.941"N	80°53'53.126"W	302.48	97.607	0.66	-0.64	-0.92	
2459.50	10.440	92.320	2431.14	-132.14	-40.23	304.42	1669241.94	14279368.30	39°19'20.939"N	80°53'53.067"W	307.06	97.529	1.40	-1.40	-0.32	
2484.50	10.350	92.300	2455.73	-133.69	-40.40	308.92	1669246.44	14279368.13	39°19'20.937"N	80°53'53.010"W	311.56	97.451	0.42	-0.36	-1.16	
2509.50	10.210	91.690	2480.32	-135.21	-40.55	313.38	1669250.90	14279367.99	39°19'20.936"N	80°53'52.953"W	316.00	97.373	0.61	-0.56	-1.36	
2534.50	9.890	91.580	2504.94	-136.67	-40.67	317.74	1669255.26	14279367.86	39°19'20.934"N	80°53'52.897"W	320.34	97.295	1.28	-1.28	-0.44	
2559.50	9.870	91.500	2529.57	-138.10	-40.79	322.03	1669259.55	14279367.75	39°19'20.933"N	80°53'52.843"W	324.61	97.219	0.10	-0.08	-0.32	
2584.50	9.590	90.010	2554.21	-139.46	-40.85	326.26	1669263.77	14279367.69	39°19'20.933"N	80°53'52.789"W	328.80	97.136	1.51	-1.12	-0.96	
2609.50	9.490	89.490	2578.86	-140.72	-40.83	330.40	1669267.91	14279367.71	39°19'20.933"N	80°53'52.736"W	332.91	97.044	0.53	-0.40	-2.08	
2634.50	9.180	89.200	2603.53	-141.92	-40.78	334.46	1669271.96	14279367.75	39°19'20.933"N	80°53'52.685"W	336.93	96.952	1.25	-1.24	-1.16	
2659.50	9.060	88.910	2628.22	-143.08	-40.72	338.42	1669275.92	14279367.82	39°19'20.934"N	80°53'52.634"W	340.86	96.860	0.51	-0.48	-1.16	
2684.50	8.980	88.380	2652.91	-144.20	-40.62	342.34	1669279.84	14279367.91	39°19'20.935"N	80°53'52.585"W	344.74	96.767	0.46	-0.32	-2.12	
2709.50	9.080	88.250	2677.60	-145.30	-40.51	346.26	1669283.76	14279368.03	39°19'20.936"N	80°53'52.535"W	348.62	96.673	0.41	0.40	-0.52	
2734.50	9.840	93.350	2702.26	-146.63	-40.57	350.36	1669287.88	14279367.96	39°19'20.935"N	80°53'52.482"W	352.70	96.606	4.52	3.04	20.40	
2759.50	10.300	94.740	2726.87	-148.27	-40.88	354.72	1669292.22	14279367.65	39°19'20.932"N	80°53'52.427"W	357.07	96.574	2.08	1.84	5.56	
2784.50	11.080	97.870	2751.44	-150.18	-41.40	359.33	1669296.83	14279367.14	39°19'20.927"N	80°53'52.368"W	361.71	96.572	3.89	3.12	12.52	
2809.50	11.570	99.960	2775.95	-152.40	-42.16	364.18	1669301.67	14279366.38	39°19'20.919"N	80°53'52.307"W	366.61	96.603	2.56	1.96	8.36	
2834.50	11.620	100.090	2800.44	-154.76	-43.03	369.13	1669306.82	14279366.50	39°19'20.911"N	80°53'52.244"W	371.53	96.650	0.23	0.20	0.52	
2859.50	11.680	100.240	2824.93	-157.14	-43.92	374.10	1669311.59	14279366.61	39°19'20.902"N	80°53'52.180"W	376.66	96.697	0.27	0.24	0.60	
2884.50	12.290	103.740	2849.38	-159.73	-45.01	379.17	1669316.66	14279366.53	39°19'20.891"N	80°53'52.116"W	381.83	96.769	3.79	2.44	14.00	
2909.50	12.360	104.690	2873.81	-162.58	-46.32	384.35	1669321.83	14279366.22	39°19'20.878"N	80°53'52.050"W	387.13	96.872	0.89	0.36	3.80	
2934.50	12.420	104.530	2898.22	-165.47	-47.67	389.54	1669327.03	14279366.07	39°19'20.865"N	80°53'51.984"W	392.45	96.977	0.21	0.16	-0.64	
2959.50	12.680	106.970	2922.63	-168.48	-49.15	394.77	1669332.25	14279359.39	39°19'20.850"N	80°53'51.917"W	397.82	97.097	2.36	1.04	9.76	
2984.50	13.020	109.260	2947.00	-171.75	-50.88	400.05	1669337.53	14279357.66	39°19'20.833"N	80°53'51.850"W	403.27	97.248	2.45	1.36	9.16	
3009.50	13.110	109.180	2971.35	-175.17	-52.74	405.39	1669342.87	14279355.80	39°19'20.814"N	80°53'51.782"W	408.80	97.412	0.37	0.36	-0.32	
3034.50	13.090	108.570	2995.70	-178.57	-54.57	410.75	1669348.23	14279353.97	39°19'20.796"N	80°53'51.714"W	414.36	97.588	0.56	-0.08	-2.44	

04/05/2019



Actual Wellpath Report

Niley Unit 1H AWP Proj: 14297

Page 6 of 15



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Ritchie County, WV	Well	Niley Unit 1H
Field	Ritchie	Wellbore	Niley Unit 1H AWB
Facility	Mulway Pad		

WELLPATH DATA (344 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
3059.50	12.800	106.490	3020.07	-181.82	-56.26	416.09	1669353.56	14279352.28	39°19'20.779"N	80°53'51.646"W	419.87	97.700	2.20	-1.16	-8.32	
3084.50	12.580	105.530	3044.46	-184.89	-57.77	421.37	1669358.84	14279350.77	39°19'20.764"N	80°53'51.579"W	425.31	97.807	2.22	-0.88	-3.84	
3109.50	12.070	103.950	3068.88	-187.77	-59.13	426.53	1669364.00	14279349.41	39°19'20.751"N	80°53'51.514"W	430.61	97.893	2.45	-2.04	-6.32	
3134.50	11.950	103.350	3093.33	-190.50	-60.36	431.58	1669369.05	14279348.18	39°19'20.739"N	80°53'51.449"W	435.78	97.962	0.69	-0.48	-2.40	
3159.50	11.720	102.090	3117.80	-193.11	-61.49	436.58	1669374.05	14279347.05	39°19'20.727"N	80°53'51.386"W	440.89	98.017	1.38	-0.92	-5.04	
3184.50	11.730	102.040	3142.28	-195.66	-62.55	441.55	1669379.02	14279345.99	39°19'20.717"N	80°53'51.322"W	445.96	98.063	0.06	0.04	-0.20	
3209.50	11.800	102.030	3166.75	-198.21	-63.61	446.54	1669384.00	14279344.93	39°19'20.706"N	80°53'51.259"W	451.05	98.108	0.28	0.28	-0.04	
3234.50	12.420	105.090	3191.20	-200.93	-64.82	451.65	1669389.11	14279343.72	39°19'20.694"N	80°53'51.194"W	456.27	98.168	3.33	2.60	9.92	
3259.50	12.720	105.090	3215.60	-203.88	-66.21	456.91	1669394.37	14279342.33	39°19'20.680"N	80°53'51.127"W	461.69	98.246	1.19	1.08	2.32	
3284.50	12.810	104.800	3239.98	-206.88	-67.64	462.25	1669399.71	14279340.91	39°19'20.666"N	80°53'51.059"W	467.17	98.325	0.44	0.36	-1.16	
3309.50	13.100	106.760	3264.34	-209.99	-69.16	467.64	1669405.10	14279339.38	39°19'20.651"N	80°53'50.991"W	472.73	98.413	2.11	1.16	7.84	
3334.50	13.500	109.260	3288.67	-213.37	-70.94	473.11	1669410.56	14279337.60	39°19'20.634"N	80°53'50.921"W	478.40	98.528	2.80	1.60	10.00	
3359.50	13.510	109.090	3312.98	-216.89	-72.86	478.62	1669416.07	14279335.69	39°19'20.615"N	80°53'50.851"W	484.14	98.656	0.16	0.04	-0.68	
3384.50	13.370	109.500	3337.30	-220.41	-74.78	484.11	1669421.56	14279333.77	39°19'20.596"N	80°53'50.781"W	489.85	98.781	0.68	-0.56	1.64	
3409.50	13.250	108.860	3361.62	-223.89	-76.67	489.54	1669426.99	14279331.88	39°19'20.577"N	80°53'50.712"W	495.51	98.901	0.76	-0.48	-2.56	
3434.50	13.110	108.280	3385.97	-227.28	-78.49	494.95	1669432.39	14279330.06	39°19'20.559"N	80°53'50.643"W	501.13	99.011	0.77	-0.56	-2.32	
3459.50	12.860	105.730	3410.33	-230.50	-80.13	500.32	1669437.76	14279328.42	39°19'20.542"N	80°53'50.575"W	506.69	99.099	2.50	-1.00	-10.20	
3484.50	12.660	104.500	3434.71	-233.51	-81.57	505.65	1669443.09	14279326.98	39°19'20.528"N	80°53'50.507"W	512.18	99.164	1.35	-0.80	-4.92	
3509.50	12.040	101.270	3459.13	-236.26	-82.77	510.86	1669448.29	14279325.79	39°19'20.516"N	80°53'50.441"W	517.52	99.203	3.71	-2.48	-12.92	
3534.50	11.830	100.200	3483.59	-238.74	-83.73	515.94	1669453.37	14279324.82	39°19'20.507"N	80°53'50.376"W	522.69	99.218	1.22	-0.84	-4.28	
3559.50	11.430	97.190	3508.08	-241.00	-84.49	520.92	1669458.35	14279324.06	39°19'20.499"N	80°53'50.313"W	527.72	99.213	2.91	-1.60	-12.04	
3584.50	11.240	95.330	3532.59	-243.02	-85.03	525.80	1669463.23	14279323.52	39°19'20.494"N	80°53'50.251"W	532.63	99.186	1.65	-0.76	-7.44	
3609.50	10.920	93.660	3557.12	-244.85	-85.41	530.59	1669468.02	14279323.00	39°19'20.490"N	80°53'50.190"W	537.42	99.144	1.81	-1.28	-6.68	
3634.50	10.970	94.210	3581.67	-246.62	-85.73	535.32	1669472.75	14279322.82	39°19'20.487"N	80°53'50.130"W	542.15	99.099	0.46	0.20	2.20	
3659.50	11.270	98.020	3606.20	-248.59	-86.25	540.12	1669477.54	14279322.30	39°19'20.482"N	80°53'50.069"W	546.96	99.073	3.17	1.20	15.24	
3684.50	11.250	101.130	3630.72	-250.85	-87.06	544.93	1669482.35	14279321.49	39°19'20.473"N	80°53'50.007"W	551.84	99.077	2.43	-0.08	12.44	
3709.50	11.250	102.040	3655.24	-253.25	-88.04	549.71	1669487.13	14279320.51	39°19'20.464"N	80°53'49.947"W	556.71	99.099	0.71	0.00	3.64	
3734.50	11.300	102.900	3679.76	-255.73	-89.09	554.48	1669491.90	14279319.46	39°19'20.453"N	80°53'49.886"W	561.59	99.128	0.70	0.20	3.44	
3759.50	11.520	103.680	3704.26	-258.29	-90.23	559.29	1669496.71	14279318.32	39°19'20.442"N	80°53'49.825"W	566.52	99.165	1.07	0.88	3.12	
3784.50	11.790	106.190	3728.75	-261.04	-91.53	564.17	1669501.58	14279317.02	39°19'20.429"N	80°53'49.763"W	571.55	99.216	2.30	1.08	10.04	



Actual Wellpath Report

Niley Unit 1H AWP Proj: 14297

Page 7 of 15



04/05/2019

REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #03
Operator	ANTERO RESOURCES CORPORATION	Well	Niley Unit 1H
Area	Ritchie County, WV	Wellbore	Niley Unit 1H AWP
Field	Ritchie		
Facility	Mulvay Pad		

WELLPATH DATA (344 stations)																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
3809.50	11.860	107.000	3753.22	-263.94	-93.00	569.08	1669506.49	14279315.56	39°19'20.415"N	80°53'49.700"W	576.63	99.281	0.72	0.28	3.24	
3834.50	11.970	106.920	3777.68	-266.90	-94.50	574.02	1669511.43	14279314.05	39°19'20.400"N	80°53'49.637"W	581.74	99.349	0.44	0.44	-0.32	
3859.50	12.030	106.170	3802.13	-269.84	-95.98	579.00	1669516.41	14279312.57	39°19'20.385"N	80°53'49.574"W	586.90	99.413	0.67	0.24	-3.00	
3884.50	12.040	106.040	3826.58	-272.76	-97.43	584.01	1669521.41	14279311.13	39°19'20.371"N	80°53'49.510"W	592.08	99.471	0.12	0.04	-0.52	
3909.50	11.990	104.370	3851.03	-275.61	-98.79	589.03	1669526.43	14279309.76	39°19'20.357"N	80°53'49.446"W	597.26	99.521	1.40	-0.20	-6.68	
3934.50	12.010	103.430	3875.49	-278.35	-100.04	594.07	1669531.48	14279308.52	39°19'20.345"N	80°53'49.382"W	602.44	99.559	0.79	0.08	-3.76	
3959.50	11.890	101.500	3899.95	-280.97	-101.16	599.13	1669536.53	14279307.41	39°19'20.333"N	80°53'49.318"W	607.61	99.584	1.67	-0.48	-7.72	
3984.50	11.860	100.750	3924.41	-283.47	-102.15	604.17	1669541.57	14279306.41	39°19'20.324"N	80°53'49.254"W	612.75	99.597	0.63	-0.12	-3.00	
4009.50	11.830	98.860	3948.88	-285.86	-103.03	609.23	1669546.63	14279305.53	39°19'20.315"N	80°53'49.189"W	617.88	99.598	1.56	-0.12	-7.56	
4034.50	11.720	98.220	3973.35	-288.14	-103.78	614.28	1669551.67	14279304.78	39°19'20.307"N	80°53'49.125"W	622.98	99.590	0.68	-0.44	-2.56	
4059.50	11.760	97.630	3997.83	-290.36	-104.49	619.31	1669556.71	14279304.07	39°19'20.300"N	80°53'49.061"W	628.07	99.576	0.51	0.16	-2.36	
4084.50	11.800	97.220	4022.30	-292.55	-105.15	624.37	1669561.77	14279303.41	39°19'20.294"N	80°53'48.997"W	633.17	99.559	0.37	0.16	-1.64	
4109.50	11.700	99.370	4046.78	-294.80	-105.88	629.41	1669566.80	14279302.68	39°19'20.287"N	80°53'48.933"W	638.26	99.549	1.80	-0.40	8.60	
4134.50	11.590	103.120	4071.27	-297.26	-106.66	634.36	1669571.75	14279301.70	39°19'20.277"N	80°53'48.870"W	643.30	99.562	3.06	-0.44	15.00	
4159.50	11.510	103.660	4095.76	-299.87	-108.02	639.23	1669576.61	14279300.54	39°19'20.265"N	80°53'48.808"W	648.29	99.592	0.54	-0.32	2.16	
4184.50	11.560	104.540	4120.25	-302.52	-109.24	644.08	1669581.46	14279299.32	39°19'20.253"N	80°53'48.746"W	653.27	99.626	0.73	0.20	3.52	
4209.50	11.620	103.550	4144.74	-305.18	-110.46	648.95	1669586.33	14279298.10	39°19'20.241"N	80°53'48.684"W	658.28	99.660	0.83	0.24	-3.96	
4234.50	11.680	104.050	4169.23	-307.84	-111.66	653.85	1669591.23	14279296.90	39°19'20.229"N	80°53'48.622"W	663.32	99.691	0.47	0.24	2.00	
4259.50	11.750	103.900	4193.71	-310.52	-112.89	658.78	1669596.15	14279295.68	39°19'20.217"N	80°53'48.559"W	668.38	99.724	0.31	0.28	-0.60	
4284.50	11.760	103.440	4218.18	-313.19	-114.09	663.73	1669601.10	14279294.47	39°19'20.205"N	80°53'48.496"W	673.46	99.754	0.38	0.04	-1.84	
4309.50	11.740	102.430	4242.66	-315.81	-115.23	668.69	1669606.06	14279293.33	39°19'20.194"N	80°53'48.433"W	678.54	99.777	0.83	-0.08	-4.04	
4334.50	11.720	102.090	4267.14	-318.37	-116.31	673.65	1669611.03	14279292.25	39°19'20.183"N	80°53'48.370"W	683.62	99.796	0.29	-0.08	-1.36	
4359.50	11.790	102.290	4291.61	-320.92	-117.39	678.63	1669616.00	14279291.18	39°19'20.172"N	80°53'48.306"W	688.71	99.814	0.32	0.28	0.80	
4384.50	11.800	101.230	4316.09	-323.46	-118.43	683.64	1669621.00	14279290.14	39°19'20.162"N	80°53'48.243"W	693.82	99.828	0.87	0.04	-4.24	
4409.50	11.800	100.820	4340.56	-325.94	-119.41	688.65	1669626.02	14279289.16	39°19'20.152"N	80°53'48.179"W	698.93	99.837	0.34	0.00	-1.64	
4434.50	11.900	98.710	4365.03	-328.32	-120.28	693.71	1669631.08	14279288.29	39°19'20.143"N	80°53'48.115"W	704.06	99.836	1.78	0.40	-8.44	
4459.50	11.900	98.180	4389.49	-330.62	-121.03	698.81	1669636.17	14279287.53	39°19'20.136"N	80°53'48.050"W	709.22	99.826	0.44	0.00	-2.12	
4484.50	11.940	97.420	4413.95	-332.86	-121.73	703.93	1669641.29	14279286.83	39°19'20.129"N	80°53'47.985"W	714.38	99.811	0.65	0.16	-3.04	
4509.50	11.990	96.230	4438.41	-335.03	-122.35	709.07	1669646.43	14279286.22	39°19'20.123"N	80°53'47.919"W	719.55	99.790	1.01	0.20	-4.76	
4534.50	12.030	96.190	4462.86	-337.16	-122.91	714.24	1669651.60	14279285.66	39°19'20.117"N	80°53'47.853"W	724.74	99.764	0.16	0.16	-0.16	



Actual Wellpath Report

Niley Unit 1H AWP Proj: 14297

Page 8 of 15



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Ritchie County, WV	Well	Niley Unit 1H
Field	Ritchie	Wellbore	Niley Unit 1H AWB
Facility	Mulway Pad		

WELLPATH DATA (344 stations)

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert.Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
4559.50	12.180	94.960	4487.30	-339.25	-123.42	719.46	1669656.82	14279285.15	39°19'20.112"N	80°53'47.787"W	729.97	99.734	1.19	0.60	-4.92	
4584.50	12.310	94.370	4511.73	-341.29	-123.85	724.75	1669662.10	14279284.72	39°19'20.108"N	80°53'47.720"W	735.25	99.698	0.72	0.52	-2.36	
4609.50	12.450	93.960	4535.15	-343.31	-124.24	730.09	1669667.44	14279284.33	39°19'20.104"N	80°53'47.652"W	740.59	99.658	0.86	0.56	-1.64	
4634.50	12.570	92.890	4560.56	-345.29	-124.56	735.50	1669672.84	14279284.00	39°19'20.101"N	80°53'47.583"W	745.97	99.612	1.04	0.48	-4.28	
4659.50	12.630	93.510	4584.96	-347.26	-124.87	740.94	1669678.29	14279283.70	39°19'20.098"N	80°53'47.514"W	751.39	99.566	0.59	0.24	2.48	
4684.50	12.250	94.950	4609.37	-349.29	-125.26	746.31	1669683.66	14279283.30	39°19'20.094"N	80°53'47.445"W	756.75	99.528	1.96	-1.52	5.76	
4709.50	11.530	97.490	4633.83	-351.39	-125.82	751.43	1669688.77	14279282.75	39°19'20.088"N	80°53'47.380"W	761.89	99.505	3.56	-2.88	10.16	
4734.50	11.410	98.260	4658.33	-353.56	-126.50	756.36	1669693.70	14279282.00	39°19'20.081"N	80°53'47.318"W	766.86	99.495	0.78	-0.48	3.08	
4759.50	11.280	99.320	4682.85	-355.77	-127.25	761.22	1669698.55	14279281.32	39°19'20.074"N	80°53'47.256"W	771.78	99.490	0.98	-0.52	4.24	
4784.50	11.180	100.410	4707.37	-358.05	-128.09	766.01	1669703.35	14279280.48	39°19'20.065"N	80°53'47.195"W	776.85	99.493	0.94	-0.40	4.36	
4809.50	10.660	101.260	4731.91	-360.33	-128.97	770.67	1669708.00	14279279.59	39°19'20.057"N	80°53'47.136"W	781.38	99.501	2.18	-2.08	3.40	
4834.50	9.870	102.830	4756.51	-362.55	-129.90	775.02	1669712.35	14279278.67	39°19'20.047"N	80°53'47.080"W	785.83	99.515	3.35	-3.16	6.28	
4859.50	9.790	102.810	4781.15	-364.74	-130.85	779.18	1669716.51	14279277.72	39°19'20.038"N	80°53'47.027"W	790.09	99.533	0.32	-0.32	-0.08	
4884.50	9.880	103.120	4805.78	-366.93	-131.81	783.35	1669720.67	14279276.76	39°19'20.029"N	80°53'46.974"W	794.36	99.551	0.42	0.36	1.24	
4909.50	10.040	102.540	4830.40	-369.14	-132.77	787.56	1669724.89	14279275.80	39°19'20.019"N	80°53'46.921"W	798.67	99.569	0.76	0.64	-2.32	
4934.50	10.130	102.140	4855.02	-371.35	-133.70	791.84	1669729.16	14279274.87	39°19'20.010"N	80°53'46.866"W	803.05	99.584	0.46	0.36	-1.60	
4959.50	10.390	100.290	4879.62	-373.52	-134.57	796.21	1669733.53	14279274.00	39°19'20.001"N	80°53'46.811"W	807.50	99.593	1.68	1.04	-7.40	
4984.50	10.630	99.350	4904.20	-375.65	-135.35	800.70	1669738.02	14279273.23	39°19'19.993"N	80°53'46.754"W	812.06	99.594	1.18	0.96	-3.76	
5009.50	10.810	98.120	4928.76	-377.74	-136.05	805.29	1669742.61	14279272.52	39°19'19.986"N	80°53'46.695"W	816.71	99.589	1.16	0.72	-4.92	
5034.50	10.920	98.510	4953.31	-379.82	-136.73	809.96	1669747.27	14279271.84	39°19'19.980"N	80°53'46.636"W	821.42	99.582	0.53	0.44	1.56	
5059.50	11.090	97.050	4977.85	-381.89	-137.38	814.69	1669752.00	14279271.20	39°19'19.973"N	80°53'46.576"W	826.19	99.572	1.31	0.68	-5.84	
5084.50	11.240	96.150	5002.38	-383.91	-137.93	819.49	1669756.81	14279270.64	39°19'19.968"N	80°53'46.514"W	831.02	99.554	0.92	0.60	-3.60	
5109.50	11.340	94.960	5026.90	-385.86	-138.41	824.37	1669761.68	14279270.17	39°19'19.963"N	80°53'46.452"W	835.90	99.531	1.01	0.40	-4.76	
5134.50	11.470	94.170	5051.40	-387.75	-138.80	829.29	1669766.60	14279269.72	39°19'19.959"N	80°53'46.390"W	840.83	99.502	0.81	0.52	-3.16	
5159.50	11.680	93.950	5075.89	-389.63	-139.16	834.30	1669771.60	14279269.41	39°19'19.955"N	80°53'46.326"W	845.82	99.469	0.86	0.84	-0.88	
5184.50	11.830	92.930	5100.37	-391.49	-139.46	839.38	1669776.69	14279269.11	39°19'19.952"N	80°53'46.261"W	850.89	99.433	1.03	0.60	-4.08	
5209.50	11.940	92.670	5124.83	-393.32	-139.71	844.52	1669781.83	14279268.86	39°19'19.950"N	80°53'46.196"W	856.00	99.394	0.49	0.44	-1.04	
5234.50	12.020	93.240	5149.29	-395.17	-139.98	849.71	1669787.01	14279268.59	39°19'19.947"N	80°53'46.130"W	861.16	99.365	0.57	0.32	2.28	
5259.50	11.780	95.350	5173.75	-397.12	-140.37	854.85	1669792.14	14279268.21	39°19'19.943"N	80°53'46.065"W	866.29	99.325	-1.99	-0.96	8.44	
5284.50	11.230	100.150	5198.25	-399.28	-141.03	859.78	1669797.08	14279267.54	39°19'19.936"N	80°53'46.002"W	871.27	99.315	4.41	-2.20	19.20	



Actual Wellpath Report

Niley Unit 1H AWP Proj: 14297

Page 9 of 15



04/05/2019

REFERENCE WELLPATH IDENTIFICATION

Operator	Area	Field	Facility	Slot	Slot #03
ANTERO RESOURCES CORPORATION	Ritchie County, WV	Ritchie	Mulway Pad	Well	Niley Unit 1H
				Wellbore	Niley Unit 1H AWP

WELLPATH DATA (344 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
5309.50	11.140	100.660	5222.78	-401.58	-141.91	864.55	1669801.85	14279266.67	39°19'19.928"N	80°53'45.941"W	876.12	99.321	0.53	-0.36	2.04	
5334.50	11.090	101.300	5247.31	-403.91	-142.83	869.28	1669806.58	14279265.75	39°19'19.919"N	80°53'45.881"W	880.94	99.331	0.53	-0.20	2.56	
5359.50	11.160	101.010	5271.84	-406.26	-143.76	874.02	1669811.31	14279264.82	39°19'19.909"N	80°53'45.821"W	885.76	99.340	0.36	0.28	-1.16	
5384.50	11.310	101.150	5296.36	-408.62	-144.70	878.80	1669816.09	14279263.88	39°19'19.900"N	80°53'45.760"W	890.63	99.350	0.61	0.60	0.56	
5409.50	11.370	100.200	5320.87	-410.98	-145.61	883.63	1669820.91	14279262.97	39°19'19.891"N	80°53'45.698"W	895.54	99.357	0.78	0.24	-3.80	
5434.50	11.380	99.380	5345.38	-413.28	-146.44	888.49	1669825.77	14279262.13	39°19'19.883"N	80°53'45.637"W	900.47	99.360	0.65	0.04	-3.28	
5459.50	11.480	97.010	5369.88	-415.46	-147.15	893.39	1669830.67	14279261.43	39°19'19.876"N	80°53'45.574"W	905.43	99.353	1.92	0.40	-9.48	
5484.50	11.550	95.610	5394.38	-417.51	-147.70	898.35	1669835.63	14279260.88	39°19'19.870"N	80°53'45.511"W	910.40	99.337	1.15	0.28	-5.60	
5509.50	11.560	93.450	5418.87	-419.42	-148.09	903.34	1669840.62	14279260.29	39°19'19.866"N	80°53'45.448"W	915.40	99.310	1.73	0.04	-8.64	
5534.50	11.550	91.080	5443.37	-421.15	-148.29	908.34	1669845.62	14279260.16	39°19'19.864"N	80°53'45.384"W	920.37	99.272	1.92	-0.04	-9.56	
5559.50	11.590	91.800	5467.86	-422.82	-148.42	913.35	1669850.63	14279260.02	39°19'19.863"N	80°53'45.320"W	925.33	99.230	0.61	0.16	2.96	
5584.50	11.860	91.440	5492.34	-424.52	-148.56	918.43	1669855.71	14279259.43	39°19'19.861"N	80°53'45.256"W	930.37	99.188	1.12	1.08	-1.44	
5609.50	11.450	93.200	5516.82	-426.27	-148.76	923.48	1669860.75	14279258.82	39°19'19.859"N	80°53'45.191"W	935.38	99.151	2.17	-1.64	7.04	
5634.50	11.170	95.820	5541.34	-428.14	-149.15	928.37	1669865.64	14279258.32	39°19'19.855"N	80°53'45.129"W	940.27	99.127	2.34	-1.12	10.48	
5659.50	11.440	96.100	5565.85	-430.13	-149.66	933.24	1669870.51	14279257.92	39°19'19.850"N	80°53'45.067"W	945.16	99.110	1.10	1.08	1.12	
5684.50	11.820	95.950	5590.34	-432.18	-150.18	938.25	1669875.52	14279257.39	39°19'19.845"N	80°53'45.003"W	950.20	99.094	1.52	1.52	-0.60	
5709.50	12.300	96.750	5614.79	-434.33	-150.76	943.44	1669880.71	14279257.82	39°19'19.839"N	80°53'44.937"W	955.41	99.079	2.03	1.92	3.20	
5734.50	12.840	96.270	5639.20	-436.57	-151.37	948.81	1669886.07	14279257.20	39°19'19.833"N	80°53'44.869"W	960.81	99.065	1.42	1.36	-1.92	
5759.50	13.030	95.860	5663.57	-438.83	-151.96	954.33	1669891.59	14279256.62	39°19'19.827"N	80°53'44.799"W	966.35	99.047	1.60	1.56	-1.64	
5784.50	12.820	92.000	5687.94	-440.91	-152.35	959.90	1669897.16	14279256.23	39°19'19.824"N	80°53'44.728"W	971.92	99.018	3.55	-0.84	-15.44	
5809.50	12.810	84.180	5712.33	-442.43	-152.17	965.39	1669902.65	14279255.41	39°19'19.825"N	80°53'44.658"W	977.31	98.957	6.93	-0.84	-31.28	
5834.50	12.830	75.680	5736.72	-443.18	-151.20	970.80	1669908.05	14279255.38	39°19'19.835"N	80°53'44.589"W	982.50	98.853	7.53	0.88	-34.00	
5859.50	13.310	66.850	5761.07	-443.10	-149.38	976.13	1669913.38	14279255.19	39°19'19.853"N	80°53'44.521"W	987.50	98.701	8.21	1.92	-35.32	
5884.50	13.670	60.770	5785.38	-442.26	-146.81	981.36	1669918.60	14279254.77	39°19'19.878"N	80°53'44.455"W	992.28	98.508	5.85	1.44	-24.32	
5909.50	14.710	56.640	5809.62	-440.84	-143.62	986.59	1669923.83	14279254.95	39°19'19.909"N	80°53'44.388"W	996.99	98.283	5.80	4.16	-16.52	
5934.50	16.280	48.760	5833.71	-438.61	-139.57	991.87	1669929.12	14279254.01	39°19'19.949"N	80°53'44.321"W	1001.64	98.009	10.49	6.28	-31.52	
5959.50	18.280	42.380	5857.59	-435.29	-134.36	997.15	1669934.39	14279274.21	39°19'20.001"N	80°53'44.254"W	1006.16	97.674	11.01	8.00	-25.52	
5984.50	20.250	37.260	5881.19	-430.88	-128.02	1002.41	1669939.65	14279288.55	39°19'20.063"N	80°53'44.187"W	1010.56	97.278	10.37	7.88	-20.48	
6009.50	22.120	31.040	5904.50	-425.32	-120.54	1007.46	1669944.70	14279288.03	39°19'20.137"N	80°53'44.122"W	1014.65	96.823	11.69	7.48	-24.88	
6034.50	23.500	25.000	5927.55	-418.58	-111.99	1012.00	1669949.23	14279296.57	39°19'20.222"N	80°53'44.065"W	1018.17	96.315	10.87	5.52	-24.16	



Actual Wellpath Report

Niley Unit 1H AWP Proj: 14297
Page 10 of 15



04/05/2019

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Richie County, WV	Well	Niley Unit 1H
Field	Richie	Wellbore	Niley Unit 1H AWB
Facility	Mulway Pad		

WELLPATH DATA (344 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
3059.50	25.410	18.990	5950.31	1410.65	102.40	1015.85	1669953.08	14279306.16	39°19'20.317"N	80°53'44.015"W	1021.00	85.756	12.54	7.64	-24.04	
3084.50	27.200	15.500	5972.72	1401.59	-91.82	1019.12	1669986.36	14279316.74	39°19'20.421"N	80°53'43.974"W	1023.25	85.148	9.46	7.16	-13.96	
3109.50	28.130	12.770	5994.86	1391.76	-80.56	1021.95	1669959.18	14279327.99	39°19'20.532"N	80°53'43.937"W	1025.12	84.507	6.29	3.72	-10.92	
3134.50	28.410	9.880	6016.88	1381.43	-68.96	1024.28	1669961.51	14279339.59	39°19'20.647"N	80°53'43.908"W	1026.59	83.851	5.59	1.12	-11.56	
3159.50	28.670	5.850	6038.84	1370.69	-57.13	1025.91	1669963.14	14279351.41	39°19'20.764"N	80°53'43.887"W	1027.50	83.187	7.77	1.04	-16.12	
3184.50	29.720	2.000	6060.67	1359.37	-44.97	1026.73	1669963.96	14279363.57	39°19'20.884"N	80°53'43.876"W	1027.52	82.508	8.60	4.20	-15.40	
3197.50	30.170	0.220	6071.93	1353.24	-38.48	1026.86	1669964.09	14279370.05	39°19'20.948"N	80°53'43.874"W	1027.78	82.146	7.66	3.46	-13.69	
3225.50	32.200	354.960	6095.89	1339.28	-24.01	1026.23	1669963.46	14279384.52	39°19'21.091"N	80°53'43.882"W	1026.51	81.340	12.13	7.25	-18.79	Directional ONE MWD <8-3/4"> (6188)(6216'6304')
3269.50	34.190	331.190	6132.71	1315.65	-0.11	1023.31	1669960.54	14279408.41	39°19'21.327"N	80°53'43.919"W	1023.31	80.006	6.51	4.52	-8.57	
3371.00	38.930	345.250	6214.32	1255.71	58.89	1010.95	1669948.18	14279467.38	39°19'21.911"N	80°53'44.075"W	1012.66	86.666	6.16	4.97	-5.97	BHI AT Curve -8-1/2"> (6313.50)(6371'-14253'), Middlesex: 6371' MD
3385.00	39.520	344.140	6225.16	1246.86	67.43	1008.61	1669945.85	14279475.92	39°19'21.995"N	80°53'44.105"W	1010.86	86.175	6.55	4.21	-7.93	
3432.00	44.590	341.270	6260.05	1215.40	97.46	999.22	1669936.46	14279505.94	39°19'22.292"N	80°53'44.224"W	1003.96	84.429	12.71	12.57	-2.49	
3479.00	50.500	340.100	6291.76	1180.75	130.16	987.74	1669924.98	14279538.63	39°19'22.615"N	80°53'44.370"W	996.28	82.493	11.53	10.79	-6.11	
3526.00	56.070	340.280	6319.85	1143.11	165.60	974.98	1669912.23	14279574.05	39°19'22.966"N	80°53'44.532"W	988.94	80.360	11.86	11.85	0.38	
3533.00H	56.983	340.320	6323.71	1137.27	171.09	973.01	1669910.26	14279579.54	39°19'23.020"N	80°53'44.556"W	987.94	80.027	13.05	13.04	0.64	Burket: 6533' MD
3574.00	62.330	340.570	6344.42	1101.92	204.43	961.17	1669898.43	14279612.86	39°19'23.350"N	80°53'44.707"W	982.67	77.993	13.05	13.04	0.60	
3600.00H	64.968	340.884	6355.96	1078.63	226.42	953.48	1669890.74	14279634.84	39°19'23.567"N	80°53'44.804"W	980.00	76.642	10.20	10.14	1.21	Tully: 6600' MD
3622.00	67.200	341.140	6364.88	1058.52	245.43	946.94	1669884.20	14279653.85	39°19'23.755"N	80°53'44.887"W	978.23	75.470	10.20	10.15	1.16	
3668.00	72.350	340.690	6380.77	1038.38	286.21	932.83	1669870.10	14279694.61	39°19'24.158"N	80°53'45.066"W	975.75	72.943	11.23	11.20	-0.98	
3689.00H	74.378	340.780	6386.78	1024.74	305.20	926.19	1669863.46	14279713.60	39°19'24.346"N	80°53'45.150"W	975.18	71.762	9.67	9.66	0.43	Marcellus POE: 6688' MD
3715.00	76.890	340.890	6393.23	1009.32	328.99	917.92	1669855.20	14279737.38	39°19'24.581"N	80°53'45.255"W	975.10	70.282	9.67	9.66	0.42	
3763.00	81.850	340.810	6402.09	987.07	373.54	902.45	1669839.73	14279781.91	39°19'25.022"N	80°53'45.451"W	976.71	67.514	10.33	10.33	-0.17	
3827.00	90.180	342.730	6406.53	960.85	434.13	882.50	1669819.79	14279842.47	39°19'25.621"N	80°53'45.704"W	983.50	63.806	13.35	13.02	3.00	
3857.00	90.310	342.860	6406.00	947.85	462.79	873.63	1669810.92	14279871.12	39°19'25.904"N	80°53'45.817"W	988.64	62.089	0.61	0.43	0.43	
3952.00	90.400	341.900	6405.81	926.85	553.33	844.87	1669782.18	14279961.62	39°19'26.799"N	80°53'46.181"W	1009.94	56.778	1.01	0.09	-1.01	
7047.00	90.280	339.730	6405.25	909.82	643.04	813.66	1669750.97	14280051.30	39°19'27.687"N	80°53'46.577"W	1037.08	61.680	2.29	-0.13	-2.28	
7142.00	90.340	337.890	6404.74	888.66	731.62	779.32	1669716.65	14280139.84	39°19'28.562"N	80°53'47.013"W	1068.93	46.808	1.94	0.06	-1.94	
7237.00	90.180	337.430	6404.30	869.88	819.48	743.21	1669680.55	14280227.67	39°19'29.431"N	80°53'47.471"W	1106.31	42.206	0.51	-0.17	-0.48	
7332.00	90.340	338.870	6403.87	845.16	907.66	707.86	1669645.21	14280315.81	39°19'30.303"N	80°53'47.920"W	1151.04	37.950	1.53	0.17	1.52	



Actual Wellpath Report

Niley Unit 1H AWP Proj: 14297

Page 11 of 15



04/05/2019

REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Ritchie County, WV	Well	Niley Unit 1H
Field	Ritchie	Wellbore	Niley Unit 1H AWP
Facility	Mulvay Pad		

WELLPATH DATA (344 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
7426.00	90.060	339.550	6403.55	739.04	995.53	674.49	1669611.86	14280403.65	39°19'31.172"N	80°53'48.343"W	1202.51	34.118	0.78	-0.30	0.72	
7521.00	90.030	340.110	6403.47	833.97	1084.71	641.73	1669579.12	14280492.79	39°19'32.054"N	80°53'48.759"W	1260.32	30.609	0.59	-0.03	0.59	
7615.00	89.940	341.630	6403.50	927.95	1173.51	610.93	1669548.33	14280581.56	39°19'32.932"N	80°53'49.149"W	1323.02	27.501	1.62	-0.10	1.62	
7710.00	89.880	342.490	6403.64	1022.95	1263.89	581.67	1669519.08	14280671.91	39°19'33.825"N	80°53'49.520"W	1391.32	24.713	0.91	-0.06	0.91	
7805.00	90.680	344.140	6403.18	1117.92	1354.89	554.40	1669491.81	14280762.86	39°19'34.725"N	80°53'49.866"W	1463.93	22.253	1.93	0.84	1.74	
7899.00	90.580	344.530	6402.15	1211.84	1445.39	529.02	1669466.45	14280853.33	39°19'35.620"N	80°53'50.188"W	1539.16	20.103	0.43	-0.11	0.41	
7994.00	90.370	344.750	6401.36	1306.74	1537.00	503.85	1669441.29	14281036.23	39°19'36.526"N	80°53'50.507"W	1617.47	18.150	0.32	-0.22	0.23	
8089.00	90.150	343.490	6400.93	1401.67	1628.37	477.86	1669415.31	14281209.29	39°19'37.429"N	80°53'50.836"W	1697.04	16.355	1.35	-0.23	-1.33	
8184.00	90.220	343.530	6400.62	1496.64	1719.46	450.89	1669388.35	14281383.33	39°19'38.330"N	80°53'51.178"W	1777.60	14.694	0.08	0.07	0.04	
8279.00	90.120	343.410	6400.34	1591.61	1810.53	423.86	1669361.34	14281563.77	39°19'39.230"N	80°53'51.520"W	1859.49	13.176	0.16	-0.11	-0.13	
8374.00	90.220	344.060	6400.06	1686.57	1901.73	397.26	1669334.74	14281749.90	39°19'40.132"N	80°53'51.858"W	1942.78	11.799	0.69	0.11	0.68	
8469.00	90.430	344.860	6399.52	1781.48	1993.26	371.81	1669309.30	14281928.88	39°19'41.037"N	80°53'52.180"W	2027.64	10.566	0.87	0.22	0.84	
8564.00	90.030	346.010	6399.14	1876.31	2085.20	347.92	1669285.42	14282100.97	39°19'41.946"N	80°53'52.483"W	2114.03	9.473	1.28	-0.42	1.21	
8658.00	90.060	344.610	6399.06	1970.16	2176.12	324.08	1669261.59	14282282.89	39°19'42.844"N	80°53'52.785"W	2200.12	8.471	1.49	0.03	-1.49	
8753.00	90.060	342.740	6398.96	2065.11	2267.29	297.38	1669234.90	14282464.65	39°19'43.746"N	80°53'53.124"W	2286.71	7.472	1.97	0.00	-1.97	
8848.00	90.150	343.040	6398.79	2160.10	2358.09	269.43	1669206.96	14282628.89	39°19'44.644"N	80°53'53.478"W	2373.43	6.518	0.33	0.09	0.32	
8943.00	90.090	344.170	6398.59	2255.06	2449.22	242.61	1669180.16	14282810.15	39°19'45.545"N	80°53'53.818"W	2461.21	5.657	1.19	-0.08	1.19	
9038.00	89.970	345.600	6398.54	2349.95	2540.93	217.84	1669155.40	14282997.73	39°19'46.451"N	80°53'54.132"W	2550.25	4.900	1.51	-0.13	1.51	
9132.00	90.250	347.080	6398.36	2443.68	2632.27	195.64	1669133.21	14283181.90	39°19'47.354"N	80°53'54.413"W	2639.53	4.251	1.60	0.30	1.57	
9227.00	90.030	345.070	6398.13	2538.44	2724.47	172.78	1669110.36	14283372.22	39°19'48.266"N	80°53'54.703"W	2729.95	3.629	2.13	-0.23	-2.12	
9322.00	89.970	341.720	6398.13	2633.40	2815.50	145.64	1669083.22	14283562.89	39°19'49.166"N	80°53'55.047"W	2819.26	2.961	3.53	-0.06	-3.53	
9415.00	90.620	338.020	6397.65	2726.31	2902.80	113.64	1669051.24	14283752.22	39°19'50.029"N	80°53'55.453"W	2905.02	2.242	4.04	0.70	-3.98	
9509.00	90.060	337.370	6397.09	2820.04	2989.77	77.96	1669015.57	14283948.83	39°19'50.889"N	80°53'55.905"W	2990.78	1.494	0.91	-0.60	-0.69	
9604.00	89.910	337.090	6397.12	2914.70	3077.36	41.20	1668978.82	14284148.83	39°19'51.755"N	80°53'56.372"W	3077.64	0.767	0.33	-0.16	-0.29	
9699.00	90.060	337.410	6397.14	3009.37	3164.97	4.46	1668942.10	14284348.83	39°19'52.621"N	80°53'56.838"W	3164.97	0.081	0.37	0.16	0.34	
9794.00	90.180	337.400	6396.94	3104.06	3252.68	-32.04	1668905.61	14284548.83	39°19'53.489"N	80°53'57.302"W	3252.84	359.436	0.13	0.13	-0.01	
9890.00	90.680	338.510	6396.22	3199.81	3341.66	-68.07	1668869.60	14284748.83	39°19'54.369"N	80°53'57.759"W	3342.35	358.833	1.27	0.52	1.16	
9985.00	90.120	339.140	6395.56	3294.66	3430.24	-102.39	1668835.30	14284948.83	39°19'55.244"N	80°53'58.194"W	3431.77	358.290	0.89	-0.59	0.66	
10080.00	90.120	342.500	6395.36	3389.63	3519.95	-133.59	1668804.10	14285148.83	39°19'56.131"N	80°53'58.590"W	3522.49	357.826	3.54	0.00	3.54	
10175.00	90.000	347.820	6395.26	3484.45	3611.75	-157.92	1668779.79	14285348.83	39°19'57.039"N	80°53'58.988"W	3615.20	357.496	5.60	-0.13	5.60	



Actual Wellpath Report

Niley Unit 1H AWP Proj: 14297

Page 12 of 15



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot #03
Area	Ritchie County, WV	Niley Unit 1H
Field	Ritchie	Niley Unit 1H AWB
Facility	Mulvey Pad	

WELLPATH DATA (344 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
10269.00	90.150	349.420	6395.14	3577.83	3703.90	-176.46	1668761.25	14283110.93	39°19'57.950"N	80°53'59.133"W	3708.10	357.272	1.71	0.16	1.70	
10364.00	90.220	345.210	6394.83	3672.40	3796.56	-197.32	1668740.40	14283203.55	39°19'58.866"N	80°53'59.397"W	3801.68	357.025	4.43	0.07	-4.43	
10461.00	90.030	341.680	6394.62	3769.36	3889.52	-224.95	1668712.78	14283296.48	39°19'59.785"N	80°53'59.748"W	3896.02	356.690	3.64	-0.20	-3.64	
10553.00	90.150	338.760	6394.47	3861.30	3976.09	-256.08	1668681.66	14283383.01	39°20'00.641"N	80°54'00.143"W	3984.32	356.315	3.18	0.13	-3.17	
10647.00	90.460	337.200	6393.97	3955.06	4063.22	-291.33	1668646.43	14283470.11	39°20'01.503"N	80°54'00.590"W	4073.65	355.899	1.69	0.33	-1.66	
10742.00	89.880	338.360	6393.69	4049.80	4151.17	-327.25	1668610.52	14283558.02	39°20'02.372"N	80°54'01.046"W	4164.05	355.493	1.37	-0.61	1.22	
10837.00	90.180	340.900	6393.64	4144.71	4240.22	-360.32	1668577.47	14283647.04	39°20'03.253"N	80°54'01.465"W	4255.50	355.143	2.69	0.32	2.67	
10932.00	89.970	342.570	6393.52	4239.70	4330.43	-390.09	1668547.71	14283737.21	39°20'04.145"N	80°54'01.843"W	4347.96	354.853	1.77	-0.22	1.76	
11027.00	90.120	345.840	6393.44	4334.62	4421.83	-415.94	1668514.71	14283828.57	39°20'05.048"N	80°54'02.171"W	4441.35	354.626	3.45	0.16	3.44	
11122.00	90.180	343.550	6393.19	4429.51	4513.45	-441.02	1668496.80	14283920.16	39°20'05.954"N	80°54'02.489"W	4534.95	354.419	2.41	0.06	-2.41	
11217.00	90.090	345.960	6392.97	4524.40	4605.10	-466.00	1668471.83	14284011.78	39°20'06.860"N	80°54'02.805"W	4628.62	354.222	2.54	-0.09	2.54	
11311.00	89.910	346.910	6392.97	4618.12	4696.48	-488.04	1668449.79	14284103.12	39°20'07.764"N	80°54'03.085"W	4721.77	354.067	1.03	-0.19	1.01	
11405.00	90.060	343.150	6393.00	4711.98	4787.27	-512.32	1668425.53	14284193.87	39°20'08.661"N	80°54'03.392"W	4814.61	353.892	4.00	0.16	-4.00	
11500.00	89.970	340.930	6392.97	4806.97	4877.64	-541.61	1668396.25	14284284.20	39°20'09.555"N	80°54'03.764"W	4907.62	353.664	2.34	-0.03	-2.34	
11594.00	90.090	340.880	6392.92	4900.95	4966.47	-572.36	1668365.51	14284372.99	39°20'10.433"N	80°54'04.154"W	4999.34	353.426	0.14	0.13	-0.05	
11690.00	90.150	341.120	6392.72	4996.93	5057.24	-603.62	1668334.27	14284463.73	39°20'11.331"N	80°54'04.550"W	5093.13	353.194	0.26	0.06	0.25	
11785.00	89.970	341.230	6392.62	5091.92	5147.16	-634.27	1668303.62	14284553.61	39°20'12.220"N	80°54'04.939"W	5186.09	352.975	0.22	-0.19	0.12	
11880.00	90.150	340.010	6392.52	5186.89	5236.77	-665.79	1668272.11	14284643.19	39°20'13.106"N	80°54'05.339"W	5278.92	352.754	1.30	0.19	-1.28	
11975.00	91.020	339.740	6391.55	5281.82	5325.96	-698.48	1668239.44	14284732.35	39°20'13.988"N	80°54'05.754"W	5371.57	352.529	0.96	0.92	-0.28	
12070.00	89.970	336.790	6390.73	5376.60	5414.20	-733.65	1668204.28	14284820.54	39°20'14.860"N	80°54'06.200"W	5463.68	352.283	3.30	-1.11	-3.11	
12165.00	89.630	336.020	6391.06	5471.14	5501.25	-771.68	1668166.27	14284907.56	39°20'15.721"N	80°54'06.683"W	5555.11	352.015	0.89	-0.36	-0.81	
12260.00	89.450	338.560	6391.82	5565.80	5588.88	-808.35	1668129.62	14284995.15	39°20'16.587"N	80°54'07.149"W	5647.03	351.770	2.68	-0.19	2.67	
12355.00	89.510	340.400	6392.69	5660.70	5677.84	-841.65	1668096.33	14285084.08	39°20'17.467"N	80°54'07.571"W	5739.88	351.568	1.94	0.06	1.94	
12450.00	89.510	343.040	6393.50	5755.68	5768.04	-871.44	1668066.55	14285174.24	39°20'18.359"N	80°54'07.949"W	5833.49	351.409	2.78	0.00	2.78	
12546.00	89.970	344.170	6393.94	5851.65	5860.13	-898.54	1668039.46	14285266.30	39°20'19.269"N	80°54'08.293"W	5928.62	351.283	1.27	0.48	1.18	
12639.00	90.180	343.140	6393.81	5944.61	5949.37	-924.71	1668013.30	14285355.50	39°20'20.152"N	80°54'08.625"W	6020.81	351.165	1.13	0.23	-1.11	
12734.00	89.970	344.010	6393.69	6039.57	6040.49	-951.57	1667986.45	14285446.59	39°20'21.052"N	80°54'08.965"W	6114.99	351.048	0.94	-0.22	0.92	
12829.00	89.940	349.990	6393.76	6134.17	6133.02	-972.93	1667965.10	14285539.07	39°20'21.967"N	80°54'09.236"W	6209.71	350.986	6.29	-0.03	6.29	
12924.00	90.770	348.010	6393.18	6228.47	6226.26	-991.06	1667946.98	14285632.28	39°20'22.889"N	80°54'09.465"W	6304.65	350.956	2.26	0.87	-2.08	
13019.00	89.570	344.200	6392.89	6323.21	6318.46	-1013.87	1667924.18	14285724.45	39°20'23.800"N	80°54'09.754"W	6399.29	350.884	4.20	-1.26	-4.01	



Actual Wellpath Report

Niley Unit 1H AWP Proj: 14297
Page 13 of 15



REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Area	Ritchie County, WV
Field	Ritchie
Facility	Mulway Pad
	Slot #03
Well	Niley Unit 1H
Wellbore	Niley Unit 1H AWB

WELLPATH DATA (344 stations)																
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[°]	[ft/100ft]	[ft/100ft]	[°/100ft]	
13113.00	89.820	343.580	6393.39	6417.16	6408.77	-1039.95	1667898.11	14285814.72	39°20'24.693"N	80°54'10.085"W	6492.60	350.783	0.71	0.27	-0.66	
13209.00	90.370	345.240	6393.23	6513.07	6501.24	-1065.75	1667872.32	14285907.15	39°20'25.607"N	80°54'10.412"W	6588.01	350.690	1.82	0.57	1.73	
13304.00	90.120	342.540	6392.83	6608.01	6592.50	-1092.11	1667845.97	14285998.37	39°20'26.510"N	80°54'10.746"W	6682.34	350.594	2.85	-0.26	-2.84	
13398.00	90.060	342.040	6392.88	6702.01	6682.04	-1120.70	1667817.39	14286087.88	39°20'27.395"N	80°54'11.109"W	6775.37	350.479	0.54	-0.06	-0.53	
13493.00	89.780	346.740	6392.81	6796.90	6773.51	-1146.26	1667791.84	14286179.31	39°20'28.299"N	80°54'11.433"W	6869.81	350.395	4.96	-0.29	4.95	
13588.00	90.030	344.300	6392.97	6891.72	6865.49	-1170.01	1667768.10	14286271.25	39°20'29.209"N	80°54'11.734"W	6964.47	350.329	2.58	0.26	-2.57	
13683.00	89.630	339.690	6393.25	6986.69	6955.81	-1199.37	1667738.76	14286361.54	39°20'30.102"N	80°54'12.107"W	7058.45	350.217	4.87	-0.42	-4.85	
13778.00	90.030	337.730	6393.53	7081.53	7044.32	-1233.86	1667704.28	14286450.01	39°20'30.977"N	80°54'12.544"W	7151.56	350.065	2.11	0.42	-2.06	
13873.00	89.600	337.800	6393.84	7176.26	7132.26	-1269.81	1667668.34	14286537.91	39°20'31.846"N	80°54'13.001"W	7244.41	349.905	0.46	-0.45	0.07	
13968.00	89.660	337.910	6394.45	7271.01	7220.25	-1305.62	1667632.55	14286625.87	39°20'32.716"N	80°54'13.455"W	7337.34	349.750	0.13	0.06	0.12	
14063.00	89.420	337.560	6395.22	7365.74	7308.16	-1341.61	1667596.57	14286713.75	39°20'33.586"N	80°54'13.912"W	7430.28	349.598	0.45	-0.25	-0.37	
14158.00	89.450	337.230	6396.15	7460.42	7395.86	-1378.12	1667560.07	14286801.41	39°20'34.453"N	80°54'14.376"W	7523.16	349.445	0.35	0.03	-0.35	
14253.00	89.630	338.530	6396.92	7555.16	7483.86	-1413.89	1667524.32	14286889.38	39°20'35.323"N	80°54'14.830"W	7616.25	349.301	1.38	0.19	1.37	
14297.00	89.630	338.530	6397.20	7599.08	7524.81	-1430.00	1667508.22	14286930.31	39°20'35.728"N	80°54'15.034"W	7659.48	349.240	0.00	0.00	0.00	Projected MD at TD: 14297'

HOLE & CASING SECTIONS - Ref Wellbore: Niley Unit 1H AWB Ref Wellpath: Niley Unit 1H AWP Proj: 14297'													
String/Diameter	Start MD		End MD		Interval	Start TVD		End TVD		Start N/S	Start E/W	End N/S	End E/W
	[ft]	[ft]	[ft]	[ft]		[ft]	[ft]	[ft]	[ft]				
20in Conductor	24.50	104.50	104.50	80.00	80.00	24.50	104.50	0.00	0.00	0.00	0.00	-0.19	-0.08
17.5in Open Hole	104.50	573.50	573.50	489.00	489.00	104.50	573.49	-0.19	-0.08	-0.19	-0.08	-2.26	0.48
13.375in Casing Surface	24.50	573.50	573.50	549.00	549.00	24.50	573.49	0.00	0.00	0.00	0.00	-2.26	0.48
12.25in Open Hole	573.50	2618.70	2618.70	2045.20	2045.20	573.49	2587.94	-2.26	0.48	-2.26	0.48	-40.81	331.91
9.625in Casing Intermediate	24.50	2618.70	2618.70	2584.20	2584.20	24.50	2587.94	0.00	0.00	0.00	0.00	-40.81	331.91
8.75in Open Hole	2618.70	6396.50	6396.50	3777.80	3777.80	2587.94	6233.95	-40.81	331.91	-40.81	331.91	74.55	1006.54
8.5in Open Hole	6396.50	14297.00	14297.00	7900.50	7900.50	6233.95	6397.20	74.55	1006.54	74.55	1006.54	7524.81	-1430.00
5.5in Casing Production	24.50	14297.00	14297.00	14272.50	14272.50	24.50	6397.20	0.00	0.00	0.00	0.00	7524.81	-1430.00



Actual Wellpath Report

Niley Unit 1H AWP Proj: 14297
Page 14 of 15



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot #03
Area	Ritchie County, WV	Niley Unit 1H
Field	Ritchie	Niley Unit 1H AWB
Facility	Mulvay Pad	

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Niley Unit 1H POE - Rev-1	6384.00	284.24	937.73	1669875.00	14279692.64	39°19'24.139"N	80°53'45.004"W	point
Niley Unit 1H BHL - Rev-2	6407.00	7538.93	-1419.85	1667518.36	14286944.42	39°20'35.867"N	80°54'14.905"W	point
Niley Unit 1H LP - Rev-1	6407.00	421.88	887.78	1669825.07	14279830.23	39°19'25.500"N	80°53'45.637"W	point

WELLPATH COMPOSITION - Ref Wellbore: Niley Unit 1H AWB Ref Wellpath: Niley Unit 1H AWP Proj: 14297

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
24.50	6197.50	Gyrodata standard - Drop gyro or Multi-shot	04 Gyrodata MS Gyro <8-3/4"> (100'-6188')	Niley Unit 1H AWB
6197.50	6313.50	OWSG MWD rev2 - Standard	03 Directional ONE MWD <8-3/4"> (6188')(6216'-6304')	Niley Unit 1H AWB
6313.50	14253.00	OWSG MWD rev2 - Standard	05 BHL AT Curve <8-1/2"> (6313.50')(6371'-14253')	Niley Unit 1H AWB
14253.00	14297.00	Blind Drilling (std)	Projection to bit	Niley Unit 1H AWB



Actual Wellpath Report

Niley Unit 1H AWP Proj: 14297
Page 15 of 15



REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #03
Area	Ritchie County, WV	Well	Niley Unit 1H
Field	Ritchie	Wellbore	Niley Unit 1H AWB
Facility	Mulvay Pad		

COMMENTS
<p>Wellpath general comments API: 47-085-10250-0000 BHI Job #: 8588758 Rig: Frontier 22 Duration: 06/05/2017-06/06/2017 Gyrodatta MS Gyro <8-3/4"> (100'-6188') Directional ONE MWD <8-3/4"> (6188')(6216'-6304') BHI AT Curve <8-1/2"> (6313.50')(6371'-14253') Middlesex: 6371' MD Burket: 6533' MD Tully: 6600' MD Marcellus POE: 6689' MD Projected MD at TD: 14297'</p>