



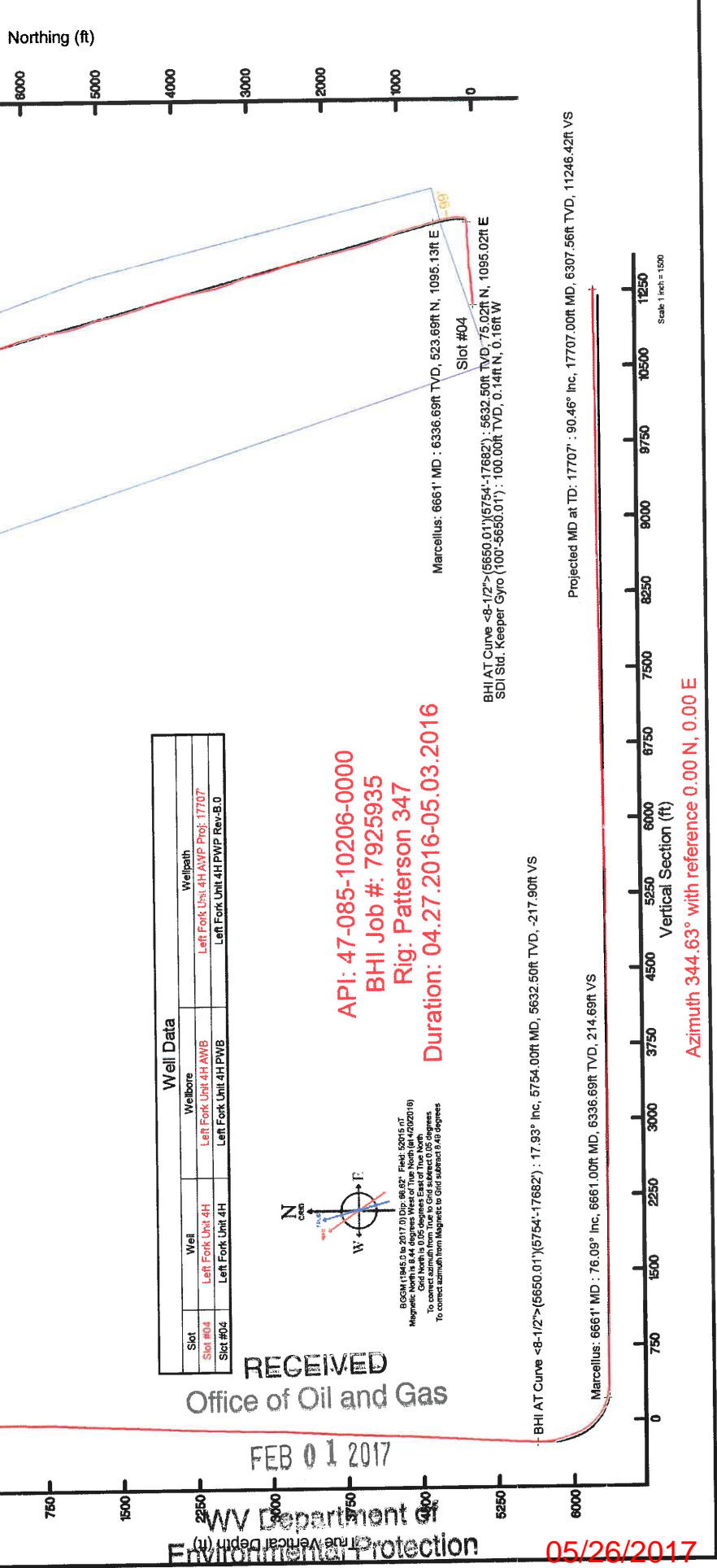
ANTERO RESOURCES CORPORATION
 Location: Ritchie County, WV
 Field: Ritchie
 Facility: Lockhart Heirs West Pad
 Slot: Slot #04
 Well: Left Fork Unit 4H
 Wellbore: Left Fork Unit 4H PWB



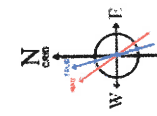
Plot reference wellpath is Left Fork Unit 4H PWB Rev-B.0
 True vertical depths are referenced to Patterson 347 (RKB)
 Measured depths are referenced to Patterson 347 (RKB)
 Patterson 347 (RKB) to Mean Sea Level: 1046 feet
 Mean Sea Level to Mud line (At Slot #04): -1021 feet
 Coordinates are in feet referenced to Slot
 Grid System: NAD27 / UTM Zone 17 North, US feet
 * = Wellpath was transformed from a different geodetic datum
 North Reference: Grid north
 Scale: True distance
 Depths are in feet
 Created by: herakid on 2016-05-09
 Database: WA_MPL_EASTERNUS_Defn

Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
Lockhart Heirs West Pad	1660769.189	14230960.966	80°55'41.410"W
Local N (ft)	Local E (ft)	Grid North (US ft)	Longitude
-19.85	-0.36	14230941.120	80°55'41.415"W
Slot #04		25ft	
Patterson 347 (RKB) to Mud line (At Slot #04)		-1021ft	
Mean Sea Level to Mud line (At Slot #04)		1046ft	
Patterson 347 (RKB) to Mean Sea Level			

SDI Std. Keeper Gyro (100°-5650.01') : 0.32° Inc. 100.00ft MD, 100.00ft TVD, 0.17ft VS



Well Data			
Slot	Wellbore	Wellpath	
Slot #04	Left Fork Unit 4H AWB	Left Fork Unit 4H PWB	Left Fork Unit 4H AWP Proj: 17707
Slot #04	Left Fork Unit 4H	Left Fork Unit 4H PWB	Left Fork Unit 4H PWP Rev-B.0



05/26/2017



Actual Wellpath Report

Left Fork Unit 4H AWP Proj: 17707'

Page n of nn

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Ritchie County, WV	Well	Left Fork Unit 4H
Field	Ritchie	Wellbore	Left Fork Unit 4H AWB
Facility	Lockhart Heirs West Pad		

REPORT SETUP INFORMATION	
Projection System	NAD27 / UTM Zone 17 North, US feet
Grid	WellArchitect@ 5.0
North Reference	User
Scale	Report Generated 5/9/2016 at 10:58:10 AM
Convergence at slot	Database/Source file WA_MPL_EASTERNUS_Defm/Left_Fork_Unit_4H_AWP_Proj_17707_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-19.85	-0.36	1660768.84	14230941.12	39°11'22.184"N	80°55'41.415"W
Facility Reference Pt			1660769.20	14230960.97	39°11'22.380"N	80°55'41.410"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM	
Calculation method	Minimum curvature
Horizontal Reference Pt	Slot
Vertical Reference Pt	Patterson 347 (RKB)
MD Reference Pt	Patterson 347 (RKB)
Field Vertical Reference	Mean Sea Level
	Patterson 347 (RKB) to Facility Vertical Datum
	Patterson 347 (RKB) to Mean Sea Level
	Patterson 347 (RKB) to Mud Line at Slot (Slot #04)
	Section Origin
	Section Azimuth
	25.00ft
	1046.00ft
	25.00ft
	N 0.00, E 0.00 ft
	344.63°

Department of Environmental Protection

05/26/2017

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Actual Wellpath Report

Left Fork Unit 4H AWP Proj: 17707

Page n of nn

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Ritchie County, WV	Well	Left Fork Unit 4H
Field	Ritchie	Wellbore	Left Fork Unit 4H AWB
Facility	Lockhart Heirs West Pad		

WELLPATH DATA (371 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)	Comments
0.00	0.00	310.490	0.00	0.00	0.00	0.00	1660768.84	14230941.12	39°11'22.184"N	80°55'41.415"W	0.00	0.000	0.00	
25.00	0.00	310.490	25.00	0.00	0.00	0.00	1660768.84	14230941.12	39°11'22.184"N	80°55'41.415"W	0.00	0.000	0.00	
100.00	0.320	310.490	100.00	0.17	0.14	-0.16	1660768.68	14230941.26	39°11'22.185"N	80°55'41.417"W	0.21	310.490	0.43	SDI Std. Keeper Gyro (100°-5650.01°)
125.00	0.070	136.350	125.00	0.22	0.17	-0.20	1660768.64	14230941.25	39°11'22.185"N	80°55'41.417"W	0.26	310.152	1.56	
150.00	0.280	118.020	150.00	0.16	0.13	-0.14	1660768.70	14230941.29	39°11'22.185"N	80°55'41.416"W	0.19	313.537	0.86	
175.00	0.160	97.740	175.00	0.11	0.10	-0.05	1660768.79	14230941.22	39°11'22.185"N	80°55'41.415"W	0.11	333.298	0.57	
200.00	0.290	104.690	200.00	0.06	0.08	0.05	1660768.89	14230941.20	39°11'22.185"N	80°55'41.414"W	0.09	31.570	0.53	
225.00	0.260	127.970	225.00	-0.02	0.03	0.15	1660768.99	14230941.15	39°11'22.184"N	80°55'41.413"W	0.15	80.551	0.46	
250.00	0.130	122.940	250.00	-0.08	-0.02	0.22	1660769.06	14230941.10	39°11'22.184"N	80°55'41.412"W	0.22	96.413	0.52	
275.00	0.240	137.500	275.00	-0.15	-0.08	0.28	1660769.12	14230941.04	39°11'22.183"N	80°55'41.411"W	0.29	105.709	0.48	
300.00	0.370	117.840	300.00	-0.25	-0.16	0.39	1660769.23	14230940.96	39°11'22.182"N	80°55'41.410"W	0.42	111.938	0.66	
325.00	0.320	109.350	325.00	-0.35	-0.22	0.52	1660769.36	14230940.90	39°11'22.182"N	80°55'41.408"W	0.57	112.385	0.29	
350.00	0.530	118.110	350.00	-0.47	-0.29	0.69	1660769.53	14230940.83	39°11'22.181"N	80°55'41.406"W	0.75	112.982	0.88	
375.00	0.630	124.560	375.00	-0.65	-0.43	0.91	1660769.75	14230940.69	39°11'22.180"N	80°55'41.403"W	1.00	115.149	0.48	
400.00	0.190	112.740	399.99	-0.78	-0.52	1.06	1660769.90	14230940.60	39°11'22.179"N	80°55'41.401"W	1.18	116.156	1.78	
425.00	0.240	105.760	424.99	-0.83	-0.55	1.15	1660769.99	14230940.57	39°11'22.178"N	80°55'41.400"W	1.27	115.620	0.23	
450.00	0.140	140.810	449.99	-0.89	-0.59	1.22	1660770.06	14230940.53	39°11'22.178"N	80°55'41.399"W	1.35	115.791	0.60	
475.00	0.250	115.670	474.99	-0.95	-0.64	1.29	1660770.13	14230940.48	39°11'22.177"N	80°55'41.398"W	1.43	116.302	0.55	
500.00	0.710	101.800	499.99	-1.04	-0.68	1.44	1660770.27	14230940.44	39°11'22.177"N	80°55'41.397"W	1.59	115.354	0.94	
525.00	1.330	92.560	524.99	-1.15	-0.71	1.76	1660770.60	14230940.41	39°11'22.177"N	80°55'41.392"W	1.90	111.998	2.28	
550.00	1.460	88.040	549.99	-1.29	-0.71	2.28	1660771.12	14230940.41	39°11'22.177"N	80°55'41.386"W	2.39	107.312	1.37	
575.00	2.100	85.440	574.97	-1.44	-0.66	3.03	1660771.87	14230940.46	39°11'22.178"N	80°55'41.376"W	3.11	102.352	2.98	
600.00	2.820	82.960	599.95	-1.61	-0.56	4.06	1660772.90	14230940.56	39°11'22.178"N	80°55'41.363"W	4.10	97.830	2.12	
625.00	3.430	82.520	624.92	-1.79	-0.40	5.30	1660774.14	14230940.72	39°11'22.180"N	80°55'41.347"W	5.32	94.305	2.04	
650.00	3.930	80.430	649.88	-1.97	-0.18	6.77	1660775.61	14230940.94	39°11'22.182"N	80°55'41.329"W	6.77	91.493	2.29	
675.00	4.420	83.070	674.82	-2.18	0.07	8.48	1660777.31	14230941.19	39°11'22.184"N	80°55'41.307"W	8.48	89.534	2.20	
700.00	4.560	87.310	699.74	-2.53	0.23	10.38	1660779.22	14230941.35	39°11'22.186"N	80°55'41.283"W	10.38	88.746	1.92	
725.00	5.240	88.980	724.66	-3.02	0.29	12.45	1660781.28	14230941.41	39°11'22.187"N	80°55'41.257"W	12.45	88.652	1.62	
750.00	5.510	91.510	749.56	-3.63	0.28	14.72	1660783.56	14230941.40	39°11'22.186"N	80°55'41.236"W	14.72	88.908	2.46	
775.00	6.230	91.760	774.42	-4.38	0.21	17.28	1660786.11	14230941.33	39°11'22.186"N	80°55'41.218"W	17.28	89.313	2.88	



Actual Wellpath Report

Left Fork Unit 4H AWP Proj: 17707

Page n of nn



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Ritchie County, WV	Well	Left Fork Unit 4H
Field	Ritchie	Wellbore	Left Fork Unit 4H AWB
Facility	Lockhart Heirs West Pad		

WELLPATH DATA (371 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)	Comments
800.00	6.940	91.150	799.26	-5.21	0.14	20.15	1660788.98	14230941.26	39°11'22.185"N	80°55'41.159"W	20.15	89.615	2.85	
825.00	8.070	91.120	824.04	-6.14	0.07	23.41	1660792.24	14230941.19	39°11'22.184"N	80°55'41.117"W	23.41	89.827	4.52	
850.00	9.090	89.940	848.76	-7.16	0.04	27.14	1660795.97	14230941.16	39°11'22.184"N	80°55'41.070"W	27.14	89.919	4.14	
875.00	9.490	90.750	873.44	-8.25	0.01	31.18	1660800.00	14230941.13	39°11'22.184"N	80°55'41.019"W	31.18	89.975	1.68	
900.00	9.990	90.050	898.08	-9.40	-0.02	35.40	1660804.23	14230941.10	39°11'22.183"N	80°55'40.965"W	35.40	90.025	2.06	
925.00	10.930	88.480	922.66	-10.54	0.05	39.94	1660808.77	14230941.17	39°11'22.184"N	80°55'40.907"W	39.94	89.935	3.93	
950.00	11.700	87.840	947.17	-11.69	0.20	44.85	1660813.67	14230941.32	39°11'22.185"N	80°55'40.845"W	44.85	89.739	3.12	
975.00	12.120	87.710	971.64	-12.86	0.40	50.00	1660818.82	14230941.52	39°11'22.187"N	80°55'40.780"W	50.00	89.537	1.68	
1000.00	12.570	87.540	996.06	-14.06	0.63	55.34	1660824.16	14230941.75	39°11'22.190"N	80°55'40.712"W	55.34	89.352	1.81	
1025.00	12.940	87.530	1020.44	-15.30	0.86	60.86	1660829.67	14230941.98	39°11'22.192"N	80°55'40.642"W	60.86	89.187	1.48	
1050.00	13.230	87.840	1044.79	-16.58	1.09	66.51	1660835.32	14230942.21	39°11'22.194"N	80°55'40.570"W	66.52	89.059	1.19	
1075.00	13.450	87.760	1069.12	-17.89	1.31	72.27	1660841.09	14230942.43	39°11'22.196"N	80°55'40.497"W	72.29	88.959	0.88	
1100.00	13.360	87.650	1093.44	-19.20	1.55	78.07	1660846.87	14230942.66	39°11'22.198"N	80°55'40.423"W	78.08	88.866	0.37	
1125.00	13.180	87.530	1117.77	-20.49	1.79	83.80	1660852.61	14230942.91	39°11'22.201"N	80°55'40.350"W	83.82	88.779	0.73	
1150.00	12.840	88.010	1142.13	-21.77	2.01	89.42	1660858.23	14230943.13	39°11'22.203"N	80°55'40.279"W	89.45	88.715	1.43	
1175.00	12.490	87.210	1166.52	-23.00	2.23	94.90	1660863.70	14230943.35	39°11'22.205"N	80°55'40.209"W	94.93	88.651	1.57	
1200.00	12.000	86.790	1190.93	-24.15	2.52	100.28	1660869.08	14230943.63	39°11'22.208"N	80°55'40.141"W	100.31	88.563	0.51	
1225.00	12.250	86.330	1215.35	-25.26	2.84	105.61	1660874.40	14230943.95	39°11'22.211"N	80°55'40.073"W	105.64	88.462	0.72	
1250.00	12.470	86.070	1239.78	-26.33	3.19	110.95	1660879.74	14230944.31	39°11'22.214"N	80°55'40.006"W	110.99	88.353	0.91	
1275.00	12.840	85.130	1264.17	-27.37	3.61	116.41	1660885.20	14230944.73	39°11'22.219"N	80°55'39.936"W	116.46	88.223	1.69	
1300.00	13.790	83.530	1288.50	-28.34	4.18	122.13	1660890.93	14230945.30	39°11'22.224"N	80°55'39.864"W	122.21	88.038	4.08	
1325.00	14.200	82.910	1312.75	-29.24	4.90	128.14	1660896.93	14230946.02	39°11'22.231"N	80°55'39.787"W	128.23	87.811	1.75	
1350.00	14.380	82.810	1336.98	-30.12	5.66	134.26	1660903.05	14230946.78	39°11'22.239"N	80°55'39.710"W	134.38	87.584	0.73	
1375.00	14.520	83.020	1361.19	-31.02	6.43	140.45	1660909.24	14230947.55	39°11'22.246"N	80°55'39.633"W	140.60	87.377	0.60	
1400.00	14.490	82.390	1385.39	-31.90	7.23	146.66	1660915.44	14230948.35	39°11'22.254"N	80°55'39.552"W	146.84	87.178	0.64	
1425.00	14.170	82.500	1409.61	-32.74	8.04	152.80	1660921.58	14230949.16	39°11'22.262"N	80°55'39.474"W	153.01	86.987	1.28	
1450.00	13.740	81.370	1433.88	-33.51	8.89	158.77	1660927.54	14230950.00	39°11'22.270"N	80°55'39.398"W	159.01	86.796	2.04	
1475.00	13.420	81.350	1458.18	-34.20	9.77	164.57	1660933.34	14230950.89	39°11'22.279"N	80°55'39.325"W	164.86	86.603	1.28	
1500.00	13.380	81.430	1482.50	-34.88	10.64	170.30	1660939.07	14230951.75	39°11'22.288"N	80°55'39.252"W	170.63	86.426	0.18	
1525.00	13.540	81.550	1506.81	-35.58	11.50	176.05	1660944.82	14230952.61	39°11'22.296"N	80°55'39.179"W	176.43	86.263	0.65	



Actual Wellpath Report

Left Fork Unit 4H AWP Proj: 17707

Page n of nn

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Ritchie County, WV	Well	Left Fork Unit 4H
Field	Ritchie	Wellbore	Left Fork Unit 4H AWB
Facility	Lockhart Heirs West Pad		

WELLPATH DATA (371 stations)														
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Seet (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS P(100ft)	Comments
1550.00	13.810	81.880	1531.10	-36.31	12.35	181.90	1660950.67	14230953.46	39°11'22.304"N	80°55'38.104"W	182.32	86.116	1.12	
1575.00	14.150	82.570	1555.36	-37.10	13.17	187.89	1660956.65	14230954.28	39°11'22.312"N	80°55'38.028"W	188.35	85.992	1.51	
1600.00	13.910	83.080	1579.62	-37.97	13.92	193.90	1660962.66	14230955.04	39°11'22.320"N	80°55'38.952"W	194.40	85.893	1.08	
1625.00	13.390	84.540	1603.91	-38.91	14.56	199.76	1660968.52	14230955.67	39°11'22.326"N	80°55'38.878"W	200.29	85.831	2.49	
1650.00	12.930	85.220	1628.25	-39.92	15.07	205.43	1660974.19	14230956.18	39°11'22.331"N	80°55'38.806"W	205.98	85.805	1.94	
1675.00	12.330	85.910	1652.65	-40.96	15.49	210.88	1660979.64	14230956.61	39°11'22.335"N	80°55'38.736"W	211.45	85.798	2.47	
1700.00	12.320	85.170	1677.07	-41.97	15.91	216.20	1660984.96	14230957.02	39°11'22.339"N	80°55'38.669"W	216.79	85.792	0.63	
1725.00	12.450	85.930	1701.49	-42.98	16.32	221.55	1660990.30	14230957.44	39°11'22.343"N	80°55'38.601"W	222.15	85.786	0.83	
1750.00	12.480	86.630	1725.90	-44.07	16.67	226.93	1660995.68	14230957.79	39°11'22.347"N	80°55'38.532"W	227.54	85.798	0.62	
1775.00	12.520	87.110	1750.31	-45.22	16.97	232.34	1661001.08	14230958.08	39°11'22.350"N	80°55'38.464"W	232.95	85.823	0.45	
1800.00	12.820	87.360	1774.70	-46.42	17.23	237.81	1661006.56	14230958.35	39°11'22.352"N	80°55'38.394"W	238.44	85.855	1.22	
1825.00	13.150	87.440	1799.06	-47.66	17.49	243.42	1661012.17	14230958.60	39°11'22.355"N	80°55'38.323"W	244.05	85.891	1.32	
1850.00	13.730	87.790	1823.37	-48.96	17.73	249.23	1661017.97	14230958.84	39°11'22.357"N	80°55'38.249"W	249.86	85.931	2.34	
1875.00	13.960	87.440	1847.65	-50.31	17.98	255.21	1661023.94	14230959.09	39°11'22.359"N	80°55'38.173"W	255.84	85.970	0.98	
1900.00	13.910	86.710	1871.91	-51.61	18.29	261.24	1661029.97	14230959.40	39°11'22.362"N	80°55'38.097"W	261.88	85.996	0.72	
1925.00	13.840	85.830	1896.17	-52.82	18.68	267.24	1661035.97	14230959.79	39°11'22.366"N	80°55'38.021"W	267.89	86.002	1.04	
1950.00	13.810	85.280	1920.45	-53.95	19.14	273.19	1661041.92	14230960.25	39°11'22.371"N	80°55'37.945"W	273.86	85.992	0.54	
1975.00	13.910	85.260	1944.72	-55.06	19.63	279.16	1661047.89	14230960.75	39°11'22.376"N	80°55'37.869"W	279.85	85.977	0.40	
2000.00	13.950	86.630	1968.99	-56.24	20.06	285.16	1661053.89	14230961.17	39°11'22.380"N	80°55'37.793"W	285.87	85.976	1.33	
2025.00	13.910	88.200	1993.25	-57.57	20.33	291.17	1661059.90	14230961.44	39°11'22.382"N	80°55'37.717"W	291.88	86.006	1.52	
2050.00	13.750	88.670	2017.53	-59.00	20.49	297.15	1661065.87	14230961.72	39°11'22.384"N	80°55'37.641"W	297.85	86.055	0.78	
2075.00	13.570	89.220	2041.82	-60.46	20.60	303.05	1661071.77	14230962.06	39°11'22.386"N	80°55'37.566"W	303.75	86.111	0.89	
2100.00	12.730	88.300	2066.16	-61.85	20.73	308.74	1661077.45	14230962.42	39°11'22.388"N	80°55'37.493"W	309.43	86.160	3.46	
2125.00	12.030	86.830	2090.58	-63.05	20.95	314.09	1661082.81	14230962.86	39°11'22.392"N	80°55'37.425"W	314.79	86.184	3.07	
2150.00	14.350	85.130	2115.06	-64.05	21.30	319.14	1661087.86	14230963.33	39°11'22.396"N	80°55'37.361"W	319.85	86.181	3.05	
2175.00	14.030	84.320	2139.59	-64.90	21.72	323.98	1661092.69	14230963.86	39°11'22.401"N	80°55'37.300"W	324.70	86.159	1.43	
2200.00	14.640	84.130	2164.14	-65.68	22.25	328.65	1661097.36	14230964.36	39°11'22.406"N	80°55'37.241"W	329.40	86.132	1.57	
2225.00	13.340	83.420	2188.73	-66.41	22.72	333.18	1661101.88	14230964.83	39°11'22.411"N	80°55'37.183"W	333.95	86.100	1.31	
2250.00	13.380	82.970	2213.32	-67.08	23.25	337.64	1661106.34	14230965.36	39°11'22.416"N	80°55'37.126"W	338.44	86.061	0.36	
2275.00	13.100	83.000	2237.90	-67.74	23.81	342.18	1661110.88	14230965.92	39°11'22.421"N	80°55'37.069"W	343.01	86.020	1.28	

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Actual Wellpath Report

Left Fork Unit 4H AWP Proj: 17707

Page n of nn



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Ritchie County, WV	Well	Left Fork Unit 4H
Field	Ritchie	Wellbore	Left Fork Unit 4H AWB
Facility	Lockhart Heirs West Pad		

WELLPATH DATA (371 stations)

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Seet (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Comments
2300.00	11.330	83.240	2262.44	-68.45	24.38	346.92	1661115.62	14230965.49	39°11'22.422"N	80°55'37.008"W	347.78	85.980	2.53	
2325.00	11.790	83.910	2286.93	-69.22	24.94	351.90	1661120.60	14230986.05	39°11'22.427"N	80°55'36.945"W	352.78	85.946	1.92	
2350.00	12.110	85.360	2311.39	-70.13	25.42	357.05	1661125.75	14230966.53	39°11'22.432"N	80°55'36.880"W	357.96	85.928	1.77	
2375.00	12.320	86.090	2335.82	-71.15	25.81	362.33	1661131.02	14230966.92	39°11'22.436"N	80°55'36.813"W	363.25	85.925	1.03	
2400.00	12.080	85.920	2360.26	-72.19	26.18	367.60	1661136.29	14230967.29	39°11'22.440"N	80°55'36.746"W	368.53	85.926	0.97	
2425.00	11.820	85.700	2384.71	-73.19	26.56	372.76	1661141.45	14230967.67	39°11'22.443"N	80°55'36.680"W	373.71	85.924	1.06	
2450.00	11.230	84.560	2409.21	-74.10	26.98	377.74	1661146.43	14230968.05	39°11'22.447"N	80°55'36.617"W	378.70	85.914	2.53	
2475.00	10.770	81.990	2433.75	-74.82	27.54	382.47	1661151.16	14230968.65	39°11'22.453"N	80°55'36.557"W	383.46	85.882	2.69	
2500.01	10.290	80.230	2458.34	-75.34	28.24	386.99	1661155.67	14230969.35	39°11'22.460"N	80°55'36.500"W	388.02	85.826	2.31	
2525.01	10.100	79.490	2482.95	-75.74	29.02	391.34	1661160.03	14230970.13	39°11'22.468"N	80°55'36.444"W	392.42	85.759	0.92	
2550.01	9.810	76.800	2507.57	-76.01	29.91	395.57	1661164.25	14230971.02	39°11'22.476"N	80°55'36.390"W	396.70	85.676	2.19	
2575.01	9.890	76.390	2532.20	-76.16	30.90	399.73	1661168.41	14230972.01	39°11'22.486"N	80°55'36.336"W	400.93	85.580	0.43	
2600.01	10.410	81.200	2556.81	-76.48	31.75	404.05	1661172.73	14230972.86	39°11'22.494"N	80°55'36.283"W	405.30	85.507	3.98	
2625.01	11.380	84.200	2581.36	-77.15	32.35	408.74	1661177.41	14230973.45	39°11'22.500"N	80°55'36.223"W	410.02	85.475	4.49	
2650.01	12.180	86.250	2605.83	-78.09	32.77	413.82	1661182.50	14230973.87	39°11'22.504"N	80°55'36.159"W	415.12	85.473	3.61	
2675.01	12.390	86.470	2630.26	-79.17	33.10	419.13	1661187.80	14230974.21	39°11'22.508"N	80°55'36.091"W	420.44	85.484	0.86	
2700.01	12.450	86.330	2654.67	-80.27	33.44	424.50	1661193.17	14230974.55	39°11'22.511"N	80°55'36.023"W	425.81	85.495	0.27	
2725.01	13.560	84.070	2679.03	-81.29	33.92	430.10	1661198.77	14230975.02	39°11'22.516"N	80°55'35.952"W	431.44	85.491	4.88	
2750.01	14.020	82.780	2703.31	-82.20	34.60	436.02	1661204.69	14230975.71	39°11'22.522"N	80°55'35.877"W	437.39	85.463	2.21	
2775.01	14.390	81.560	2727.55	-83.01	35.44	442.10	1661210.76	14230976.54	39°11'22.531"N	80°55'35.800"W	443.52	85.417	1.90	
2800.01	14.470	79.300	2751.76	-83.64	36.47	448.24	1661216.90	14230977.58	39°11'22.541"N	80°55'35.722"W	449.72	85.348	2.28	
2825.01	14.660	77.780	2775.96	-84.07	37.72	454.40	1661223.06	14230978.83	39°11'22.553"N	80°55'35.643"W	455.97	85.254	1.71	
2850.01	14.730	77.210	2800.14	-84.38	39.10	460.59	1661229.25	14230980.20	39°11'22.567"N	80°55'35.565"W	462.25	85.148	0.64	
2875.01	14.610	76.840	2824.32	-84.65	40.52	466.76	1661235.42	14230981.62	39°11'22.581"N	80°55'35.486"W	468.52	85.039	0.61	
2900.01	13.970	77.880	2848.55	-84.94	41.87	472.79	1661241.44	14230982.97	39°11'22.594"N	80°55'35.410"W	474.64	84.939	2.76	
2925.01	12.740	80.940	2872.87	-85.41	42.94	478.46	1661247.11	14230984.04	39°11'22.604"N	80°55'35.338"W	480.38	84.872	5.67	
2950.01	12.140	81.130	2897.29	-86.02	43.78	483.78	1661252.42	14230984.88	39°11'22.613"N	80°55'35.270"W	485.75	84.829	2.41	
2975.01	12.090	80.300	2921.73	-86.57	44.62	488.96	1661257.60	14230985.72	39°11'22.621"N	80°55'35.204"W	490.99	84.766	0.72	
3000.01	12.040	78.360	2946.18	-87.00	45.59	494.09	1661262.73	14230986.69	39°11'22.630"N	80°55'35.139"W	496.19	84.728	1.63	
3025.01	11.950	76.910	2970.64	-87.27	46.70	499.14	1661267.78	14230987.80	39°11'22.641"N	80°55'35.075"W	501.32	84.655	1.42	

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Actual Wellpath Report

Left Fork Unit 4H AWP Proj: 17707

Page n of nn



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Ritchie County, WV	Well	Left Fork Unit 4H
Field	Ritchie	Wellbore	Left Fork Unit 4H AWB
Facility	Lockhart Heirs West Pad		

WELLPATH DATA (371 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 r/(100ft)	Comments
3050.01	11.980	75.880	2995.10	-87.43	47.91	504.16	1661272.80	14230989.01	39°11'22.653"N	80°55'35.011"W	506.43	84.571	1.00	
3075.01	12.020	75.360	3019.55	-87.52	49.20	509.20	1661277.83	14230990.30	39°11'22.666"N	80°55'34.947"W	511.57	84.481	0.48	
3100.01	12.200	81.010	3044.00	-87.85	50.27	514.32	1661282.96	14230991.37	39°11'22.677"N	80°55'34.882"W	516.77	84.417	4.79	
3125.01	12.300	83.920	3068.43	-88.57	50.97	519.58	1661288.21	14230992.07	39°11'22.683"N	80°55'34.815"W	522.07	84.397	2.50	
3150.01	12.210	84.830	3092.86	-89.47	51.49	524.86	1661293.49	14230992.59	39°11'22.689"N	80°55'34.748"W	527.38	84.397	0.85	
3175.01	12.090	85.710	3117.30	-90.44	51.92	530.10	1661298.73	14230993.02	39°11'22.693"N	80°55'34.682"W	532.64	84.406	0.88	
3200.01	12.130	91.940	3141.74	-91.72	52.03	535.34	1661303.97	14230993.13	39°11'22.694"N	80°55'34.615"W	537.86	84.449	5.23	
3225.01	12.000	93.330	3166.19	-93.34	51.79	540.56	1661309.18	14230992.89	39°11'22.691"N	80°55'34.549"W	543.04	84.527	1.27	
3250.01	11.900	93.300	3190.65	-95.00	51.49	545.73	1661314.35	14230992.59	39°11'22.688"N	80°55'34.483"W	548.15	84.610	0.40	
3275.01	11.980	93.550	3215.11	-96.66	51.18	550.89	1661319.51	14230992.28	39°11'22.685"N	80°55'34.418"W	553.26	84.692	0.38	
3300.01	11.780	92.550	3239.57	-98.29	50.91	556.03	1661324.64	14230992.01	39°11'22.683"N	80°55'34.352"W	558.35	84.769	1.20	
3325.01	11.390	91.710	3264.06	-99.80	50.72	561.04	1661329.65	14230991.82	39°11'22.681"N	80°55'34.289"W	563.33	84.834	1.63	
3350.01	11.060	91.050	3288.59	-101.20	50.60	565.90	1661334.52	14230991.62	39°11'22.679"N	80°55'34.227"W	568.16	84.890	1.42	
3375.01	10.600	91.020	3313.14	-102.53	50.52	570.60	1661339.21	14230991.62	39°11'22.678"N	80°55'34.167"W	572.83	84.941	1.84	
3400.01	10.310	90.800	3337.73	-103.80	50.45	575.14	1661343.75	14230991.55	39°11'22.678"N	80°55'34.110"W	577.34	84.987	1.17	
3425.01	10.220	90.600	3362.33	-105.03	50.39	579.59	1661348.20	14230991.49	39°11'22.677"N	80°55'34.053"W	581.78	85.031	0.39	
3450.01	10.090	89.630	3386.93	-106.21	50.38	584.00	1661352.60	14230991.48	39°11'22.677"N	80°55'33.997"W	586.17	85.069	0.86	
3475.01	10.930	92.010	3411.51	-107.48	50.31	588.56	1661357.16	14230991.41	39°11'22.676"N	80°55'33.939"W	590.70	85.114	3.78	
3500.01	11.340	93.930	3436.04	-109.00	50.06	593.38	1661361.98	14230991.16	39°11'22.674"N	80°55'33.878"W	595.49	85.178	2.21	
3525.01	11.410	93.820	3460.55	-110.63	49.73	598.30	1661366.90	14230990.83	39°11'22.671"N	80°55'33.816"W	600.36	85.249	0.29	
3550.01	11.390	94.260	3485.06	-112.27	49.38	603.23	1661371.82	14230990.17	39°11'22.667"N	80°55'33.753"W	605.24	85.320	0.36	
3575.01	12.230	92.760	3509.53	-113.93	49.07	608.33	1661376.93	14230989.96	39°11'22.664"N	80°55'33.688"W	610.31	85.388	3.58	
3600.01	12.410	91.710	3533.95	-115.54	48.86	613.66	1661382.26	14230989.96	39°11'22.662"N	80°55'33.620"W	615.61	85.448	1.15	
3625.01	12.460	91.540	3558.37	-117.11	48.71	619.04	1661387.64	14230989.81	39°11'22.660"N	80°55'33.552"W	620.96	85.501	0.25	
3650.01	12.300	90.540	3582.79	-118.63	48.61	624.40	1661392.99	14230989.71	39°11'22.659"N	80°55'33.484"W	626.29	85.548	1.07	
3675.01	12.050	88.940	3607.22	-120.00	48.63	629.68	1661398.26	14230989.74	39°11'22.659"N	80°55'33.417"W	631.55	85.583	1.68	
3700.01	11.790	87.320	3631.69	-121.21	48.80	634.84	1661403.42	14230989.90	39°11'22.661"N	80°55'33.352"W	636.71	85.604	1.69	
3725.01	11.620	85.780	3656.17	-122.26	49.11	639.90	1661408.48	14230990.21	39°11'22.664"N	80°55'33.287"W	641.78	85.612	1.42	
3750.01	11.740	84.310	3680.65	-123.17	49.54	644.94	1661413.52	14230990.64	39°11'22.668"N	80°55'33.223"W	646.84	85.607	1.28	
3775.01	11.560	82.270	3705.13	-123.93	50.13	649.95	1661418.53	14230991.23	39°11'22.674"N	80°55'33.160"W	651.88	85.589	1.80	



Actual Wellpath Report

Left Fork Unit 4H AWP Proj: 17707

Page n of nn



REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #04
ANTERO RESOURCES CORPORATION	Well	Left Fork Unit 4H
Area	Wellbore	Left Fork Unit 4H AWB
Field		
Facility		

WELLPATH DATA (371 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)	Comments
3800.01	11.260	80.570	3729.64	-124.51	50.87	654.84	1661423.42	14230991.97	39°11'22.881"N	80°55'33.097"W	656.82	85.558	1.84	
3825.01	10.920	80.570	3754.17	-125.01	51.66	659.59	1661428.16	14230992.76	39°11'22.689"N	80°55'33.037"W	661.61	85.521	1.36	
3850.01	10.800	85.460	3778.72	-125.69	52.24	664.26	1661432.83	14230993.34	39°11'22.695"N	80°55'32.978"W	666.31	85.504	3.72	
3875.01	11.030	88.990	3803.27	-126.73	52.46	668.98	1661437.55	14230993.56	39°11'22.697"N	80°55'32.918"W	671.04	85.516	2.83	
3900.01	11.140	89.450	3827.81	-127.94	52.53	673.79	1661442.36	14230993.63	39°11'22.698"N	80°55'32.857"W	675.83	85.542	0.56	
3925.01	11.350	89.200	3852.33	-129.17	52.59	678.66	1661447.23	14230993.69	39°11'22.698"N	80°55'32.795"W	680.70	85.569	0.86	
3950.01	11.890	88.800	3876.81	-130.42	52.88	683.70	1661452.26	14230993.77	39°11'22.699"N	80°55'32.731"W	685.72	85.594	2.18	
3975.01	11.930	88.430	3901.28	-131.67	52.80	688.86	1661457.42	14230993.90	39°11'22.700"N	80°55'32.665"W	690.88	85.617	0.34	
4000.01	12.470	88.100	3925.71	-132.92	52.96	694.14	1661462.70	14230994.06	39°11'22.702"N	80°55'32.598"W	696.15	85.637	2.18	
4025.01	12.670	86.930	3950.11	-134.13	53.20	699.57	1661468.13	14230994.30	39°11'22.704"N	80°55'32.529"W	701.59	85.651	1.30	
4050.01	13.330	85.760	3974.47	-135.27	53.56	705.18	1661473.74	14230994.66	39°11'22.708"N	80°55'32.458"W	707.22	85.657	2.84	
4075.01	13.420	86.160	3998.79	-136.40	53.96	710.95	1661479.51	14230995.06	39°11'22.711"N	80°55'32.385"W	713.00	85.659	0.52	
4100.01	13.360	85.680	4023.11	-137.54	54.38	716.73	1661485.28	14230995.47	39°11'22.716"N	80°55'32.311"W	718.79	85.661	0.51	
4125.01	13.090	85.240	4047.45	-138.61	54.83	722.43	1661490.98	14230995.93	39°11'22.720"N	80°55'32.239"W	724.51	85.660	1.15	
4150.01	12.840	85.170	4071.81	-139.64	55.30	728.02	1661496.57	14230996.40	39°11'22.725"N	80°55'32.168"W	730.12	85.656	1.00	
4175.01	12.930	85.260	4096.18	-140.67	55.76	733.57	1661502.12	14230996.86	39°11'22.729"N	80°55'32.097"W	735.69	85.653	0.37	
4200.01	12.490	84.960	4120.57	-141.67	56.23	739.04	1661507.59	14230997.33	39°11'22.734"N	80°55'32.028"W	741.18	85.649	1.98	
4225.01	12.490	84.280	4144.98	-142.60	56.74	744.42	1661512.96	14230997.83	39°11'22.739"N	80°55'31.960"W	746.57	85.642	0.62	
4250.01	12.290	83.820	4169.40	-143.48	57.29	749.75	1661518.29	14230998.39	39°11'22.744"N	80°55'31.892"W	751.94	85.630	0.89	
4275.01	12.300	83.090	4193.83	-144.30	57.90	755.04	1661523.58	14230998.90	39°11'22.750"N	80°55'31.825"W	757.26	85.615	0.62	
4300.01	12.260	82.130	4218.26	-145.03	58.58	760.31	1661528.85	14230999.41	39°11'22.757"N	80°55'31.758"W	762.57	85.594	0.83	
4325.01	12.010	81.820	4242.70	-145.71	59.32	765.52	1661534.05	14231000.41	39°11'22.764"N	80°55'31.692"W	767.81	85.569	1.03	
4350.01	11.900	81.620	4267.16	-146.35	60.06	770.64	1661539.17	14231001.16	39°11'22.771"N	80°55'31.627"W	772.98	85.544	0.47	
4375.01	11.820	82.550	4291.62	-147.01	60.77	775.73	1661544.26	14231001.86	39°11'22.778"N	80°55'31.562"W	778.11	85.521	0.83	
4400.01	12.700	82.160	4316.08	-147.71	61.46	780.86	1661549.39	14231002.55	39°11'22.785"N	80°55'31.497"W	783.28	85.500	1.17	
4425.01	13.050	81.330	4340.48	-148.67	61.95	786.28	1661554.80	14231003.04	39°11'22.790"N	80°55'31.428"W	788.72	85.495	5.89	
4450.01	13.470	88.450	4364.81	-149.99	62.16	792.01	1661560.53	14231003.25	39°11'22.792"N	80°55'31.355"W	794.45	85.513	1.97	
4475.01	13.990	88.540	4389.10	-151.41	62.31	797.94	1661566.46	14231003.41	39°11'22.793"N	80°55'31.280"W	800.37	85.535	2.08	
4500.01	13.770	88.670	4413.37	-152.86	62.46	803.94	1661572.45	14231003.55	39°11'22.795"N	80°55'31.204"W	806.36	85.557	0.89	
4525.01	14.090	88.110	4437.63	-154.29	62.63	809.95	1661578.47	14231003.72	39°11'22.796"N	80°55'31.127"W	812.37	85.578	1.39	



Actual Wellpath Report

Left Fork Unit 4H AWP Proj: 17707

Page n of nn



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Ritchie County, WV	Well	Left Fork Unit 4H
Field	Ritchie	Wellbore	Left Fork Unit 4H AWB
Facility	Lockhart Heirs West Pad		

WELLPATH DATA (371 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)	Comments
4550.01	14.340	87.710	4461.87	-155.70	62.85	816.09	1661584.60	14231003.95	39°11'22.798"N	80°55'31.049"W	818.51	85.596	1.07	
4575.01	14.610	87.560	4486.07	-157.11	63.11	822.33	1661590.84	14231004.21	39°11'22.801"N	80°55'30.970"W	824.75	85.611	1.09	
4600.01	14.570	87.240	4510.27	-158.50	63.40	828.62	1661597.13	14231004.49	39°11'22.804"N	80°55'30.890"W	831.04	85.625	0.39	
4625.01	14.600	86.870	4534.46	-159.85	63.72	834.91	1661603.41	14231004.81	39°11'22.807"N	80°55'30.810"W	837.34	85.636	0.39	
4650.01	14.720	86.390	4558.65	-161.17	64.09	841.23	1661609.73	14231005.19	39°11'22.811"N	80°55'30.730"W	843.66	85.643	0.68	
4675.01	14.840	85.940	4582.82	-162.44	64.52	847.59	1661616.09	14231005.61	39°11'22.815"N	80°55'30.649"W	850.04	85.647	0.66	
4700.01	14.830	85.180	4606.99	-163.66	65.01	853.97	1661622.47	14231006.11	39°11'22.820"N	80°55'30.568"W	856.44	85.646	0.78	
4725.01	15.056	84.610	4631.14	-164.81	65.59	860.39	1661628.89	14231006.68	39°11'22.825"N	80°55'30.487"W	862.89	85.641	1.06	
4750.01	15.240	84.250	4655.27	-165.92	66.22	866.89	1661635.38	14231007.32	39°11'22.831"N	80°55'30.404"W	869.42	85.632	0.85	
4775.01	14.850	85.240	4679.42	-167.06	66.82	873.35	1661641.84	14231007.91	39°11'22.837"N	80°55'30.322"W	875.91	85.625	1.87	
4800.01	13.790	87.850	4703.64	-168.33	67.19	879.52	1661648.01	14231008.29	39°11'22.841"N	80°55'30.244"W	882.09	85.631	4.96	
4825.01	13.580	88.160	4727.93	-169.70	67.40	885.43	1661653.92	14231008.49	39°11'22.843"N	80°55'30.169"W	888.00	85.647	0.89	
4850.01	13.530	88.080	4752.24	-171.06	67.59	891.29	1661659.77	14231008.69	39°11'22.845"N	80°55'30.094"W	893.85	85.663	0.21	
4875.01	13.810	88.140	4776.53	-172.44	67.79	897.20	1661665.68	14231008.88	39°11'22.847"N	80°55'29.019"W	899.75	85.679	1.12	
4900.01	14.090	87.340	4800.79	-173.81	68.03	903.22	1661671.69	14231009.12	39°11'22.849"N	80°55'29.943"W	905.78	85.683	1.36	
4925.01	14.380	87.630	4825.02	-175.17	68.30	909.36	1661677.83	14231009.39	39°11'22.852"N	80°55'29.865"W	911.92	85.705	1.19	
4950.01	14.680	87.600	4849.22	-176.58	68.56	915.63	1661684.10	14231009.65	39°11'22.854"N	80°55'29.785"W	918.19	85.718	1.20	
4975.01	14.110	89.670	4873.44	-178.08	68.71	921.84	1661690.31	14231009.80	39°11'22.855"N	80°55'29.706"W	924.40	85.737	3.07	
5000.01	13.540	91.350	4897.71	-179.72	68.66	927.81	1661696.28	14231009.75	39°11'22.855"N	80°55'29.630"W	930.35	85.768	2.79	
5025.01	12.720	91.190	4922.04	-181.40	68.50	933.58	1661702.05	14231009.59	39°11'22.853"N	80°55'29.557"W	936.09	85.803	1.56	
5050.01	11.970	92.220	4946.40	-183.02	68.36	939.18	1661707.64	14231009.29	39°11'22.852"N	80°55'29.486"W	941.66	85.837	1.83	
5075.01	11.580	93.050	4970.82	-184.59	68.20	944.52	1661712.98	14231009.29	39°11'22.850"N	80°55'29.418"W	946.98	85.870	3.13	
5100.01	11.900	93.320	4995.30	-186.16	67.97	949.62	1661718.08	14231009.06	39°11'22.848"N	80°55'29.354"W	952.05	85.906	1.70	
5125.01	12.030	92.390	5019.78	-187.78	67.68	954.70	1661723.15	14231008.78	39°11'22.843"N	80°55'29.289"W	957.09	85.945	1.30	
5150.01	12.450	91.100	5044.23	-189.40	67.43	959.87	1661728.33	14231008.52	39°11'22.841"N	80°55'29.223"W	962.24	85.982	0.93	
5175.01	12.520	89.680	5068.66	-190.98	67.24	965.17	1661733.62	14231008.33	39°11'22.841"N	80°55'29.156"W	967.51	86.015	1.79	
5200.01	12.530	89.680	5093.07	-192.54	67.11	970.57	1661739.02	14231008.20	39°11'22.839"N	80°55'29.087"W	972.89	86.045	0.55	
5225.01	11.880	89.280	5117.48	-194.01	67.07	975.99	1661744.44	14231008.17	39°11'22.839"N	80°55'29.019"W	978.29	86.069	1.23	
5250.01	10.580	89.490	5141.91	-195.37	67.12	981.28	1661749.72	14231008.21	39°11'22.839"N	80°55'28.951"W	983.57	86.087	2.62	
5275.01	10.580	89.490	5166.43	-196.61	67.17	986.15	1661754.59	14231008.27	39°11'22.840"N	80°55'28.890"W	988.43	86.103	5.20	

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Actual Wellpath Report

Left Fork Unit 4H AWP Proj: 17707

Page n of nn

REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Ritchie County, WV	Well	Left Fork Unit 4H
Field	Ritchie	Wellbore	Left Fork Unit 4H AWB
Facility	Lockhart Heirs West Pad		

WELLPATH DATA (371 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)	Comments
5300.01	10.310	89.840	5191.02	-197.78	67.21	980.68	1661739.12	14231008.30	39°11'22.840"N	80°55'28.832"W	992.96	86.119	1.09	
5325.01	10.520	89.000	5215.61	-198.92	67.26	995.20	1661763.64	14231008.35	39°11'22.841"N	80°55'28.775"W	997.47	86.133	0.96	
5350.01	11.130	89.380	5240.16	-200.10	67.33	999.89	1661768.33	14231008.42	39°11'22.841"N	80°55'28.715"W	1002.16	86.148	2.46	
5375.01	11.470	88.650	5264.68	-201.32	67.41	1004.79	1661773.23	14231008.50	39°11'22.842"N	80°55'28.653"W	1007.05	86.162	1.48	
5400.01	11.860	89.160	5289.16	-202.57	67.51	1009.84	1661778.28	14231008.60	39°11'22.843"N	80°55'28.589"W	1012.10	86.175	1.61	
5425.01	12.350	88.990	5313.61	-203.87	67.59	1015.09	1661783.52	14231008.69	39°11'22.844"N	80°55'28.522"W	1017.33	86.190	1.97	
5450.01	12.730	89.370	5338.01	-205.24	67.67	1020.51	1661788.94	14231008.76	39°11'22.844"N	80°55'28.453"W	1022.75	86.206	1.56	
5475.01	13.440	89.120	5362.36	-206.67	67.75	1026.17	1661794.60	14231008.84	39°11'22.845"N	80°55'28.381"W	1028.41	86.223	2.85	
5500.01	14.060	89.810	5386.64	-208.19	67.80	1032.11	1661800.54	14231008.89	39°11'22.846"N	80°55'28.306"W	1034.34	86.242	2.57	
5525.01	14.540	89.140	5410.87	-209.77	67.86	1038.29	1661806.71	14231008.95	39°11'22.846"N	80°55'28.227"W	1040.50	86.261	2.03	
5550.01	13.660	87.510	5435.12	-211.21	68.03	1044.38	1661812.80	14231009.13	39°11'22.848"N	80°55'28.150"W	1046.59	86.273	3.86	
5575.01	12.650	84.780	5459.46	-212.35	68.41	1050.58	1661818.47	14231009.50	39°11'22.851"N	80°55'28.078"W	1052.28	86.273	4.74	
5600.01	13.040	83.390	5483.83	-213.27	68.98	1055.58	1661824.00	14231010.08	39°11'22.857"N	80°55'28.008"W	1057.83	86.261	1.99	
5625.01	13.430	83.260	5508.17	-214.13	69.65	1061.26	1661829.68	14231010.74	39°11'22.864"N	80°55'27.936"W	1063.55	86.245	1.56	
5650.01	13.710	83.280	5532.47	-215.01	70.34	1067.09	1661835.50	14231011.43	39°11'22.870"N	80°55'27.862"W	1069.40	86.229	1.12	
5754.00	17.930	78.340	5632.50	-217.90	75.02	1095.02	1661863.42	14231016.11	39°11'22.916"N	80°55'27.507"W	1097.58	86.081	4.25	BH AT Curve <B-1/2> (5650.01)(5754-17682)
5807.00	18.140	74.430	5682.90	-218.40	78.88	1110.96	1661879.35	14231019.97	39°11'22.955"N	80°55'27.304"W	1113.75	85.938	2.32	
5858.00	18.080	67.100	5731.38	-217.33	84.10	1125.90	1661894.28	14231023.28	39°11'23.006"N	80°55'27.115"W	1129.03	85.728	4.47	
5909.00	17.800	49.900	5779.94	-213.03	92.20	1139.16	1661907.54	14231033.28	39°11'23.086"N	80°55'26.946"W	1142.88	85.373	10.37	
5952.00	18.220	31.630	5820.86	-205.69	102.17	1147.72	1661916.10	14231043.25	39°11'23.184"N	80°55'26.837"W	1152.26	84.913	13.12	
5999.00	19.010	12.920	5865.44	-193.93	115.90	1153.29	1661921.66	14231056.97	39°11'23.320"N	80°55'26.766"W	1159.10	84.261	12.76	
6043.00	18.660	3.610	5907.10	-180.96	129.91	1155.33	1661923.71	14231070.98	39°11'23.458"N	80°55'26.740"W	1162.61	83.584	6.87	
6089.00	18.820	359.680	5950.66	-166.83	144.67	1155.75	1661924.27	14231085.74	39°11'23.604"N	80°55'26.735"W	1164.77	82.865	2.78	
6141.00	21.420	1.130	5999.48	-149.63	162.56	1155.93	1661924.27	14231103.61	39°11'23.781"N	80°55'26.730"W	1167.26	81.995	5.09	
6164.00†	23.044	1.439	6020.77	-141.29	171.26	1156.09	1661924.46	14231112.31	39°11'23.867"N	80°55'26.730"W	1168.70	81.574	7.08	Sycamore 6164' MD
6188.00	24.740	1.720	6042.71	-131.99	180.97	1156.35	1661924.73	14231122.02	39°11'23.963"N	80°55'26.727"W	1170.43	81.105	7.08	
6235.00	27.910	0.050	6084.84	-111.98	201.81	1156.66	1661925.04	14231142.85	39°11'24.169"N	80°55'26.723"W	1174.13	80.103	6.93	
6280.00	34.230	356.580	6123.36	-89.42	225.00	1155.91	1661924.29	14231166.03	39°11'24.398"N	80°55'26.732"W	1177.61	78.985	14.59	
6329.00	39.200	353.550	6162.63	-60.62	254.17	1153.35	1661921.73	14231195.18	39°11'24.687"N	80°55'26.764"W	1181.02	77.572	10.79	
6353.00†	41.949	352.562	6180.86	-45.18	269.66	1151.46	1661919.84	14231210.67	39°11'24.840"N	80°55'26.788"W	1182.61	76.819	11.78	Middlesex 6353' MD



Actual Wellpath Report

Left Fork Unit 4H AWP Proj: 17707

Page n of nn



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Ritchie County, WV	Well	Left Fork Unit 4H
Field	Ritchie	Wellbore	Left Fork Unit 4H AWB
Facility	Lockhart Heirs West Pad		

WELLPATH DATA (371 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 P/100ft	Comments
44.590	351.710	6197.61	-29.55	4.75	319.35	1143.86	1661917.68	14231226.28	39°11'24.994"N	80°55'26.815"W	1184.17	76.060	11.76	
6376.00	49.940	350.230	6229.49	4.75	319.35	1143.86	1661912.25	14231226.34	39°11'25.331"N	80°55'26.884"W	1187.61	74.401	11.61	
6423.00	55.120	347.840	6258.69	42.71	356.73	1136.59	1661904.98	14231297.71	39°11'25.700"N	80°55'26.976"W	1191.26	72.575	11.49	
6517.00	59.820	346.430	6283.42	81.45	394.02	1127.95	1661896.34	14231335.48	39°11'26.074"N	80°55'27.085"W	1194.96	70.722	10.54	
6520.00†	60.191	346.380	6284.91	84.05	397.05	1127.34	1661895.73	14231338.01	39°11'26.099"N	80°55'27.093"W	1195.22	70.598	12.45	Burkett 6520' MD
6563.00	65.510	345.700	6304.53	122.28	434.17	1118.11	1661886.50	14231375.11	39°11'26.466"N	80°55'27.210"W	1199.44	68.779	12.45	
6596.00†	69.092	345.575	6317.26	152.72	463.65	1110.56	1661878.95	14231404.59	39°11'26.758"N	80°55'27.305"W	1203.46	67.340	10.86	Tully 6596' MD
6611.00†	70.720	345.520	6322.42	166.80	477.28	1107.04	1661875.44	14231418.22	39°11'26.892"N	80°55'27.350"W	1205.55	66.677	10.86	
6661.00†	76.085	345.674	6336.69	214.69	523.68	1095.13	1661863.53	14231464.60	39°11'27.351"N	80°55'27.501"W	1213.90	64.443	10.73	Marcellus 6661' MD
6663.00	76.300	345.680	6337.17	216.64	525.57	1094.65	1661863.05	14231466.48	39°11'27.370"N	80°55'27.507"W	1214.28	64.353	10.73	
6704.00	79.730	346.460	6345.68	256.72	564.49	1084.99	1661853.40	14231505.38	39°11'27.754"N	80°55'27.629"W	1223.05	62.513	8.57	
6750.00	80.980	345.680	6353.39	302.06	608.51	1074.08	1661842.49	14231549.38	39°11'28.190"N	80°55'27.767"W	1234.47	60.467	3.19	
6799.00	86.370	344.260	6358.79	350.74	655.52	1061.45	1661829.86	14231596.38	39°11'28.654"N	80°55'27.927"W	1247.55	58.302	11.37	
6844.00	90.220	342.950	6360.12	395.70	698.66	1048.75	1661817.17	14231639.50	39°11'29.081"N	80°55'28.088"W	1260.17	56.329	9.04	
6893.00	89.660	342.590	6360.18	444.68	745.46	1034.24	1661802.67	14231686.29	39°11'29.544"N	80°55'28.272"W	1274.90	54.217	1.36	
6897.00	90.090	345.060	6360.38	538.66	835.74	1008.06	1661776.49	14231776.52	39°11'30.436"N	80°55'28.603"W	1309.44	50.339	2.67	
7081.00	90.220	346.280	6360.13	632.64	926.81	984.80	1661753.24	14231867.56	39°11'31.336"N	80°55'28.898"W	1352.34	46.738	1.32	
7175.00	90.550	340.950	6359.49	726.59	1016.96	958.30	1661726.76	14231957.67	39°11'32.228"N	80°55'29.233"W	1397.34	43.299	5.69	
7269.00	88.150	336.280	6360.56	820.03	1104.45	924.04	1661692.51	14232045.13	39°11'33.093"N	80°55'29.667"W	1440.02	39.918	5.59	
7364.00	89.820	338.050	6362.24	914.21	1191.99	887.18	1661655.67	14232132.63	39°11'33.958"N	80°55'30.135"W	1485.91	36.660	2.56	
7458.00	89.880	341.360	6362.49	1007.85	1280.14	854.58	1661623.08	14232220.75	39°11'34.830"N	80°55'30.548"W	1539.18	33.726	3.52	
7552.00	89.850	343.400	6362.71	1101.77	1369.73	826.13	1661594.64	14232310.30	39°11'35.715"N	80°55'30.908"W	1599.57	31.096	2.17	
7646.00	89.910	344.550	6362.91	1195.76	1460.07	800.18	1661568.70	14232400.60	39°11'36.609"N	80°55'31.233"W	1664.96	28.725	1.23	
7740.00	89.820	345.120	6363.13	1289.76	1550.80	775.59	1661544.12	14232491.29	39°11'37.505"N	80°55'31.548"W	1733.93	26.571	0.61	
7834.00	89.850	345.250	6363.40	1383.75	1641.67	751.56	1661520.09	14232582.13	39°11'38.404"N	80°55'31.853"W	1805.53	24.598	0.14	
7928.00	89.940	346.130	6363.57	1477.74	1732.56	728.32	1661496.87	14232673.18	39°11'39.304"N	80°55'32.147"W	1879.60	22.798	0.94	
8022.00	89.630	346.260	6363.93	1571.70	1824.04	705.89	1661474.45	14232764.43	39°11'40.207"N	80°55'32.431"W	1955.86	21.156	0.36	
8116.00	89.880	346.470	6364.33	1665.66	1915.39	683.73	1661452.30	14232855.74	39°11'41.110"N	80°55'32.711"W	2033.77	19.645	0.35	
8210.00	89.850	345.970	6364.55	1759.62	2006.68	661.34	1661429.92	14232947.00	39°11'42.012"N	80°55'32.995"W	2112.85	18.241	0.53	
8304.00	89.820	344.290	6364.82	1853.61	2097.53	637.22	1661405.81	14233037.81	39°11'42.910"N	80°55'33.300"W	2192.19	16.899	1.79	



Actual Wellpath Report

Left Fork Unit 4H AWP Proj: 17707

Page n of nn



REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #04
ANTERO RESOURCES CORPORATION	Well	Left Fork Unit 4H
Area	Wellbore	Left Fork Unit 4H AWB
Field		
Facility		

WELLPATH DATA (371 stations)

ID	Inclination P1	Azimuth P1	TVD ftr	Vert Sect ftr	North ftr	East ftr	Grid East ftr	Grid North ftr	Latitude	Longitude	Closure Dist ftr	Closure Dir P1	DLS P1/100ftr	Comments	
8398.00	89.820	344.850	6365.12	1947.61	2188.14	612.21	1661380.81	14233128.38	39°11'43.806"N	80°55'33.617"W	2272.17	15.631	0.60		
8492.00	89.910	345.780	6365.34	2041.60	2279.07	588.38	1661356.99	14233219.27	39°11'44.705"N	80°55'33.918"W	2353.79	14.476	0.99		
8680.00	89.850	346.990	6365.53	2135.56	2370.43	566.26	1661334.87	14233310.59	39°11'45.608"N	80°55'34.199"W	2437.12	13.435	1.29		
8774.00	89.630	341.280	6365.86	2323.45	2552.24	518.80	1661287.44	14233402.07	39°11'46.513"N	80°55'34.470"W	2521.50	12.478	0.46		
8868.00	89.940	340.510	6366.21	2417.25	2641.06	488.04	1661256.68	14233581.12	39°11'48.264"N	80°55'35.189"W	2604.44	11.490	5.69		
8962.00	89.750	343.510	6366.47	2511.14	2730.46	459.01	1661203.56	14233670.48	39°11'49.168"N	80°55'35.557"W	2688.77	10.470	0.88		
9056.00	89.910	346.750	6366.75	2605.12	2821.30	434.89	1661152.67	14233761.28	39°11'50.066"N	80°55'36.123"W	2768.77	9.543	3.20		
9150.00	90.150	347.960	6366.70	2699.01	2913.01	414.31	1661182.99	14233852.97	39°11'50.972"N	80°55'36.406"W	2854.62	8.763	3.45		
9244.00	89.940	344.470	6366.62	2792.96	3004.29	391.92	1661160.60	14233944.21	39°11'51.875"N	80°55'36.774"W	2942.33	8.095	1.31		
9338.00	89.660	339.540	6366.95	2886.84	3093.67	362.89	1661131.58	14234033.54	39°11'52.756"N	80°55'37.204"W	3029.75	7.432	3.72		
9433.00	89.750	338.620	6367.44	2981.39	3182.40	328.97	1661097.68	14234122.24	39°11'53.636"N	80°55'37.610"W	3114.88	6.690	5.25		
9526.00	89.880	341.060	6367.74	3074.06	3269.70	296.92	1661065.64	14234209.50	39°11'54.499"N	80°55'38.305"W	3199.36	5.902	0.97		
9621.00	89.940	346.600	6367.38	3168.93	3359.91	267.15	1661035.89	14234299.68	39°11'55.391"N	80°55'38.988"W	3283.15	5.189	2.63		
9715.00	89.880	349.200	6367.53	3256.75	3450.48	242.05	1661010.80	14234390.21	39°11'56.286"N	80°55'39.443"W	3370.52	4.546	1.50		
9809.00	89.720	349.010	6367.86	3345.46	3542.38	222.35	1660991.10	14234482.08	39°11'57.194"N	80°55'39.555"W	3458.96	4.013	4.46		
9903.00	89.800	349.280	6368.09	3434.17	3634.69	204.58	1660973.34	14234574.35	39°11'58.107"N	80°55'38.779"W	3549.35	3.592	2.77		
9997.00	90.000	350.590	6367.94	3527.77	3727.00	186.88	1660955.65	14234666.63	39°11'59.020"N	80°55'39.003"W	3640.44	3.222	0.26		
10091.00	90.310	348.900	6367.54	3617.51	3819.55	170.45	1660939.23	14234759.14	39°11'59.934"N	80°55'39.211"W	3731.69	2.871	0.41		
10185.00	89.420	341.560	6367.76	3705.47	4002.16	126.57	1660920.89	14234851.28	39°12'00.846"N	80°55'39.443"W	3823.36	2.555	1.41		
10279.00	89.000	342.330	6368.23	3791.36	4091.53	97.44	1660895.36	14234941.67	39°12'01.740"N	80°55'39.767"W	3914.69	2.227	3.93		
10373.00	89.510	344.510	6368.64	3878.64	4181.61	70.62	1660866.24	14235031.05	39°12'02.623"N	80°55'40.136"W	4004.16	1.811	5.76		
10467.00	89.850	345.200	6369.16	3965.16	4272.34	46.06	1660839.43	14235121.05	39°12'03.514"N	80°55'40.476"W	4092.69	1.364	1.03		
10561.00	91.020	341.640	6368.44	4052.29	4363.38	18.96	1660814.88	14235211.75	39°12'04.411"N	80°55'40.787"W	4182.21	0.968	2.38		
10656.00	89.750	340.490	6367.81	4296.10	4452.28	-11.54	1660787.79	14235302.74	39°12'05.311"N	80°55'41.130"W	4272.59	0.618	0.82		
10750.00	89.850	342.890	6368.13	4388.97	4540.57	-40.76	1660757.30	14235391.62	39°12'06.190"N	80°55'41.517"W	4363.42	0.249	3.94		
10843.00	89.750	345.010	6368.46	4483.96	4631.86	-67.02	1660728.10	14235479.87	39°12'07.063"N	80°55'41.887"W	4452.30	359.851	1.82		
10938.00	90.250	344.430	6368.46	4577.96	4722.54	-91.79	1660701.85	14235551.12	39°12'07.965"N	80°55'42.219"W	4540.75	359.466	2.58		
11032.00	89.910	346.610	6368.33	4671.94	4813.54	-115.29	1660677.09	14235661.76	39°12'08.861"N	80°55'42.533"W	4632.34	359.171	2.23		
11126.00							1660653.59	14235752.73	39°12'09.761"N	80°55'42.831"W	4723.43	358.886	0.81		
											4814.93	358.628	2.95		



Actual Wellpath Report

Left Fork Unit 4H AWP Proj: 17707

Page n of nn



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Ritchie County, WV	Well	Left Fork Unit 4H
Field	Ritchie	Wellbore	Left Fork Unit 4H AWB
Facility	Lockhart Heirs West Pad		

WELLPATH DATA (371 stations)

ID (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)	Comments
11220.00	90.280	348.110	6368.18	4765.83	4905.26	-135.86	1660633.03	14236844.41	39°12'10.668"N	80°55'43.091"W	4907.14	358.413	1.64	
11314.00	90.460	345.360	6367.57	4859.76	4996.74	-157.43	1660611.47	14235935.86	39°12'11.572"N	80°55'43.364"W	4999.22	358.195	2.93	
11408.00	90.990	339.480	6366.38	4953.64	5086.31	-185.81	1660583.11	14236025.39	39°12'12.458"N	80°55'43.724"W	5089.70	357.908	6.28	
11502.00	89.820	338.290	6365.71	5047.16	5173.99	-219.67	1660549.26	14236113.03	39°12'13.325"N	80°55'44.153"W	5178.65	357.569	1.78	
11596.00	90.580	344.580	6365.39	5140.97	5263.05	-249.58	1660519.36	14236202.06	39°12'14.205"N	80°55'44.532"W	5268.97	357.285	6.74	
11690.00	90.650	345.370	6364.38	5234.96	5353.83	-273.95	1660495.00	14236292.80	39°12'15.103"N	80°55'44.841"W	5360.84	357.071	0.84	
11785.00	90.490	349.670	6363.43	5329.81	5446.56	-294.47	1660474.49	14236385.50	39°12'16.019"N	80°55'45.101"W	5454.52	356.905	4.53	
11878.00	90.430	351.150	6362.68	5422.33	5538.26	-309.96	1660459.00	14236477.15	39°12'16.926"N	80°55'45.297"W	5546.93	356.797	1.59	
11973.00	91.260	351.410	6361.28	5516.68	5632.15	-324.36	1660444.61	14236571.01	39°12'17.854"N	80°55'45.479"W	5641.48	356.704	0.92	
12067.00	91.510	348.990	6359.01	5610.21	5724.74	-340.36	1660428.62	14236663.56	39°12'18.769"N	80°55'45.681"W	5734.85	356.598	2.59	
12161.00	91.510	345.070	6356.53	5704.07	5816.30	-361.44	1660407.54	14236755.08	39°12'19.674"N	80°55'45.948"W	5827.52	356.444	4.17	
12255.00	90.650	343.660	6354.76	5798.05	5906.80	-386.77	1660382.22	14236845.55	39°12'20.569"N	80°55'46.269"W	5919.45	356.254	1.76	
12349.00	90.490	344.560	6353.83	5892.04	5997.20	-412.51	1660356.50	14236935.91	39°12'21.463"N	80°55'46.595"W	6011.37	356.065	0.97	
12444.00	90.580	343.280	6352.94	5987.03	6088.48	-438.82	1660330.20	14237027.15	39°12'22.365"N	80°55'46.928"W	6104.27	355.878	1.35	
12538.00	90.680	341.540	6351.91	6080.95	6178.07	-467.22	1660301.81	14237116.71	39°12'23.261"N	80°55'47.288"W	6195.72	355.675	1.85	
12632.00	90.520	342.350	6350.79	6174.84	6267.44	-496.35	1660272.69	14237206.04	39°12'24.134"N	80°55'47.657"W	6287.06	355.472	0.86	
12726.00	91.050	342.560	6349.81	6268.76	6357.06	-524.69	1660244.36	14237295.63	39°12'25.020"N	80°55'48.016"W	6378.68	355.282	0.28	
12820.00	91.050	341.360	6348.52	6362.65	6446.43	-553.79	1660215.27	14237384.96	39°12'25.904"N	80°55'48.385"W	6470.17	355.090	1.40	
12914.00	90.950	340.800	6348.88	6456.46	6535.34	-584.27	1660184.81	14237473.83	39°12'26.783"N	80°55'48.771"W	6561.40	354.891	0.61	
13009.00	91.140	343.420	6345.14	6551.34	6625.72	-613.44	1660155.84	14237564.18	39°12'27.676"N	80°55'49.141"W	6654.06	354.710	2.76	
13103.00	91.050	344.590	6343.35	6645.32	6716.06	-639.34	1660129.76	14237654.49	39°12'28.569"N	80°55'49.469"W	6746.43	354.562	1.25	
13197.00	91.050	347.860	6341.62	6739.25	6807.33	-661.72	1660107.39	14237745.72	39°12'29.472"N	80°55'49.753"W	6839.42	354.448	3.48	
13291.00	91.050	348.960	6339.90	6833.03	6899.40	-680.60	1660088.51	14237837.75	39°12'30.382"N	80°55'49.992"W	6932.89	354.366	1.17	
13385.00	90.620	347.300	6338.53	6926.84	6991.37	-699.93	1660069.19	14237929.69	39°12'31.291"N	80°55'50.236"W	7026.32	354.283	1.82	
13479.00	90.228	345.140	6337.84	7020.80	7082.66	-722.32	1660046.81	14238020.94	39°12'32.193"N	80°55'50.520"W	7119.40	354.177	2.34	
13573.00	90.430	343.170	6337.31	7114.79	7173.08	-747.98	1660021.16	14238111.32	39°12'33.087"N	80°55'50.845"W	7211.98	354.047	2.11	
13668.00	90.280	340.640	6336.77	7209.67	7263.38	-777.49	1660000.67	14238201.58	39°12'33.980"N	80°55'51.219"W	7304.87	353.880	2.87	
13762.00	90.280	340.000	6336.37	7302.41	7350.94	-808.81	1659980.36	14238289.11	39°12'34.846"N	80°55'51.616"W	7395.30	353.721	0.69	
13856.00	90.490	343.830	6335.73	7397.28	7441.23	-838.29	1659960.89	14238379.36	39°12'35.738"N	80°55'51.990"W	7488.30	353.572	4.04	
13950.00	90.820	349.360	6334.82	7491.18	7532.63	-868.07	1659940.11	14238470.73	39°12'36.642"N	80°55'52.265"W	7581.57	353.486	5.88	

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Actual Wellpath Report

Left Fork Unit 4H AWP Proj: 17707

Page n of nn



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Ritchie County, WV	Well	Left Fork Unit 4H
Field	Ritchie	Wellbore	Left Fork Unit 4H AWB
Facility	Lockhart Heirs West Pad		

WELLPATH DATA (371 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 P/100ft	Comments
14044.00	90.490	348.560	6333.90	7584.91	7624.89	-878.07	1659891.12	14238562.94	39°12'37.554"N	80°55'52.493"W	7675.28	353.431	0.86	
14138.00	90.400	345.840	6333.17	7678.80	7716.54	-896.90	1659890.31	14238654.56	39°12'38.460"N	80°55'52.757"W	7768.72	353.356	2.90	
14233.00	90.550	345.520	6332.39	7773.78	7808.58	-922.39	1659846.82	14238746.57	39°12'39.370"N	80°55'53.054"W	7862.87	353.263	0.37	
14327.00	90.490	344.130	6331.53	7867.78	7899.30	-947.00	1659822.22	14238837.25	39°12'40.267"N	80°55'53.366"W	7955.86	353.164	1.48	
14421.00	90.550	344.320	6330.68	7961.77	7989.76	-972.55	1659796.68	14238927.67	39°12'41.161"N	80°55'53.690"W	8048.73	353.060	0.21	
14515.00	90.710	344.190	6329.65	8055.76	8080.22	-998.06	1659771.19	14239018.10	39°12'42.055"N	80°55'54.013"W	8141.63	352.959	0.22	
14609.00	90.550	345.340	6328.61	8149.76	8170.91	-1022.75	1659746.50	14239108.75	39°12'42.952"N	80°55'54.326"W	8234.67	352.865	1.24	
14703.00	91.260	347.060	6327.13	8243.71	8262.18	-1045.17	1659724.09	14239199.99	39°12'43.854"N	80°55'54.610"W	8328.03	352.790	1.98	
14797.00	91.020	346.140	6325.26	8337.63	8353.60	-1066.95	1659702.32	14239291.37	39°12'44.758"N	80°55'54.886"W	8421.47	352.721	1.01	
14892.00	91.050	343.500	6323.64	8432.61	8445.27	-1091.82	1659677.46	14239383.00	39°12'45.664"N	80°55'55.201"W	8515.55	352.634	2.78	
14986.00	90.550	344.320	6322.23	8526.59	8535.58	-1117.87	1659651.42	14239473.27	39°12'46.557"N	80°55'55.531"W	8608.47	352.539	1.02	
15080.00	90.550	346.110	6321.33	8620.57	8626.45	-1141.86	1659627.44	14239564.11	39°12'47.455"N	80°55'55.835"W	8701.70	352.460	1.90	
15174.00	90.550	345.610	6320.43	8714.55	8717.60	-1164.82	1659604.49	14239655.22	39°12'48.356"N	80°55'56.126"W	8795.08	352.389	0.53	
15268.00	90.850	345.550	6319.44	8808.53	8808.64	-1188.23	1659581.09	14239746.22	39°12'49.256"N	80°55'56.422"W	8888.42	352.318	0.12	
15362.00	89.940	344.360	6318.96	8892.52	8899.41	-1212.63	1659556.70	14239836.96	39°12'50.154"N	80°55'56.731"W	8981.65	352.241	1.47	
15457.00	89.850	343.790	6319.13	8987.52	8990.76	-1238.69	1659530.64	14240018.26	39°12'51.057"N	80°55'57.062"W	9075.69	352.166	0.61	
15551.00	89.910	342.760	6319.33	9091.49	9080.79	-1265.74	1659503.60	14240182.26	39°12'51.947"N	80°55'57.405"W	9169.58	352.085	1.10	
15645.00	90.060	343.720	6319.35	9185.46	9170.79	-1292.85	1659476.51	14240366.26	39°12'52.837"N	80°55'57.748"W	9261.47	351.976	1.03	
15739.00	90.000	346.140	6319.30	9279.46	9261.55	-1317.29	1659450.42	14240550.42	39°12'53.734"N	80°55'58.058"W	9354.76	351.905	2.88	
15834.00	90.120	347.490	6319.20	9374.38	9354.05	-1338.96	1659430.42	14240734.41	39°12'54.648"N	80°55'58.332"W	9449.39	351.854	1.43	
15928.00	89.820	346.130	6319.25	9468.31	9445.56	-1360.40	1659408.98	14240918.26	39°12'55.553"N	80°55'58.604"W	9543.03	351.804	1.48	
16022.00	89.880	339.710	6319.50	9562.22	9535.37	-1388.00	1659381.40	14240472.66	39°12'56.441"N	80°55'58.953"W	9635.86	351.718	6.83	
16116.00	89.880	343.230	6319.70	9656.06	9624.48	-1417.87	1659351.54	14240561.74	39°12'57.322"N	80°55'59.332"W	9728.36	351.620	3.74	
16210.00	89.660	345.430	6320.07	9750.06	9714.98	-1443.25	1659326.17	14240652.20	39°12'58.216"N	80°55'59.654"W	9821.80	351.550	2.35	
16304.00	90.400	343.900	6320.02	9844.05	9805.63	-1468.11	1659301.32	14240742.82	39°12'59.112"N	80°55'59.969"W	9914.93	351.485	1.81	
16399.00	98.550	344.490	6319.24	9939.05	9897.04	-1493.99	1659275.45	14240834.19	39°13'00.016"N	80°56'00.297"W	10009.16	351.416	0.84	
16493.00	90.490	344.370	6318.38	10033.04	9987.58	-1519.22	1659250.23	14240924.69	39°13'00.911"N	80°56'00.616"W	10102.47	351.351	0.14	
16587.00	90.520	344.780	6317.56	10127.04	10078.20	-1544.22	1659225.24	14241015.27	39°13'01.807"N	80°56'00.933"W	10195.81	351.289	0.44	
16681.00	90.490	345.330	6316.73	10221.03	10169.01	-1568.46	1659201.01	14241106.05	39°13'02.705"N	80°56'01.240"W	10289.26	351.232	0.59	
16775.00	90.490	345.240	6315.97	10315.02	10259.93	-1592.33	1659177.15	14241196.93	39°13'03.604"N	80°56'01.543"W	10382.75	351.178	0.12	

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Actual Wellpath Report

Left Fork Unit 4H AWP Proj: 17707

Page n of nn



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Ritchie County, WV	Well	Left Fork Unit 4H
Field	Ritchie	Wellbore	Left Fork Unit 4H AWB
Facility	Lockhart Heirs West Pad		

WELLPATH DATA (371 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 [1/100ft]	Comments
16869.00	90.460	344.690	6315.24	10409.02	10350.70	-1616.72	1659152.77	14241287.67	39°13'04.501"N	80°56'01.852"W	10476.20	351.122	0.59	
16963.00	90.490	345.490	6314.46	10503.01	10441.54	-1640.90	1659128.60	14241378.46	39°13'05.399"N	80°56'02.158"W	10569.68	351.069	0.85	
17057.00	90.430	345.380	6313.71	10597.00	10532.51	-1664.54	1659104.97	14241469.40	39°13'06.298"N	80°56'02.458"W	10663.23	351.019	0.13	
17151.00	90.680	344.380	6312.80	10690.99	10623.25	-1689.06	1659080.48	14241560.11	39°13'07.195"N	80°56'02.768"W	10756.69	350.966	1.10	
17246.00	90.520	342.340	6311.80	10785.96	10714.26	-1716.26	1659053.27	14241651.08	39°13'08.095"N	80°56'03.113"W	10850.85	350.899	2.15	
17340.00	90.620	340.270	6310.87	10879.79	10803.30	-1746.39	1659023.15	14241740.08	39°13'08.975"N	80°56'03.495"W	10943.54	350.817	2.20	
17434.00	90.520	342.090	6309.93	10973.61	10892.26	-1776.71	1658992.85	14241829.01	39°13'09.855"N	80°56'03.880"W	11036.22	350.736	1.94	
17528.00	90.490	344.190	6309.10	11067.57	10982.21	-1803.97	1658965.60	14241918.92	39°13'10.744"N	80°56'04.522"W	11129.39	350.672	2.23	
17622.00	90.520	346.950	6308.27	11161.55	11073.23	-1827.39	1658942.18	14242009.91	39°13'11.644"N	80°56'04.522"W	11223.01	350.629	2.94	
17682.00	90.480	348.010	6307.76	11221.47	11131.81	-1840.40	1658929.18	14242088.48	39°13'12.223"N	80°56'04.687"W	11282.91	350.612	1.77	
17707.00	90.480	348.010	6307.56	11246.42	11156.26	-1845.59	1658923.99	14242092.90	39°13'12.465"N	80°56'04.752"W	11307.89	350.607	0.00	Projected MD at TD: 17707'

HOLE & CASING SECTIONS - Ref Wellbore: Left Fork Unit 4H AWB Ref Wellpath: Left Fork Unit 4H AWP Proj: 17707

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
20in Conductor	25.00	65.00	40.00	25.00	65.00	0.00	0.00	0.00	-0.05
13.375in Casing Surface	25.00	414.00	389.00	25.00	413.99	0.00	0.00	-0.54	1.11
9.825in Casing Intermediate	25.00	2493.00	2468.00	25.00	2451.44	0.00	0.00	28.04	385.75

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Actual Wellpath Report

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Page n of nn



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Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Ritchie County, WV	Well	Left Fork Unit 4H
Field	Ritchie	Wellbore	Left Fork Unit 4H AWB
Facility	Lockhart Heirs West Pad		

TARGETS								
Name	TVD (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Shape
Left Fork Unit 4H BHL - Rev2	6356.00	11100.16	-1827.26	1658942.31	14242036.83	39°13'11.910"N	80°56'04.520"W	point
Left Fork Unit 4H LP - Rev6	6356.00	628.29	1052.02	1661820.44	14231569.16	39°11'28.385"N	80°55'28.047"W	point

WELLPATH COMPOSITION - Ref Wellbore: Left Fork Unit 4H AWB				Ref Wellpath: Left Fork Unit 4H AWP Proj: 17707	
Start MD (ft)	End MD (ft)	Positional Uncertainty Model	Log Name/Comment		
25.00	5650.01	SDI Keeper VI 04	Wellbore		
5650.01	17682.00	BHI Auto Trak Curve (Short)	Left Fork Unit 4H AWB		
17682.00	17707.00	Blind Drilling (std)	Left Fork Unit 4H AWB		
			Left Fork Unit 4H AWB		

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Page n of nn

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Field	Ritchie	Wellbore	Left Fork Unit 4H AWB
Facility	Lockhart Heirs West Pad		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
100.00	0.320	310.490	100.00	SDI Std. Keeper Gyro (100'-5650.01')
5754.00	17.930	78.340	5632.50	BHI AT Curve <8-1/2">(5754'-17682')
6164.00	23.044	1.439	6020.77	Sycamore: 6164' MD
6353.00	41.949	352.562	6180.86	Middlesex: 6353' MD
6520.00	60.191	346.380	6284.91	Burkett: 6520' MD
6596.00	69.092	345.575	6317.26	Tully: 6596' MD
6661.00	76.085	345.674	6336.69	Marcellus: 6661' MD
17707.00	90.460	348.010	6307.56	Projected MD at TD: 17707'

COMMENTS

Wellpath general comments
 API: 47-085-10206-0000
 BHI Job #: 7925935
 Rig: Patterson 347
 Duration: 04.27.2016-05.03.2016
 SDI Std. Keeper Gyro (100'-5650.01')
 BHI AT Curve <8-1/2">(5754'-17682')
 Sycamore: 6164' MD
 Middlesex: 6353' MD
 Burkett: 6520' MD
 Tully: 6596' MD
 Marcellus: 6661' MD
 Projected MD at TD: 17707'