



ANTERO RESOURCES CORPORATION



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

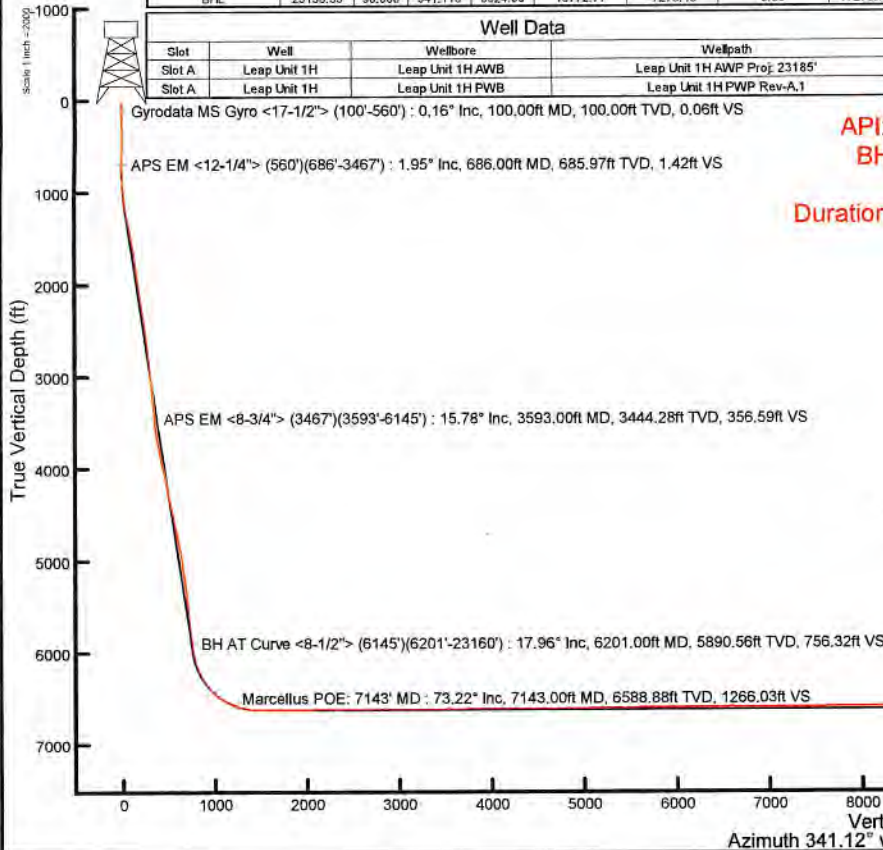
Slot: Slot A
 Well: Leap Unit 1H
 Wellbore: Leap Unit 1H PWB

PHI reference wellpath is Leap Unit 1H PWP Rev-A.1	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to H&P 519 (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to H&P 519 (RKB)	Scale: True distance
H&P 519 (RKB) to Mean Sea Level: 1223 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot A): -1193 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: indy@ar on 2022-12-21; Database: WA_MPL_EASTERNUS_Dein

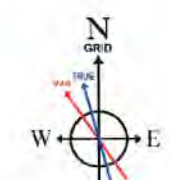
Location Information						
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude		
Heintzman Pad	1681067.630	14359649.490	39°32'34.5540"N	80°51'20.8980"W		
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Slot A	26.39	-14.30	1681053.340	14359675.870	39°32'34.8150"N	80°51'21.0799"W
Comment: Leap Unit 1H						
H&P 519 (RKB) to Ground level (At Slot Slot A)					30ft	
Mean Sea Level to Ground level (At Slot Slot A)					-1193ft	
H&P 519 (RKB) to Mean Sea Level					1223ft	

Well Profile Data								
Design Comment	MD (ft)	Inc. (")	Az. (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	30.00	0.000	276.135	30.00	0.00	0.00	0.00	0.00
KOP 1	630.00	0.000	276.135	630.00	0.00	0.00	0.00	0.00
End of Build	1286.48	19.695	276.135	1273.63	11.94	-111.08	3.00	47.24
Curve KOP	6328.90	19.695	276.135	6021.08	193.56	-1800.68	0.00	765.82
POE	7138.50	72.014	341.116	6589.00	618.70	-2092.71	8.00	1262.58
Landing Pt.	7363.33	90.000	341.116	6624.00	827.95	-2164.29	8.00	1483.74
BHL	23158.33	90.000	341.116	8624.00	15772.77	-7276.46	0.00	17278.74

Well Data			
Slot	Well	Wellbore	Wellpath
Slot A	Leap Unit 1H	Leap Unit 1H AWP	Leap Unit 1H AWP Proj 23185'
Slot A	Leap Unit 1H	Leap Unit 1H PWB	Leap Unit 1H PWP Rev-A.1

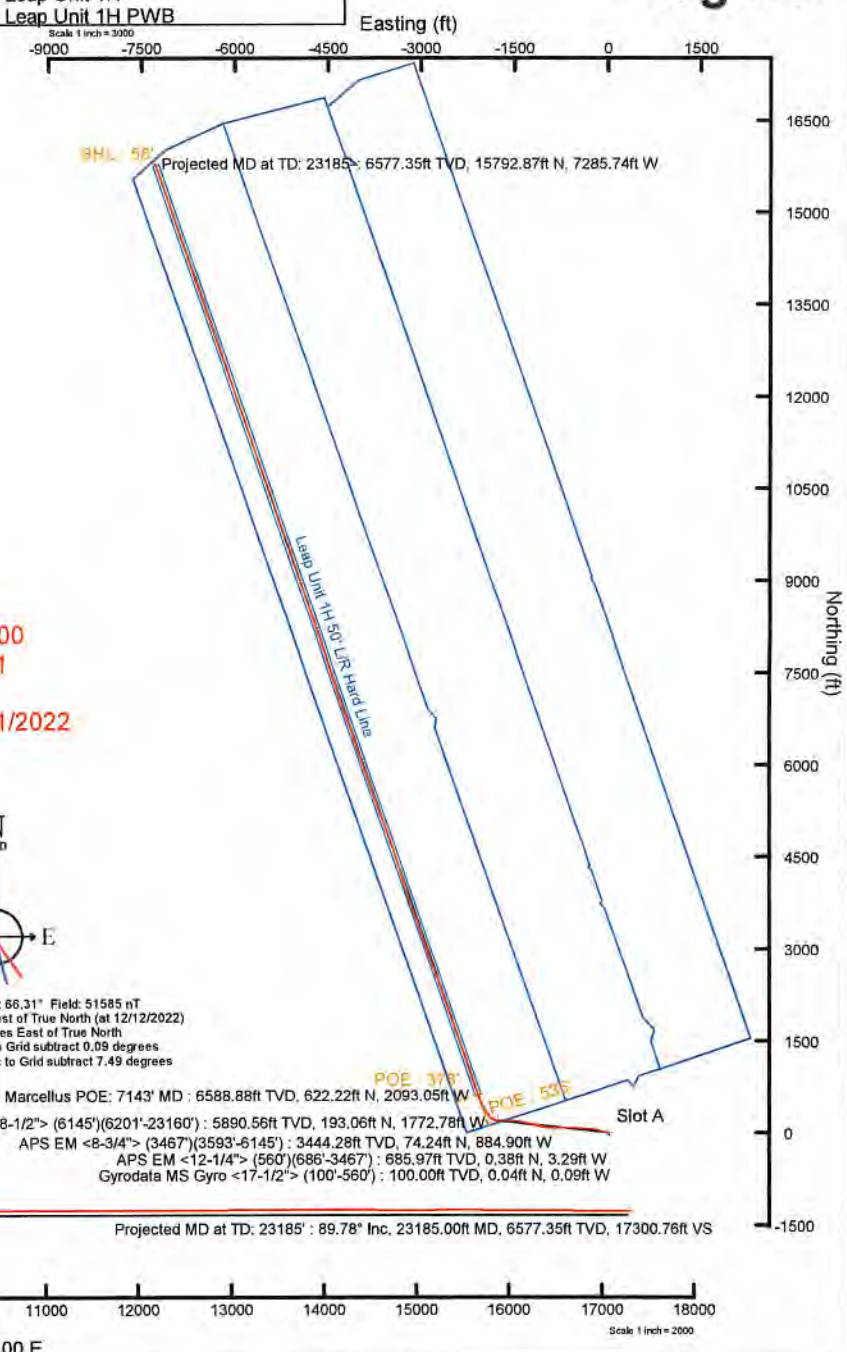


API: 47-095-02818-0000
 BH Job #: 111601071
 Rig: H&P 519
 Duration: 12/13/2022-12/21/2022



User specified (HdGM) Dip: 66.31° Field: 51585 nT
 Magnetic North is 7.40 degrees West of True North (at 12/12/2022)
 Grid North is 0.09 degrees East of True North
 To correct azimuth from True to Grid subtract 0.09 degrees
 To correct azimuth from Magnetic to Grid subtract 7.49 degrees

Marcellus POE: 7143' MD : 6588.88ft TVD, 622.22ft N, 2093.05ft W
 BH AT Curve <8-1/2"> (6145')(6201'-23160') : 5890.56ft TVD, 193.06ft N, 1772.78ft W
 APS EM <8-3/4"> (3467')(3593'-6145') : 3444.28ft TVD, 74.24ft N, 884.90ft W
 APS EM <12-1/4"> (560')(686'-3467') : 685.97ft TVD, 0.38ft N, 3.29ft W
 Gyrodatta MS Gyro <17-1/2"> (100'-560') : 100.00ft TVD, 0.04ft N, 0.09ft W



Projected MD at TD: 23185' : 89.78" Inc, 23185.00ft MD, 6577.35ft TVD, 17300.76ft VS

Scale 1 inch = 2000



Actual Wellpath Report

Leap Unit 1H AWP Proj: 23185'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Leap Unit 1H
Field	Tyler	API	47-095-02818-0000
Facility	Heintzman Pad	Wellbore	Leap Unit 1H AWB
Slot	Slot A		

REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Edsaryar
Scale	0.999602	Report Generated	12/21/2022 at 5:21:32 PM
Convergence at slot	0.09° East	Database	WA_MPL_EASTERNUS_Defn

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	26.39	-14.30	1681053.34	14359675.87	39°32'34.8150"N	80°51'21.0799"W
Facility Reference Pt			1681067.63	14359649.49	39°32'34.5540"N	80°51'20.8980"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.3013"W

WELLPATH DATUM

Calculation method	Minimum curvature	H&P 519 (RKB) to Facility Vertical Datum	1223.00ft
Horizontal Reference Pt	Slot	H&P 519 (RKB) to Mean Sea Level	1223.00ft
Vertical Reference Pt	H&P 519 (RKB)	H&P 519 (RKB) to Ground Level at Slot (Slot A)	30.00ft
MD Reference Pt	H&P 519 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	341.12°



Actual Wellpath Report

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Slot	Slot A		

WELLPATH DATA (253 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
0.00†	0.000	291.330	0.00	0.00	0.00	0.00	1681053.34	14359675.87	39°32'34.8150"N	80°51'21.0799"W	0.00	0.000	0.00	0.00	0.00	
30.00	0.000	291.330	30.00	0.00	0.00	0.00	1681053.34	14359675.87	39°32'34.8150"N	80°51'21.0799"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.160	291.330	100.00	0.06	0.04	-0.09	1681053.25	14359675.91	39°32'34.8154"N	80°51'21.0811"W	0.10	291.330	0.23	0.23	0.00	Gyrodatta MS Gyro <17-1/2"> (100'-560')
200.00	0.100	272.440	200.00	0.18	0.09	-0.31	1681053.03	14359675.96	39°32'34.8159"N	80°51'21.0838"W	0.32	286.283	0.07	-0.06	-18.89	
300.00	0.170	259.210	300.00	0.24	0.07	-0.54	1681052.80	14359675.94	39°32'34.8157"N	80°51'21.0868"W	0.55	276.952	0.08	0.07	-13.23	
400.00	0.150	217.030	400.00	0.19	-0.07	-0.77	1681052.57	14359675.80	39°32'34.8144"N	80°51'21.0897"W	0.77	265.053	0.12	-0.02	-42.18	
500.00	0.130	241.980	500.00	0.09	-0.22	-0.94	1681052.40	14359675.65	39°32'34.8128"N	80°51'21.0920"W	0.97	256.657	0.08	-0.02	24.95	
560.00	0.150	306.700	560.00	0.15	-0.21	-1.07	1681052.27	14359675.66	39°32'34.8130"N	80°51'21.0935"W	1.09	258.920	0.25	0.03	107.87	
686.00	1.950	283.200	685.97	1.42	0.38	-3.29	1681050.05	14359676.25	39°32'34.8188"N	80°51'21.1219"W	3.31	276.577	1.44	1.43	-18.65	APS EM <12-1/4"> (560')(686'-3467')
776.00	4.790	282.660	775.81	4.20	1.55	-8.45	1681044.90	14359677.42	39°32'34.8305"N	80°51'21.1877"W	8.59	280.416	3.16	3.16	-0.60	
867.00	7.220	277.100	866.30	8.69	3.09	-17.83	1681035.52	14359678.96	39°32'34.8459"N	80°51'21.3074"W	18.09	279.840	2.74	2.67	-6.11	
958.00	9.850	276.500	956.29	14.54	4.68	-31.24	1681022.11	14359680.55	39°32'34.8618"N	80°51'21.4786"W	31.59	278.521	2.89	2.89	-0.66	
1048.00	12.180	277.750	1044.62	22.09	6.83	-48.30	1681005.06	14359682.70	39°32'34.8833"N	80°51'21.6963"W	48.78	278.052	2.60	2.59	1.39	
1143.00	15.080	281.990	1136.94	32.93	10.75	-70.32	1680983.05	14359686.62	39°32'34.9224"N	80°51'21.9773"W	71.14	278.693	3.23	3.05	4.46	
1237.00	17.420	285.030	1227.18	47.05	16.94	-95.88	1680957.50	14359692.81	39°32'34.9840"N	80°51'22.3034"W	97.36	280.021	2.65	2.49	3.23	
1332.00	19.800	285.690	1317.21	64.12	24.98	-125.10	1680928.29	14359700.84	39°32'35.0639"N	80°51'22.6763"W	127.57	281.293	2.52	2.51	0.69	
1427.00	19.340	283.900	1406.72	81.77	33.11	-155.87	1680897.54	14359708.97	39°32'35.1447"N	80°51'23.0688"W	159.34	281.994	0.80	-0.48	-1.88	
1521.00	19.520	283.490	1495.37	98.60	40.52	-186.25	1680867.17	14359716.37	39°32'35.2184"N	80°51'23.4564"W	190.60	282.273	0.24	0.19	-0.44	
1616.00	19.310	279.860	1584.97	114.65	46.91	-217.16	1680836.27	14359722.76	39°32'35.2821"N	80°51'23.8509"W	222.16	282.189	1.29	-0.22	-3.82	
1710.00	19.810	278.320	1673.54	129.41	51.87	-248.23	1680805.21	14359727.72	39°32'35.3316"N	80°51'24.2474"W	253.59	281.804	0.76	0.53	-1.64	
1805.00	20.220	276.420	1762.81	143.78	56.04	-280.47	1680772.98	14359731.89	39°32'35.3733"N	80°51'24.6589"W	286.02	281.299	0.81	0.43	-2.00	
1899.00	19.770	272.950	1851.14	156.64	58.67	-312.49	1680740.97	14359734.52	39°32'35.3998"N	80°51'25.0676"W	317.95	280.634	1.35	-0.48	-3.69	
1994.00	19.800	270.230	1940.54	167.88	59.57	-344.63	1680708.85	14359735.41	39°32'35.4092"N	80°51'25.4777"W	349.74	279.806	0.97	0.03	-2.86	
2089.00	20.760	273.830	2029.65	179.65	60.75	-377.52	1680675.97	14359736.60	39°32'35.4214"N	80°51'25.8976"W	382.38	279.142	1.66	1.01	3.79	
2183.00	21.570	276.480	2117.31	193.48	63.82	-411.31	1680642.19	14359739.66	39°32'35.4522"N	80°51'26.3288"W	416.23	278.819	1.33	0.86	2.82	
2277.00	22.250	274.980	2204.52	208.08	67.31	-446.21	1680607.31	14359743.16	39°32'35.4873"N	80°51'26.7742"W	451.26	278.579	0.94	0.72	-1.60	
2372.00	23.000	273.590	2292.21	222.45	70.04	-482.65	1680570.88	14359745.88	39°32'35.5148"N	80°51'27.2394"W	487.71	278.256	0.97	0.79	-1.46	
2466.00	21.360	272.080	2379.25	235.59	71.81	-518.09	1680535.46	14359747.65	39°32'35.5329"N	80°51'27.6917"W	523.04	277.891	1.85	-1.74	-1.61	
2558.00	20.900	271.060	2465.07	247.18	72.72	-551.24	1680502.32	14359748.56	39°32'35.5424"N	80°51'28.1148"W	556.02	277.515	0.64	-0.50	-1.11	
2652.00	21.610	268.690	2652.67	258.13	72.63	-585.31	1680468.26	14359748.47	39°32'35.5421"N	80°51'28.5497"W	589.80	277.074	1.19	0.76	-2.52	



Actual Wellpath Report

Leap Unit 1H AWP Proj: 23185'

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Operator	ANTERO RESOURCES CORPORATION	Well	Leap Unit 1H
Field	Tyler	API	47-095-02818-0000
Facility	Heintzman Pad	Wellbore	Leap Unit 1H AWB
Slot	Slot A		

WELLPATH DATA (253 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
2842.00	19.880	271.890	2730.35	280.14	72.90	-652.58	1680401.02	14359748.74	39°32'35.5458"N	80°51'29.4084"W	656.64	276.374	1.09	-0.91	1.68	
2936.00	19.780	269.680	2818.78	290.88	73.34	-684.46	1680369.15	14359749.18	39°32'35.5506"N	80°51'29.8153"W	688.38	276.116	0.80	-0.11	-2.35	
3031.00	19.330	267.650	2908.30	300.47	72.60	-716.25	1680337.38	14359748.44	39°32'35.5438"N	80°51'30.2211"W	719.92	275.788	0.86	-0.47	-2.14	
3125.00	18.520	271.160	2997.22	310.01	72.27	-746.72	1680306.92	14359748.11	39°32'35.5410"N	80°51'30.6100"W	750.21	275.528	1.49	-0.86	3.73	
3220.00	17.900	273.880	3087.47	320.83	73.56	-776.37	1680277.28	14359749.40	39°32'35.5542"N	80°51'30.9885"W	779.85	275.413	1.11	-0.65	2.86	
3315.00	17.480	271.920	3177.97	331.54	75.03	-805.20	1680248.47	14359750.87	39°32'35.5692"N	80°51'31.3564"W	808.68	275.323	0.77	-0.44	-2.06	
3409.00	17.070	270.310	3267.73	341.09	75.57	-833.10	1680220.57	14359751.41	39°32'35.5750"N	80°51'31.7126"W	836.52	275.183	0.67	-0.44	-1.71	
3467.00	16.540	269.620	3323.26	346.51	75.57	-849.87	1680203.81	14359751.41	39°32'35.5752"N	80°51'31.9267"W	853.22	275.081	0.98	-0.91	-1.19	
3593.00	15.780	265.970	3444.28	356.59	74.24	-884.90	1680168.80	14359750.08	39°32'35.5626"N	80°51'32.3738"W	888.01	274.796	1.01	-0.60	-2.90	APS EM <8-3/4"> (3467')(3593'-6145')
3687.00	17.960	267.430	3534.23	363.94	72.69	-912.13	1680141.58	14359748.54	39°32'35.5478"N	80°51'32.7214"W	915.02	274.557	2.36	2.32	1.55	
3782.00	20.200	276.780	3624.03	375.16	73.97	-943.06	1680110.66	14359749.81	39°32'35.5609"N	80°51'33.1162"W	945.96	274.485	3.98	2.36	9.84	
3876.00	20.460	284.400	3712.19	391.20	79.98	-975.09	1680078.64	14359755.81	39°32'35.6207"N	80°51'33.5250"W	978.37	274.689	2.83	0.28	8.11	
3971.00	19.790	280.680	3801.39	408.25	87.09	-1006.98	1680046.76	14359762.92	39°32'35.6915"N	80°51'33.9319"W	1010.74	274.943	1.52	-0.71	-3.92	
4065.00	20.250	284.400	3889.71	425.03	94.08	-1038.38	1680015.38	14359769.91	39°32'35.7611"N	80°51'34.3325"W	1042.63	275.177	1.44	0.49	3.96	
4160.00	19.960	284.350	3978.93	442.93	102.19	-1070.01	1679983.76	14359778.02	39°32'35.8417"N	80°51'34.7361"W	1074.88	275.455	0.31	-0.31	-0.05	
4254.00	21.500	283.420	4066.84	460.93	110.16	-1102.31	1679951.47	14359785.99	39°32'35.9210"N	80°51'35.1483"W	1107.80	275.707	1.68	1.64	-0.99	
4349.00	21.610	281.290	4155.19	479.02	117.63	-1136.40	1679917.40	14359793.45	39°32'35.9953"N	80°51'35.5832"W	1142.47	275.910	0.83	0.12	-2.24	
4443.00	20.860	277.180	4242.82	495.08	123.11	-1169.98	1679883.83	14359798.93	39°32'36.0500"N	80°51'36.0118"W	1176.44	276.007	1.77	-0.80	-4.37	
4538.00	21.550	281.480	4331.39	511.33	128.70	-1203.86	1679849.96	14359804.52	39°32'36.1057"N	80°51'36.4442"W	1210.72	276.102	1.79	0.73	4.53	
4632.00	23.030	284.720	4418.37	530.23	136.81	-1238.57	1679815.27	14359812.62	39°32'36.1864"N	80°51'36.8870"W	1246.10	276.303	2.05	1.57	3.45	
4727.00	22.980	283.690	4505.81	550.50	145.92	-1274.56	1679779.29	14359821.73	39°32'36.2770"N	80°51'37.3462"W	1282.88	276.531	0.43	-0.05	-1.08	
4822.00	22.770	284.230	4593.34	570.52	154.82	-1310.40	1679743.47	14359830.63	39°32'36.3656"N	80°51'37.8035"W	1319.51	276.738	0.31	-0.22	0.57	
4916.00	22.100	282.440	4680.23	589.65	163.11	-1345.30	1679708.58	14359838.91	39°32'36.4480"N	80°51'38.2489"W	1355.15	276.913	1.02	-0.71	-1.90	
5011.00	21.010	277.670	4768.59	606.55	169.23	-1379.63	1679674.26	14359845.03	39°32'36.5090"N	80°51'38.6870"W	1389.97	276.993	2.17	-1.15	-5.02	
5106.00	20.480	282.660	4857.44	622.86	175.14	-1412.73	1679641.18	14359850.94	39°32'36.5680"N	80°51'39.1093"W	1423.54	277.067	1.94	-0.56	5.25	
5200.00	19.720	281.900	4945.71	639.58	182.02	-1444.29	1679609.63	14359857.82	39°32'36.6364"N	80°51'39.5121"W	1455.71	277.183	0.85	-0.81	-0.81	
5295.00	18.620	277.740	5035.44	654.58	187.37	-1475.00	1679578.93	14359863.16	39°32'36.6897"N	80°51'39.9040"W	1486.85	277.239	1.85	-1.16	-4.38	
5389.00	16.670	278.420	5125.02	667.49	191.36	-1503.21	1679550.73	14359867.16	39°32'36.7297"N	80°51'40.2640"W	1515.34	277.255	2.09	-2.07	0.72	
5484.00	18.270	274.980	5215.64	679.76	194.65	-1531.53	1679522.42	14359870.44	39°32'36.7626"N	80°51'40.6254"W	1543.85	277.243	2.00	1.68	-3.62	
5578.00	21.130	271.170	5304.13	691.53	196.28	-1563.15	1679490.81	14359872.07	39°32'36.7791"N	80°51'41.0291"W	1575.43	277.157	3.33	3.04	-4.05	



Actual Wellpath Report

Leap Unit 1H AWP Proj: 23185'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Leap Unit 1H
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Facility	Heintzman Pad	Wellbore	Leap Unit 1H AWB
Slot	Slot A		

WELLPATH DATA (253 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
5673.00	20.790	266.310	5392.85	701.82	195.54	-1597.10	1679456.88	14359871.33	39°32'36.7724"N	80°51'41.4624"W	1609.03	276.980	1.86	-0.36	-5.12	
5767.00	21.730	265.300	5480.45	710.46	193.04	-1631.09	1679422.90	14359868.83	39°32'36.7482"N	80°51'41.8964"W	1642.48	276.750	1.07	1.00	-1.07	
5862.00	20.060	271.630	5569.21	720.47	192.06	-1664.91	1679389.09	14359867.86	39°32'36.7391"N	80°51'42.3281"W	1675.95	276.581	2.95	-1.76	6.66	
5956.00	17.710	270.630	5658.15	730.90	192.68	-1695.33	1679358.69	14359868.47	39°32'36.7456"N	80°51'42.7163"W	1706.24	276.484	2.52	-2.50	-1.06	
6051.00	18.720	267.340	5748.39	739.98	192.13	-1725.01	1679329.02	14359867.92	39°32'36.7406"N	80°51'43.0952"W	1735.67	276.355	1.52	1.06	-3.46	
6145.00	18.750	272.680	5837.41	749.75	192.14	-1755.17	1679298.87	14359867.93	39°32'36.7412"N	80°51'43.4802"W	1765.65	276.247	1.82	0.03	5.68	
6201.00	17.960	273.350	5890.56	756.32	193.06	-1772.78	1679281.27	14359868.86	39°32'36.7506"N	80°51'43.7049"W	1783.26	276.215	1.46	-1.41	1.20	BH AT Curve <8-1/2"> (6145')(6201'-23160')
6260.00	18.330	271.010	5946.63	762.92	193.76	-1791.13	1679262.92	14359869.55	39°32'36.7577"N	80°51'43.9392"W	1801.58	276.174	1.39	0.63	-3.97	
6355.00	20.140	288.450	6036.40	777.93	199.20	-1821.61	1679232.46	14359874.99	39°32'36.8120"N	80°51'44.3282"W	1832.47	276.241	6.31	1.91	18.36	
6450.00	22.610	304.390	6124.93	802.51	214.71	-1852.23	1679201.85	14359890.49	39°32'36.9657"N	80°51'44.7187"W	1864.63	276.612	6.62	2.60	16.78	
6544.00	27.730	306.590	6209.98	835.03	237.97	-1884.72	1679169.37	14359913.74	39°32'37.1960"N	80°51'45.1330"W	1899.68	277.196	5.54	5.45	2.34	
6639.00	34.270	314.940	6291.40	877.31	270.08	-1921.46	1679132.65	14359945.85	39°32'37.5140"N	80°51'45.6013"W	1940.35	278.001	8.23	6.88	8.79	
6680.00†	36.664	320.953	6324.80	899.17	287.75	-1937.35	1679116.77	14359963.51	39°32'37.6889"N	80°51'45.8038"W	1958.60	278.448	10.31	5.84	14.67	Sycamore: 6680' MD
6733.00	40.150	327.740	6366.35	930.67	314.51	-1956.45	1679097.67	14359990.25	39°32'37.9536"N	80°51'46.0471"W	1981.57	279.133	10.31	6.58	12.81	
6823.00†	46.340	332.953	6431.90	991.20	368.11	-1986.78	1679067.36	14360043.83	39°32'38.4839"N	80°51'46.4332"W	2020.59	280.497	7.94	6.88	5.79	Middlesex: 6823' MD
6828.00	46.690	333.210	6435.34	994.79	371.35	-1988.42	1679065.71	14360047.07	39°32'38.5158"N	80°51'46.4541"W	2022.80	280.578	7.94	7.01	5.14	
6922.00	55.890	336.870	6494.07	1067.65	437.82	-2019.19	1679034.95	14360113.51	39°32'39.1733"N	80°51'46.8456"W	2066.12	282.234	10.25	9.79	3.89	
6971.00†	59.588	337.287	6520.22	1108.97	475.98	-2035.33	1679018.83	14360151.66	39°32'39.5506"N	80°51'47.0508"W	2090.24	283.162	7.58	7.55	0.85	Burkett: 6971' MD
7006.00†	62.230	337.565	6537.24	1139.49	504.22	-2047.07	1679007.09	14360179.88	39°32'39.8299"N	80°51'47.2001"W	2108.25	283.837	7.58	7.55	0.80	Tully: 7006' MD
7017.00	63.060	337.650	6542.29	1149.24	513.25	-2050.79	1679003.37	14360188.91	39°32'39.9192"N	80°51'47.2474"W	2114.04	284.051	7.58	7.55	0.77	
7112.00	70.980	339.330	6579.35	1236.54	594.56	-2082.79	1678971.38	14360270.20	39°32'40.7234"N	80°51'47.6544"W	2166.00	285.932	8.49	8.34	1.77	
7143.00†	73.217	339.991	6588.88	1266.03	622.22	-2093.05	1678961.13	14360297.84	39°32'40.9969"N	80°51'47.7847"W	2183.58	286.556	7.50	7.22	2.13	Marcellus POE: 7143' MD
7206.00	77.770	341.290	6604.66	1327.00	679.75	-2113.25	1678940.93	14360355.35	39°32'41.5658"N	80°51'48.0416"W	2219.89	287.831	7.50	7.23	2.06	
7301.00	84.300	342.540	6619.46	1420.78	768.91	-2142.36	1678911.84	14360444.47	39°32'42.4474"N	80°51'48.4114"W	2276.16	289.743	7.00	6.87	1.32	
7396.00	90.280	343.160	6623.95	1515.58	859.54	-2170.32	1678883.88	14360535.07	39°32'43.3435"N	80°51'48.7666"W	2334.33	291.606	6.33	6.29	0.65	
7491.00	90.740	340.210	6623.10	1610.57	949.71	-2200.17	1678854.05	14360625.20	39°32'44.2352"N	80°51'49.1459"W	2396.40	293.348	3.14	0.48	-3.11	
7586.00	90.860	341.180	6621.77	1705.55	1039.36	-2231.58	1678822.66	14360714.82	39°32'45.1217"N	80°51'49.5450"W	2461.75	294.974	1.03	0.13	1.02	
7680.00	89.690	338.580	6621.32	1799.52	1127.62	-2263.91	1678790.34	14360803.03	39°32'45.9944"N	80°51'49.9560"W	2529.19	296.477	3.03	-1.24	-2.77	
7775.00	90.520	342.030	6621.15	1894.49	1217.04	-2295.92	1678758.34	14360892.43	39°32'46.8787"N	80°51'50.3629"W	2598.55	297.928	3.74	0.87	3.63	
7869.00	89.780	339.840	6620.90	1988.49	1305.88	-2326.62	1678727.65	14360981.23	39°32'47.7572"N	80°51'50.7531"W	2668.05	299.305	2.46	-0.79	-2.33	



Actual Wellpath Report

Leap Unit 1H AWP Proj: 23185'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Leap Unit 1H
Field	Tyler	API	47-095-02818-0000
Facility	Heintzman Pad	Wellbore	Leap Unit 1H AWB
Slot	Slot A		

WELLPATH DATA (253 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
7964.00	91.320	342.710	6619.99	2083.47	1395.84	-2357.11	1678697.17	14361071.15	39°32'48.6467"N	80°51'51.1406"W	2739.41	300.633	3.43	1.62	3.02	
8058.00	89.750	342.090	6619.11	2177.44	1485.43	-2385.53	1678668.76	14361160.70	39°32'49.5326"N	80°51'51.5017"W	2810.21	301.910	1.80	-1.67	-0.66	
8153.00	89.200	339.690	6619.98	2272.43	1575.18	-2416.63	1678637.68	14361250.42	39°32'50.4201"N	80°51'51.8970"W	2884.67	303.097	2.59	-0.58	-2.53	
8248.00	90.550	340.670	6620.19	2367.41	1664.55	-2448.84	1678605.48	14361339.76	39°32'51.3038"N	80°51'52.3064"W	2961.01	304.205	1.76	1.42	1.03	
8343.00	90.250	339.660	6619.53	2462.39	1753.91	-2481.07	1678573.26	14361429.08	39°32'52.1875"N	80°51'52.7162"W	3038.41	305.257	1.11	-0.32	-1.06	
8437.00	90.950	340.870	6618.54	2556.38	1842.38	-2512.81	1678541.53	14361517.52	39°32'53.0624"N	80°51'53.1196"W	3115.86	306.249	1.49	0.74	1.29	
8532.00	89.200	340.120	6618.42	2651.37	1931.93	-2544.53	1678509.83	14361607.03	39°32'53.9478"N	80°51'53.5228"W	3194.84	307.207	2.00	-1.84	-0.79	
8626.00	92.120	340.590	6617.34	2745.34	2020.44	-2576.13	1678478.24	14361695.50	39°32'54.8231"N	80°51'53.9245"W	3273.93	308.107	3.15	3.11	0.50	
8721.00	89.010	340.430	6616.40	2840.32	2109.98	-2607.82	1678446.57	14361785.01	39°32'55.7085"N	80°51'54.3273"W	3354.51	308.976	3.28	-3.27	-0.17	
8816.00	90.220	340.340	6617.04	2935.31	2199.47	-2639.71	1678414.69	14361874.46	39°32'56.5934"N	80°51'54.7327"W	3435.94	309.802	1.28	1.27	-0.09	
8910.00	90.710	340.650	6616.27	3029.30	2288.07	-2671.09	1678383.32	14361963.02	39°32'57.4695"N	80°51'55.1316"W	3517.10	310.583	0.62	0.52	0.33	
9005.00	90.800	341.400	6615.02	3124.29	2377.90	-2701.98	1678352.44	14362052.82	39°32'58.3578"N	80°51'55.5242"W	3599.32	311.350	0.80	0.09	0.79	
9099.00	89.510	340.610	6614.77	3218.29	2466.78	-2732.57	1678321.86	14362141.66	39°32'59.2366"N	80°51'55.9131"W	3681.30	312.074	1.61	-1.37	-0.84	
9194.00	90.150	339.970	6615.05	3313.27	2556.21	-2764.61	1678289.83	14362231.06	39°33'0.1210"N	80°51'56.3204"W	3765.27	312.757	0.95	0.67	-0.67	
9288.00	90.280	338.870	6614.70	3407.23	2644.21	-2797.65	1678256.80	14362319.02	39°33'0.9912"N	80°51'56.7405"W	3849.51	313.385	1.18	0.14	-1.17	
9383.00	90.830	340.870	6613.78	3502.20	2733.40	-2830.35	1678224.13	14362408.17	39°33'1.8732"N	80°51'57.1562"W	3934.76	314.002	2.18	0.58	2.11	
9477.00	88.890	339.970	6614.01	3596.19	2821.95	-2861.85	1678192.64	14362496.70	39°33'2.7489"N	80°51'57.5566"W	4019.15	314.598	2.28	-2.06	-0.96	
9572.00	91.170	341.690	6613.96	3691.17	2911.68	-2893.04	1678161.46	14362586.38	39°33'3.6361"N	80°51'57.9531"W	4104.57	315.184	3.01	2.40	1.81	
9666.00	90.060	341.020	6612.95	3785.17	3000.74	-2923.09	1678131.42	14362675.41	39°33'4.5167"N	80°51'58.3350"W	4189.14	315.751	1.38	-1.18	-0.71	
9761.00	90.180	340.890	6612.75	3880.17	3090.54	-2954.09	1678100.43	14362765.17	39°33'5.4047"N	80°51'58.7291"W	4275.28	316.293	0.19	0.13	-0.14	
9855.00	90.430	340.640	6612.25	3974.16	3179.29	-2985.05	1678069.48	14362853.89	39°33'6.2823"N	80°51'59.1227"W	4361.01	316.805	0.38	0.27	-0.27	
9950.00	90.310	341.400	6611.64	4069.16	3269.12	-3015.95	1678038.60	14362943.68	39°33'7.1706"N	80°51'59.5154"W	4447.82	317.307	0.81	-0.13	0.80	
10044.00	89.600	341.960	6611.71	4163.15	3358.36	-3045.50	1678009.06	14363032.88	39°33'8.0530"N	80°51'59.8909"W	4533.61	317.797	0.96	-0.76	0.60	
10139.00	89.970	338.890	6612.07	4258.13	3447.85	-3077.32	1677977.25	14363122.34	39°33'8.9380"N	80°52'0.2955"W	4621.43	318.250	3.25	0.39	-3.23	
10233.00	91.050	341.210	6611.23	4352.11	3536.20	-3109.39	1677945.19	14363210.66	39°33'9.8116"N	80°52'0.7033"W	4708.82	318.675	2.72	1.15	2.47	
10327.00	89.780	337.250	6610.55	4446.03	3624.07	-3142.72	1677911.88	14363298.49	39°33'10.6805"N	80°52'1.1271"W	4796.93	319.069	4.42	-1.35	-4.21	
10422.00	91.110	340.970	6609.81	4540.95	3712.81	-3176.58	1677878.03	14363387.19	39°33'11.5580"N	80°52'1.5578"W	4886.27	319.451	4.16	1.40	3.92	
10517.00	90.770	342.220	6608.25	4635.93	3802.93	-3206.57	1677848.05	14363477.28	39°33'12.4492"N	80°52'1.9389"W	4974.38	319.863	1.36	-0.36	1.32	
10611.00	89.350	341.660	6608.15	4729.92	3892.30	-3235.71	1677818.92	14363566.61	39°33'13.3328"N	80°52'2.3093"W	5061.60	320.263	1.62	-1.51	-0.60	
10706.00	90.800	345.640	6608.03	4824.81	3983.44	-3262.45	1677792.19	14363657.71	39°33'14.2340"N	80°52'2.6489"W	5148.92	320.682	4.46	1.53	4.19	



Actual Wellpath Report

Leap Unit 1H AWP Proj: 23185'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Leap Unit 1H
Field	Tyler	API	47-095-02818-0000
Facility	Heintzman Pad	Wellbore	Leap Unit 1H AWB
Slot	Slot A		

WELLPATH DATA (253 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
10800.00	89.480	343.680	6607.80	4918.62	4074.08	-3287.32	1677767.34	14363748.32	39°33'15.1302"N	80°52'2.9646"W	5234.94	321.100	2.51	-1.40	-2.09	
10895.00	90.520	342.450	6607.80	5013.56	4164.96	-3314.99	1677739.68	14363839.16	39°33'16.0288"N	80°52'3.3162"W	5323.16	321.483	1.70	1.09	-1.29	
10990.00	91.050	343.220	6606.50	5108.51	4255.72	-3343.02	1677711.66	14363929.88	39°33'16.9262"N	80°52'3.6724"W	5411.74	321.849	0.98	0.56	0.81	
11084.00	90.090	342.320	6605.56	5202.47	4345.49	-3370.86	1677683.83	14364019.62	39°33'17.8138"N	80°52'4.0261"W	5499.64	322.199	1.40	-1.02	-0.96	
11178.00	90.950	342.760	6604.71	5296.43	4435.16	-3399.07	1677655.63	14364109.25	39°33'18.7004"N	80°52'4.3845"W	5587.87	322.534	1.03	0.91	0.47	
11273.00	91.140	342.910	6602.98	5391.37	4525.91	-3427.10	1677627.61	14364199.97	39°33'19.5978"N	80°52'4.7407"W	5677.05	322.866	0.25	0.20	0.16	
11368.00	89.820	342.120	6602.18	5486.34	4616.51	-3455.64	1677599.08	14364290.54	39°33'20.4936"N	80°52'5.1034"W	5766.60	323.184	1.62	-1.39	-0.83	
11463.00	91.660	341.830	6600.95	5581.32	4706.84	-3485.03	1677569.70	14364380.83	39°33'21.3868"N	80°52'5.4770"W	5856.60	323.483	1.96	1.94	-0.31	
11557.00	91.170	341.810	6598.63	5675.28	4796.12	-3514.35	1677540.40	14364470.07	39°33'22.2696"N	80°52'5.8496"W	5945.88	323.768	0.52	-0.52	-0.02	
11652.00	90.650	337.870	6597.12	5770.23	4885.27	-3547.08	1677507.68	14364559.19	39°33'23.1512"N	80°52'6.2658"W	6037.19	324.017	4.18	-0.55	-4.15	
11746.00	89.880	335.700	6596.69	5863.95	4971.65	-3584.13	1677470.64	14364645.53	39°33'24.0054"N	80°52'6.7372"W	6128.89	324.212	2.45	-0.82	-2.31	
11841.00	90.620	341.470	6596.27	5958.81	5060.06	-3618.80	1677435.98	14364733.90	39°33'24.8796"N	80°52'7.1782"W	6220.92	324.429	6.12	0.78	6.07	
11935.00	89.690	340.180	6596.02	6052.81	5148.84	-3649.68	1677405.12	14364822.65	39°33'25.7575"N	80°52'7.5707"W	6311.15	324.670	1.69	-0.99	-1.37	
12030.00	90.280	341.310	6596.04	6147.81	5238.52	-3681.00	1677373.81	14364912.30	39°33'26.6444"N	80°52'7.9690"W	6402.49	324.905	1.34	0.62	1.19	
12124.00	90.060	340.550	6595.76	6241.80	5327.36	-3711.72	1677343.11	14365001.10	39°33'27.5228"N	80°52'8.3595"W	6492.89	325.134	0.84	-0.23	-0.81	
12219.00	90.090	339.920	6595.64	6336.79	5416.76	-3743.84	1677311.00	14365090.47	39°33'28.4069"N	80°52'8.7680"W	6584.66	325.349	0.66	0.03	-0.66	
12314.00	89.820	341.010	6595.71	6431.78	5506.29	-3775.61	1677279.24	14365179.96	39°33'29.2922"N	80°52'9.1719"W	6676.41	325.562	1.18	-0.28	1.15	
12408.00	91.600	341.240	6594.55	6525.77	5595.23	-3806.01	1677248.85	14365268.86	39°33'30.1716"N	80°52'9.5584"W	6767.00	325.775	1.91	1.89	0.24	
12503.00	89.630	341.540	6593.53	6620.76	5685.25	-3836.33	1677218.55	14365358.85	39°33'31.0617"N	80°52'9.9438"W	6858.53	325.989	2.10	-2.07	0.32	
12597.00	88.340	341.140	6595.20	6714.74	5774.29	-3866.40	1677188.49	14365447.85	39°33'31.9422"N	80°52'10.3261"W	6949.21	326.194	1.44	-1.37	-0.43	
12692.00	90.220	341.450	6596.39	6809.73	5864.27	-3896.86	1677158.04	14365537.79	39°33'32.8319"N	80°52'10.7133"W	7040.96	326.396	2.01	1.98	0.33	
12786.00	89.140	341.780	6596.91	6903.73	5953.47	-3926.51	1677128.41	14365626.95	39°33'33.7139"N	80°52'11.0902"W	7131.70	326.594	1.20	-1.15	0.35	
12881.00	90.740	339.460	6597.01	6998.71	6043.07	-3958.03	1677096.90	14365716.53	39°33'34.5999"N	80°52'11.4910"W	7223.90	326.776	2.97	1.68	-2.44	
12975.00	88.860	339.940	6597.34	7092.68	6131.23	-3990.64	1677064.30	14365804.65	39°33'35.4717"N	80°52'11.9057"W	7315.54	326.941	2.06	-2.00	0.51	
13070.00	90.920	340.730	6597.52	7187.66	6220.68	-4022.60	1677032.35	14365894.06	39°33'36.3562"N	80°52'12.3122"W	7407.99	327.111	2.32	2.17	0.83	
13164.00	90.150	342.850	6596.65	7281.65	6309.97	-4051.98	1677002.99	14365983.31	39°33'37.2390"N	80°52'12.6856"W	7498.95	327.293	2.40	-0.82	2.26	
13258.00	90.580	341.070	6596.05	7375.63	6399.34	-4081.08	1676973.89	14366072.65	39°33'38.1228"N	80°52'13.0556"W	7589.91	327.473	1.95	0.46	-1.89	
13353.00	91.140	343.680	6594.62	7470.59	6489.86	-4109.84	1676945.14	14366163.13	39°33'39.0178"N	80°52'13.4211"W	7681.74	327.655	2.81	0.59	2.75	
13447.00	89.880	342.310	6593.78	7564.53	6579.74	-4137.33	1676917.66	14366252.98	39°33'39.9065"N	80°52'13.7704"W	7772.42	327.838	1.98	-1.34	-1.46	
13541.00	90.830	340.470	6593.20	7658.52	6668.82	-4167.33	1676887.68	14366342.02	39°33'40.7873"N	80°52'14.1518"W	7863.83	327.999	2.20	1.01	-1.96	



Actual Wellpath Report

Leap Unit 1H AWP Proj: 23185'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Leap Unit 1H
Field	Tyler	API	47-095-02818-0000
Facility	Heintzman Pad	Wellbore	Leap Unit 1H AWB
Slot	Slot A		

WELLPATH DATA (253 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
13635.00	90.710	337.040	6591.94	7752.42	6756.41	-4201.38	1676853.64	14366429.58	39°33'41.6535"N	80°52'14.5850"W	7956.18	328.125	3.65	-0.13	-3.65	
13729.00	89.750	338.730	6591.56	7846.27	6843.49	-4236.77	1676818.27	14366516.62	39°33'42.5146"N	80°52'15.0352"W	8048.83	328.239	2.07	-1.02	1.80	
13824.00	90.650	341.790	6591.23	7941.24	6932.90	-4268.85	1676786.20	14366605.99	39°33'43.3987"N	80°52'15.4432"W	8141.75	328.378	3.36	0.95	3.22	
13918.00	90.520	344.380	6590.27	8035.17	7022.82	-4296.19	1676758.86	14366695.88	39°33'44.2878"N	80°52'15.7907"W	8232.70	328.544	2.76	-0.14	2.76	
14013.00	90.120	340.840	6589.74	8130.12	7113.46	-4324.58	1676730.49	14366786.48	39°33'45.1840"N	80°52'16.1515"W	8324.86	328.703	3.75	-0.42	-3.73	
14107.00	91.020	342.180	6588.80	8224.11	7202.60	-4354.39	1676700.69	14366875.59	39°33'46.0655"N	80°52'16.5304"W	8416.54	328.845	1.72	0.96	1.43	
14202.00	91.750	342.070	6586.51	8319.07	7292.99	-4383.54	1676671.55	14366965.94	39°33'46.9592"N	80°52'16.9010"W	8509.00	328.992	0.78	0.77	-0.12	
14296.00	89.780	340.680	6585.25	8413.06	7382.05	-4413.56	1676641.55	14367054.97	39°33'47.8398"N	80°52'17.2826"W	8600.82	329.126	2.56	-2.10	-1.48	
14391.00	91.200	343.240	6584.44	8508.03	7472.37	-4442.97	1676612.14	14367145.25	39°33'48.7329"N	80°52'17.6566"W	8693.46	329.265	3.08	1.49	2.69	
14485.00	90.180	343.430	6583.31	8601.95	7562.41	-4469.93	1676585.20	14367235.26	39°33'49.6232"N	80°52'17.9991"W	8784.66	329.414	1.10	-1.09	0.20	
14579.00	89.510	342.200	6583.56	8695.91	7652.21	-4497.70	1676557.44	14367325.02	39°33'50.5111"N	80°52'18.3521"W	8876.13	329.554	1.49	-0.71	-1.31	
14673.00	90.620	340.550	6583.46	8789.90	7741.29	-4527.72	1676527.43	14367414.06	39°33'51.3919"N	80°52'18.7338"W	8968.15	329.678	2.12	1.18	-1.76	
14768.00	90.740	340.970	6582.33	8884.89	7830.97	-4559.02	1676496.14	14367503.71	39°33'52.2787"N	80°52'19.1318"W	9061.39	329.793	0.46	0.13	0.44	
14862.00	89.820	336.730	6581.87	8978.80	7918.62	-4592.93	1676462.25	14367591.32	39°33'53.1454"N	80°52'19.5632"W	9154.21	329.886	4.62	-0.98	-4.51	
14956.00	90.340	342.320	6581.74	9072.72	8006.64	-4625.80	1676429.39	14367679.31	39°33'54.0158"N	80°52'19.9813"W	9246.86	329.983	5.97	0.59	5.95	
15051.00	89.720	339.450	6581.69	9167.71	8096.40	-4656.90	1676398.30	14367769.03	39°33'54.9033"N	80°52'20.3768"W	9340.15	330.093	3.09	-0.65	-3.02	
15145.00	90.800	341.810	6581.26	9261.70	8185.07	-4688.08	1676367.14	14367857.66	39°33'55.7801"N	80°52'20.7733"W	9432.57	330.198	2.76	1.15	2.51	
15240.00	90.490	342.260	6580.19	9356.68	8275.43	-4717.38	1676337.85	14367947.99	39°33'56.6736"N	80°52'21.1457"W	9525.57	330.315	0.58	-0.33	0.47	
15334.00	90.520	341.780	6579.36	9450.67	8364.84	-4746.39	1676308.85	14368037.36	39°33'57.5576"N	80°52'21.5146"W	9617.63	330.428	0.51	0.03	-0.51	
15429.00	90.430	341.920	6578.58	9545.65	8455.11	-4775.98	1676279.27	14368127.59	39°33'58.4502"N	80°52'21.8908"W	9710.76	330.539	0.18	-0.09	0.15	
15523.00	90.430	341.110	6577.87	9639.65	8544.25	-4805.79	1676249.48	14368216.70	39°33'59.3317"N	80°52'22.2698"W	9803.05	330.644	0.86	0.00	-0.86	
15617.00	89.750	340.720	6577.72	9733.65	8633.09	-4836.52	1676218.75	14368305.50	39°34'0.2101"N	80°52'22.6606"W	9895.56	330.741	0.83	-0.72	-0.41	
15712.00	90.770	341.240	6577.29	9828.64	8722.90	-4867.48	1676187.81	14368395.28	39°34'1.0981"N	80°52'23.0543"W	9989.06	330.838	1.21	1.07	0.55	
15806.00	90.680	343.200	6576.10	9922.62	8812.39	-4896.18	1676159.12	14368484.74	39°34'1.9831"N	80°52'23.4192"W	10081.22	330.943	2.09	-0.10	2.09	
15901.00	89.940	342.080	6575.59	10017.58	8903.06	-4924.53	1676130.78	14368575.37	39°34'2.8796"N	80°52'23.7795"W	10174.26	331.052	1.41	-0.78	-1.18	
15995.00	90.310	342.360	6575.38	10111.56	8992.57	-4953.23	1676102.09	14368664.85	39°34'3.7646"N	80°52'24.1444"W	10266.49	331.153	0.49	0.39	0.30	
16090.00	90.710	341.300	6574.54	10206.55	9082.83	-4982.85	1676072.48	14368755.07	39°34'4.6571"N	80°52'24.5210"W	10359.86	331.251	1.19	0.42	-1.12	
16185.00	90.400	342.010	6573.62	10301.54	9173.00	-5012.75	1676042.59	14368845.20	39°34'5.5486"N	80°52'24.9012"W	10453.30	331.345	0.82	-0.33	0.75	
16279.00	90.370	341.360	6572.99	10395.53	9262.23	-5042.29	1676013.07	14368934.40	39°34'6.4310"N	80°52'25.2768"W	10545.79	331.436	0.69	-0.03	-0.69	
16374.00	90.830	341.720	6571.99	10490.52	9352.34	-5072.37	1675983.00	14369024.47	39°34'7.3219"N	80°52'25.6592"W	10639.32	331.526	0.61	0.48	0.38	



Actual Wellpath Report

Leap Unit 1H AWP Proj: 23185'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Leap Unit 1H
Field	Tyler	API	47-095-02818-0000
Facility	Heintzman Pad	Wellbore	Leap Unit 1H AWB
Slot	Slot A		

WELLPATH DATA (253 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
16469.00	90.830	342.950	6570.61	10585.49	9442.85	-5101.19	1675954.19	14369114.94	39°34'8.2168"N	80°52'26.0257"W	10732.64	331.621	1.29	0.00	1.29	
16563.00	89.720	340.820	6570.16	10679.47	9532.18	-5130.42	1675924.97	14369204.24	39°34'9.1001"N	80°52'26.3973"W	10825.14	331.710	2.56	-1.18	-2.27	
16657.00	90.060	340.490	6570.34	10773.47	9620.88	-5161.56	1675893.85	14369292.90	39°34'9.9771"N	80°52'26.7933"W	10918.01	331.787	0.50	0.36	-0.35	
16752.00	90.710	339.840	6569.71	10868.45	9710.24	-5193.79	1675861.63	14369382.22	39°34'10.8608"N	80°52'27.2033"W	11012.00	331.859	0.97	0.68	-0.68	
16847.00	90.000	338.100	6569.12	10963.38	9798.90	-5227.88	1675827.55	14369470.85	39°34'11.7376"N	80°52'27.6370"W	11106.27	331.919	1.98	-0.75	-1.83	
16941.00	91.080	343.440	6568.23	11057.34	9887.62	-5258.83	1675796.62	14369559.53	39°34'12.6148"N	80°52'28.0306"W	11199.12	331.993	5.80	1.15	5.68	
17036.00	89.080	341.400	6568.10	11152.30	9978.17	-5287.52	1675767.94	14369650.05	39°34'13.5102"N	80°52'28.3954"W	11292.56	332.081	3.01	-2.11	-2.15	
17130.00	89.820	339.060	6569.00	11246.28	10066.62	-5319.31	1675736.16	14369738.47	39°34'14.3848"N	80°52'28.7998"W	11385.60	332.148	2.61	0.79	-2.49	
17225.00	90.250	342.270	6568.94	11341.27	10156.25	-5350.76	1675704.72	14369828.06	39°34'15.2710"N	80°52'29.1998"W	11479.55	332.218	3.41	0.45	3.38	
17319.00	90.180	341.100	6568.59	11435.26	10245.49	-5380.30	1675675.20	14369917.26	39°34'16.1534"N	80°52'29.5754"W	11572.28	332.294	1.25	-0.07	-1.24	
17414.00	90.710	341.730	6567.85	11530.25	10335.53	-5410.57	1675644.93	14370007.27	39°34'17.0437"N	80°52'29.9604"W	11666.08	332.368	0.87	0.56	0.66	
17508.00	88.980	340.210	6568.11	11624.25	10424.39	-5441.22	1675614.30	14370096.09	39°34'17.9223"N	80°52'30.3502"W	11759.03	332.437	2.45	-1.84	-1.62	
17603.00	90.030	340.960	6568.93	11719.24	10513.98	-5472.80	1675582.73	14370185.64	39°34'18.8082"N	80°52'30.7518"W	11853.07	332.502	1.36	1.11	0.79	
17698.00	90.030	340.910	6568.88	11814.24	10603.77	-5503.83	1675551.72	14370275.40	39°34'19.6960"N	80°52'31.1465"W	11947.05	332.569	0.05	0.00	-0.05	
17792.00	90.890	342.600	6568.12	11908.22	10693.04	-5533.25	1675522.30	14370364.63	39°34'20.5787"N	80°52'31.5207"W	12039.85	332.640	2.02	0.91	1.80	
17887.00	89.720	337.650	6567.62	12003.18	10782.35	-5565.54	1675490.03	14370453.90	39°34'21.4618"N	80°52'31.9314"W	12134.01	332.699	5.35	-1.23	-5.21	
17982.00	89.570	341.160	6568.20	12098.12	10871.26	-5598.95	1675456.63	14370542.78	39°34'22.3410"N	80°52'32.3565"W	12228.35	332.750	3.70	-0.16	3.69	
18076.00	89.570	341.290	6568.91	12192.12	10960.26	-5629.21	1675426.39	14370631.74	39°34'23.2210"N	80°52'32.7413"W	12321.33	332.815	0.14	0.00	0.14	
18171.00	90.030	340.430	6569.24	12287.11	11050.00	-5660.35	1675395.25	14370721.45	39°34'24.1084"N	80°52'33.1375"W	12415.40	332.876	1.03	0.48	-0.91	
18265.00	90.060	341.560	6569.17	12381.11	11138.88	-5690.96	1675364.65	14370810.29	39°34'24.9872"N	80°52'33.5268"W	12508.46	332.937	1.20	0.03	1.20	
18360.00	89.630	341.070	6569.42	12476.11	11228.87	-5721.40	1675334.23	14370900.25	39°34'25.8770"N	80°52'33.9139"W	12602.46	333.000	0.69	-0.45	-0.52	
18454.00	89.940	340.480	6569.78	12570.11	11317.63	-5752.35	1675303.29	14370988.97	39°34'26.7546"N	80°52'34.3076"W	12695.60	333.057	0.71	0.33	-0.63	
18548.00	90.890	341.750	6569.10	12664.10	11406.56	-5782.77	1675272.88	14371077.87	39°34'27.6340"N	80°52'34.6945"W	12788.67	333.116	1.69	1.01	1.35	
18643.00	89.660	342.650	6568.64	12759.08	11497.01	-5811.81	1675243.85	14371168.28	39°34'28.5283"N	80°52'35.0638"W	12882.48	333.183	1.60	-1.29	0.95	
18737.00	90.680	341.420	6568.36	12853.06	11586.42	-5840.80	1675214.87	14371257.66	39°34'29.4124"N	80°52'35.4325"W	12975.37	333.247	1.70	1.09	-1.31	
18832.00	90.620	340.820	6567.28	12948.06	11676.31	-5871.54	1675184.15	14371347.50	39°34'30.3012"N	80°52'35.8235"W	13069.47	333.304	0.63	-0.06	-0.63	
18926.00	90.770	341.030	6566.14	13042.05	11765.14	-5902.26	1675153.44	14371436.30	39°34'31.1795"N	80°52'36.2142"W	13162.64	333.358	0.27	0.16	0.22	
19021.00	90.830	340.180	6564.82	13137.04	11854.74	-5933.80	1675121.91	14371525.86	39°34'32.0655"N	80°52'36.6154"W	13256.88	333.410	0.90	0.06	-0.89	
19115.00	88.950	341.160	6565.00	13231.03	11943.43	-5964.92	1675090.81	14371614.53	39°34'32.9425"N	80°52'37.0112"W	13350.13	333.461	2.26	-2.00	1.04	
19210.00	89.970	340.600	6565.89	13326.02	12033.19	-5996.03	1675059.71	14371704.24	39°34'33.8300"N	80°52'37.4070"W	13444.33	333.513	1.22	1.07	-0.59	



Actual Wellpath Report

Leap Unit 1H AWP Proj: 23185'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Leap Unit 1H
Field	Tyler	API	47-095-02818-0000
Facility	Heintzman Pad	Wellbore	Leap Unit 1H AWB
Slot	Slot A		

WELLPATH DATA (253 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
19304.00	89.880	341.310	6566.02	13420.02	12122.04	-6026.71	1675029.05	14371793.06	39°34'34.7086"N	80°52'37.7972"W	13537.54	333.565	0.76	-0.10	0.76	
19398.00	90.000	340.680	6566.11	13514.02	12210.92	-6057.32	1674998.45	14371881.90	39°34'35.5874"N	80°52'38.1866"W	13630.76	333.616	0.68	0.13	-0.67	
19493.00	90.180	340.110	6565.97	13609.01	12300.41	-6089.19	1674966.58	14371971.36	39°34'36.4723"N	80°52'38.5921"W	13725.10	333.663	0.63	0.19	-0.60	
19587.00	90.520	342.790	6565.39	13703.00	12389.52	-6119.09	1674936.69	14372060.43	39°34'37.3533"N	80°52'38.9724"W	13818.23	333.716	2.87	0.36	2.85	
19682.00	89.200	339.700	6565.82	13797.99	12479.46	-6149.63	1674906.17	14372150.34	39°34'38.2427"N	80°52'39.3608"W	13912.40	333.767	3.54	-1.39	-3.25	
19776.00	90.740	341.110	6565.67	13891.97	12568.01	-6181.16	1674874.66	14372238.85	39°34'39.1183"N	80°52'39.7619"W	14005.77	333.811	2.22	1.64	1.50	
19870.00	90.770	340.560	6564.43	13985.96	12656.79	-6212.01	1674843.81	14372327.60	39°34'39.9961"N	80°52'40.1544"W	14099.06	333.858	0.59	0.03	-0.59	
19965.00	88.740	341.190	6564.84	14080.96	12746.54	-6243.14	1674812.70	14372417.31	39°34'40.8836"N	80°52'40.5503"W	14193.35	333.905	2.24	-2.14	0.66	
20059.00	90.180	339.040	6565.73	14174.93	12834.93	-6275.10	1674780.75	14372505.66	39°34'41.7575"N	80°52'40.9571"W	14286.79	333.946	2.75	1.53	-2.29	
20154.00	89.910	340.980	6565.65	14269.91	12924.20	-6307.58	1674748.28	14372594.90	39°34'42.6402"N	80°52'41.3703"W	14381.25	333.986	2.06	-0.28	2.04	
20249.00	89.510	340.320	6566.13	14364.90	13013.83	-6339.06	1674716.82	14372684.49	39°34'43.5265"N	80°52'41.7707"W	14475.61	334.029	0.81	-0.42	-0.69	
20343.00	90.000	340.210	6566.53	14458.89	13102.31	-6370.80	1674685.09	14372772.94	39°34'44.4014"N	80°52'42.1745"W	14569.06	334.069	0.53	0.52	-0.12	
20438.00	89.780	340.760	6566.72	14553.88	13191.85	-6402.53	1674653.37	14372862.44	39°34'45.2868"N	80°52'42.5783"W	14663.47	334.111	0.62	-0.23	0.58	
20532.00	89.780	341.060	6567.08	14647.88	13280.68	-6433.27	1674622.64	14372951.24	39°34'46.1651"N	80°52'42.9694"W	14756.81	334.154	0.32	0.00	0.32	
20626.00	89.850	341.760	6567.38	14741.88	13369.77	-6463.24	1674592.69	14373040.30	39°34'47.0460"N	80°52'43.3505"W	14850.06	334.200	0.75	0.07	0.74	
20721.00	89.850	341.500	6567.63	14836.88	13459.93	-6493.18	1674562.76	14373130.42	39°34'47.9375"N	80°52'43.7314"W	14944.27	334.247	0.27	0.00	-0.27	
20815.00	89.820	341.000	6567.90	14930.88	13548.94	-6523.39	1674532.56	14373219.39	39°34'48.8176"N	80°52'44.1157"W	15037.57	334.291	0.53	-0.03	-0.53	
20909.00	89.880	340.780	6568.15	15024.87	13637.76	-6554.17	1674501.79	14373308.18	39°34'49.6958"N	80°52'44.5072"W	15130.95	334.332	0.24	0.06	-0.23	
21004.00	90.430	340.400	6567.89	15119.87	13727.36	-6585.74	1674470.24	14373397.74	39°34'50.5818"N	80°52'44.9089"W	15225.39	334.371	0.70	0.58	-0.40	
21099.00	90.650	342.270	6566.99	15214.86	13817.36	-6616.14	1674439.85	14373487.70	39°34'51.4717"N	80°52'45.2956"W	15319.68	334.414	1.98	0.23	1.97	
21193.00	90.030	341.160	6566.44	15308.85	13906.61	-6645.63	1674410.37	14373576.91	39°34'52.3541"N	80°52'45.6707"W	15412.92	334.458	1.35	-0.66	-1.18	
21288.00	90.060	341.490	6566.36	15403.85	13996.61	-6676.05	1674379.96	14373666.88	39°34'53.2440"N	80°52'46.0577"W	15507.24	334.500	0.35	0.03	0.35	
21383.00	90.340	340.380	6566.03	15498.85	14086.39	-6707.08	1674348.94	14373756.63	39°34'54.1318"N	80°52'46.4524"W	15601.65	334.539	1.21	0.29	-1.17	
21477.00	89.880	342.970	6565.85	15592.83	14175.62	-6736.63	1674319.40	14373845.82	39°34'55.0140"N	80°52'46.8283"W	15694.92	334.582	2.80	-0.49	2.76	
21571.00	89.200	341.430	6566.60	15686.81	14265.11	-6765.36	1674290.68	14373935.28	39°34'55.8989"N	80°52'47.1938"W	15788.08	334.627	1.79	-0.72	-1.64	
21666.00	89.660	341.410	6567.55	15781.81	14355.16	-6795.63	1674260.43	14374025.28	39°34'56.7892"N	80°52'47.5788"W	15882.42	334.667	0.48	0.48	-0.02	
21761.00	89.750	340.750	6568.04	15876.80	14445.02	-6826.44	1674229.64	14374115.11	39°34'57.6778"N	80°52'47.9707"W	15976.82	334.705	0.70	0.09	-0.69	
21855.00	89.720	341.080	6568.47	15970.80	14533.85	-6857.17	1674198.91	14374203.91	39°34'58.5661"N	80°52'48.3617"W	16070.27	334.742	0.35	-0.03	0.35	
21950.00	89.660	341.200	6568.99	16065.80	14623.75	-6887.88	1674168.22	14374293.77	39°34'59.4450"N	80°52'48.7524"W	16164.68	334.779	0.14	-0.06	0.13	
22044.00	89.780	341.370	6569.45	16159.80	14712.78	-6918.04	1674138.07	14374382.77	39°35'0.3253"N	80°52'49.1361"W	16258.08	334.817	0.22	0.13	0.18	



Actual Wellpath Report

Leap Unit 1H AWP Proj: 23185'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Leap Unit 1H
Field	Tyler	API	47-095-02818-0000
Facility	Heintzman Pad	Wellbore	Leap Unit 1H AWB
Slot	Slot A		

WELLPATH DATA (253 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
22139.00	89.200	341.060	6570.29	16254.79	14802.72	-6948.63	1674107.49	14374472.66	39°35'1.2146"N	80°52'49.5253"W	16352.49	334.854	0.69	-0.61	-0.33	
22234.00	89.290	341.560	6571.54	16349.79	14892.70	-6979.07	1674077.06	14374562.61	39°35'2.1043"N	80°52'49.9125"W	16446.88	334.891	0.53	0.09	0.53	
22328.00	90.060	341.470	6572.08	16443.78	14981.85	-7008.87	1674047.27	14374651.72	39°35'2.9857"N	80°52'50.2917"W	16540.26	334.929	0.82	0.82	-0.10	
22423.00	89.570	341.270	6572.38	16538.78	15071.87	-7039.22	1674016.94	14374741.71	39°35'3.8758"N	80°52'50.6778"W	16634.66	334.965	0.56	-0.52	-0.21	
22517.00	89.600	341.290	6573.06	16632.78	15160.89	-7069.39	1673986.78	14374830.70	39°35'4.7561"N	80°52'51.0616"W	16728.09	335.001	0.04	0.03	0.02	
22612.00	89.350	340.950	6573.94	16727.77	15250.78	-7100.13	1673956.05	14374920.55	39°35'5.6448"N	80°52'51.4527"W	16822.55	335.035	0.44	-0.26	-0.36	
22707.00	89.570	341.270	6574.83	16822.77	15340.66	-7130.88	1673925.31	14375010.39	39°35'6.5335"N	80°52'51.8440"W	16917.01	335.069	0.41	0.23	0.34	
22801.00	89.940	341.340	6575.23	16916.77	15429.70	-7161.01	1673895.19	14375099.39	39°35'7.4139"N	80°52'52.2273"W	17010.46	335.104	0.40	0.39	0.07	
22896.00	89.450	341.130	6575.74	17011.76	15519.65	-7191.57	1673864.65	14375189.31	39°35'8.3033"N	80°52'52.6161"W	17104.92	335.138	0.56	-0.52	-0.22	
22990.00	89.750	341.060	6576.39	17105.76	15608.57	-7222.03	1673834.20	14375278.20	39°35'9.1826"N	80°52'53.0036"W	17198.41	335.170	0.33	0.32	-0.07	
23085.00	89.660	340.590	6576.88	17200.76	15698.30	-7253.23	1673803.01	14375367.89	39°35'10.0698"N	80°52'53.4006"W	17292.95	335.201	0.50	-0.09	-0.49	
23160.00	89.780	341.290	6577.25	17275.76	15769.19	-7277.72	1673778.53	14375438.75	39°35'10.7707"N	80°52'53.7122"W	17367.57	335.226	0.95	0.16	0.93	
23185.00‡	89.780	341.290	6577.35	17300.76	15792.87	-7285.74	1673770.51	14375462.42	39°35'11.0048"N	80°52'53.8142"W	17392.43	335.235	0.00	0.00	0.00	Projected MD at TD: 23185'

HOLE & CASING SECTIONS - Ref Wellbore: Leap Unit 1H AWB Ref Wellpath: Leap Unit 1H AWP Proj: 23185'

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	30.00	130.00	100.00	30.00	130.00	0.00	0.00	0.06	-0.17
17.5in Open Hole	130.00	588.00	458.00	130.00	588.00	0.06	-0.17	-0.15	-1.22
13.375in Casing Surface	30.00	568.00	538.00	30.00	568.00	0.00	0.00	-0.20	-1.09
12.25in Open Hole	588.00	3539.00	2951.00	588.00	3392.36	-0.15	-1.22	75.08	-870.09
9.625in Casing Intermediate	30.00	3509.00	3479.00	30.00	3363.55	0.00	0.00	75.37	-861.73
8.75in Open Hole	3539.00	6216.00	2677.00	3392.36	5904.83	75.08	-870.09	193.31	-1777.41
8.5in Open Hole	6216.00	23185.00	16969.00	5904.83	6577.35	193.31	-1777.41	15792.87	-7285.74
5.5in Casing Production	30.00	23165.00	23135.00	30.00	6577.27	0.00	0.00	15773.92	-7279.33



Actual Wellpath Report

Leap Unit 1H AWP Proj: 23185'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Leap Unit 1H
Field	Tyler	API	47-095-02818-0000
Facility	Heintzman Pad	Wellbore	Leap Unit 1H AWB
Slot	Slot A		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Leap Unit 1H POE Plat	6589.00	691.03	-2069.25	1678984.92	14360366.62	39°32'41.6766"N	80°51'47.4796"W	point
Leap Unit 1H POE Rev-1	6589.00	618.70	-2092.71	1678961.47	14360294.32	39°32'40.9621"N	80°51'47.7805"W	point
Leap Unit 1H BHL Rev-1	6624.00	15772.77	-7276.46	1673779.79	14375442.33	39°35'10.8061"N	80°52'53.6961"W	point
Leap Unit 1H LP Rev-1	6624.00	827.95	-2164.28	1678889.92	14360503.49	39°32'43.0312"N	80°51'48.6901"W	point
Leap Unit 1H 50' L/R Hard Line	7000.00	8195.74	-4684.58	1676370.63	14367868.33	39°33'55.8855"N	80°52'20.7284"W	rectangle
2D Rectangle 16016.2 x 100.								

WELLPATH COMPOSITION - Ref Wellbore: Leap Unit 1H AWB Ref Wellpath: Leap Unit 1H AWP Proj: 23185'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
30.00	560.00	Gyrodata 2015 - GC+WIR+DPIPE	01 Gyrodata MS Gyro <17-1/2"> (100'-560')	Leap Unit 1H AWB	12/12/2022
560.00	3467.00	BH NaviTrak (2019) (Axial Corr+HRGM)	02 APS EM <12-1/4"> (560')(686'-3467')	Leap Unit 1H AWB	12/12/2022
3467.00	6145.00	BH NaviTrak (2019) (Axial Corr+HRGM)	03 APS EM <8-3/4"> (3467')(3593'-6145')	Leap Unit 1H AWB	12/12/2022
6145.00	23185.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	04 BH AT Curve <8-1/2"> (6145')(6201'-23160')	Leap Unit 1H AWB	12/12/2022



Actual Wellpath Report

Leap Unit 1H AWP Proj: 23185'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Leap Unit 1H
Field	Tyler	API	47-095-02818-0000
Facility	Heintzman Pad	Wellbore	Leap Unit 1H AWB
Slot	Slot A		

COMMENTS

Wellpath general comments

API: 47-095-02818-0000

BH Job #: 111601071

Rig: H&P 519

Duration: 12/13/2022-12/21/2022

Gyrodatta MS Gyro <17-1/2"> (100'-560')

APS EM <12-1/4"> (560')(686'-3467')

APS EM <8-3/4"> (3467')(3593'-6145')

BH AT Curve <8-1/2"> (6145')(6201'-23160')

Sycamore: 6680' MD

Middlesex: 6823' MD

Burkett: 6971' MD

Tully: 7006' MD

Marcellus POE: 7143' MD

Projected MD at TD: 23185'