



ANTERO RESOURCES CORPORATION

Location: Tyler County, WV
Field: Tyler
Facility: Roma Lou Pad

Slot: Slot #09
Well: Calvin Unit 1H
Wellbore: Calvin Unit 1H PWB

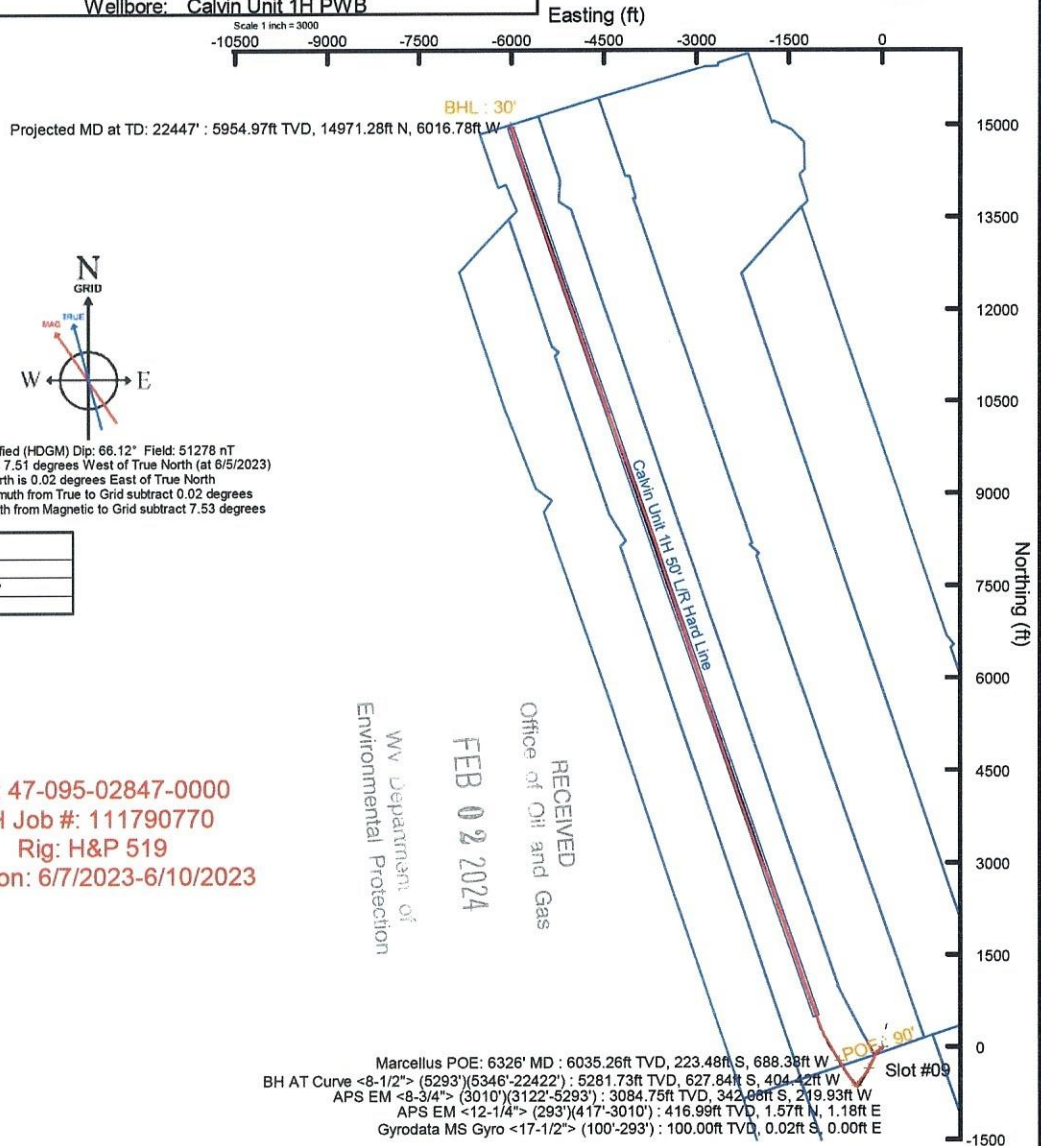
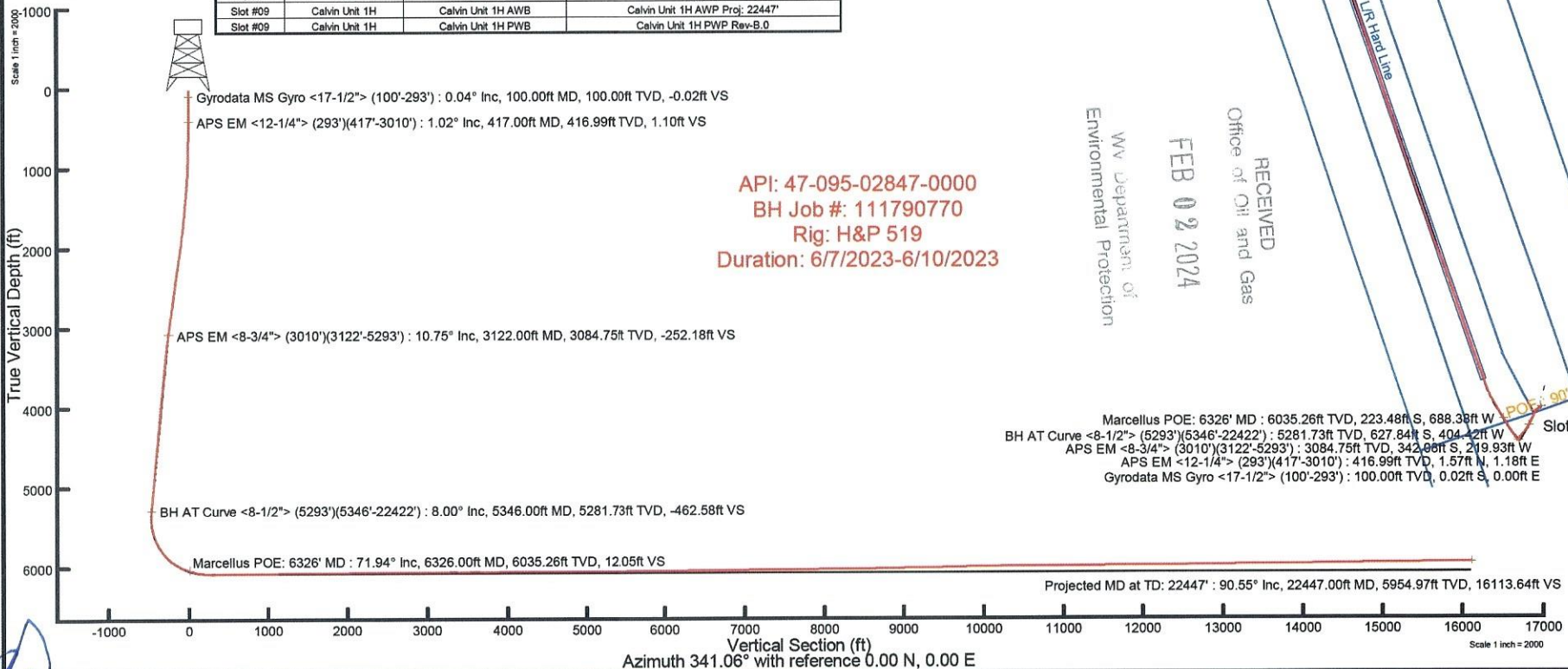


Plot reference wellpath is Calvin Unit 1H PWP Rev-B.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to H&P 519 (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to H&P 519 (RKB)	Scale: True distance
H&P 519 (RKB) to Mean Sea Level: 913 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot #09): -883 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: edsanyar on 2023-06-29; Database: WA_MPL_EASTERNUS_06th

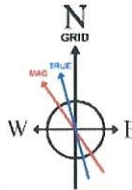
Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Roma Lou Pad	1647741.529	14338818.190	39°29'8.9000"N	80°58'26.5400"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
Slot #09	-294.04	-51.69	1647689.860	14338524.270	39°29'5.9941"N
Comment	Calvin Unit 1H - Plat SHL				
H&P 519 (RKB) to Ground level (At Slot: Slot #09)					30ft
Mean Sea Level to Ground level (At Slot: Slot #09)					-883ft
H&P 519 (RKB) to Mean Sea Level					913ft

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	3010.00	10.620	206.480	2974.69	-323.20	-211.33	1.19	-237.11
Proj. to Bottom	3085.00	10.620	206.480	3048.41	-335.57	-217.49	0.00	-246.81
Drill Out	3165.00	10.620	206.480	3127.03	-348.77	-224.07	0.00	-257.16
End of 3D Arc	3291.81	8.117	209.015	3252.14	-367.06	-233.62	2.00	-271.36
Curve KOP	5371.22	8.117	209.015	5310.72	-623.81	-376.03	0.00	-467.99
POE	6293.07	69.561	328.700	6030.00	-259.94	-674.39	8.00	-26.98
Landing Pt.	6548.31	90.000	328.700	6075.00	-46.44	-804.20	8.00	217.10
On AZI	7166.50	90.000	341.064	6075.00	512.20	-1066.10	2.00	830.50
BHL	22429.03	90.000	341.064	6075.00	14948.73	-6019.04	0.00	16093.04

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #09	Calvin Unit 1H	Calvin Unit 1H AWB	Calvin Unit 1H AWP Proj: 22447'
Slot #09	Calvin Unit 1H	Calvin Unit 1H PWB	Calvin Unit 1H PWP Rev-B.0



User specified (HDGM) Dip: 66.12° Field: 51278 nT
Magnetic North is 7.51 degrees West of True North (at 6/5/2023)
Grid North is 0.02 degrees East of True North
To correct azimuth from True to Grid subtract 0.02 degrees
To correct azimuth from Magnetic to Grid subtract 7.53 degrees





Actual Wellpath Report

Calvin Unit 1H AWP Proj: 22447'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Calvin Unit 1H
Field	Tyler	API	47-095-02847-0000
Facility	Roma Lou Pad	Wellbore	Calvin Unit 1H AWB
Slot	Slot #09		

REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Edsaryar
Scale	0.999600	Report Generated	6/29/2023 at 3:10:02 AM
Convergence at slot	0.02° 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	-294.04	-51.69	1647689.86	14338524.27	39°29'5.9941"N	80°58'27.2003"W
Facility Reference Pt			1647741.53	14338818.19	39°29'8.9000"N	80°58'26.5400"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	913.00ft
Horizontal Reference Pt	Slot	H&P 519 (RKB) to Mean Sea Level	913.00ft
Vertical Reference Pt	H&P 519 (RKB)	H&P 519 (RKB) to Ground Level at Slot (Slot #09)	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	341.06°

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Calvin Unit 1H AWP Proj: 22447'

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Facility	Roma Lou Pad	Wellbore	Calvin Unit 1H AWB
Slot	Slot #09		

WELLPATH DATA (245 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	189.730	0.00	0.00	0.00	0.00	1647689.86	14338524.27	39°29'5.9941"N	80°58'27.2003"W	0.00	0.000	0.00	0.00	0.00	
30.00	0.000	189.730	30.00	0.00	0.00	0.00	1647689.86	14338524.27	39°29'5.9941"N	80°58'27.2003"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.040	189.730	100.00	-0.02	-0.02	0.00	1647689.86	14338524.25	39°29'5.9938"N	80°58'27.2004"W	0.02	189.730	0.06	0.06	0.00	Gyrodata MS Gyro <17-1/2"> (100'-293')
200.00	0.030	183.760	200.00	-0.08	-0.08	-0.01	1647689.85	14338524.19	39°29'5.9932"N	80°58'27.2005"W	0.09	187.903	0.01	-0.01	-5.97	
293.00	0.530	22.890	293.00	0.22	0.29	0.15	1647690.01	14338524.56	39°29'5.9969"N	80°58'27.1984"W	0.33	28.182	0.60	0.54	-172.98	
417.00	1.020	46.800	416.99	1.10	1.57	1.18	1647691.04	14338525.84	39°29'6.0096"N	80°58'27.1853"W	1.97	36.944	0.47	0.40	19.28	APS EM <12-1/4"> (293')(417'-3010')
506.00	0.770	106.270	505.98	1.08	1.95	2.33	1647692.19	14338526.22	39°29'6.0133"N	80°58'27.1706"W	3.04	50.170	1.03	-0.28	66.82	
596.00	1.570	166.000	595.96	-0.49	0.58	3.21	1647693.07	14338524.85	39°29'5.9998"N	80°58'27.1594"W	3.26	79.761	1.51	0.89	66.37	
687.00	2.410	199.270	686.91	-3.24	-2.44	2.88	1647692.74	14338521.84	39°29'5.9700"N	80°58'27.1636"W	3.77	130.200	1.53	0.92	36.56	
777.00	3.450	224.020	776.79	-5.96	-6.17	0.38	1647690.24	14338518.10	39°29'5.9331"N	80°58'27.1956"W	6.18	176.515	1.79	1.16	27.50	
866.00	4.710	241.670	865.57	-7.77	-9.83	-4.70	1647685.16	14338514.44	39°29'5.8969"N	80°58'27.2603"W	10.90	205.565	1.98	1.42	19.83	
956.00	6.270	241.090	955.15	-9.22	-13.96	-12.26	1647677.61	14338510.32	39°29'5.8561"N	80°58'27.3567"W	18.58	221.286	1.73	1.73	-0.64	
1047.00	7.740	233.440	1045.47	-11.94	-20.01	-21.53	1647668.34	14338504.27	39°29'5.7963"N	80°58'27.4750"W	29.39	227.093	1.91	1.62	-8.41	
1141.00	9.580	228.980	1138.40	-16.80	-28.92	-32.52	1647657.36	14338495.36	39°29'5.7084"N	80°58'27.6152"W	43.51	228.354	2.08	1.96	-4.74	
1236.00	10.110	225.970	1232.00	-23.30	-39.90	-44.48	1647645.40	14338484.39	39°29'5.5998"N	80°58'27.7677"W	59.75	228.104	0.78	0.56	-3.17	
1330.00	10.260	224.270	1324.52	-30.58	-51.63	-56.25	1647633.63	14338472.66	39°29'5.4839"N	80°58'27.9180"W	76.35	227.453	0.36	0.16	-1.81	
1425.00	10.680	223.500	1417.94	-38.46	-64.07	-68.22	1647621.67	14338460.22	39°29'5.3610"N	80°58'28.0706"W	93.59	226.794	0.47	0.44	-0.81	
1519.00	10.350	222.870	1510.36	-46.48	-76.58	-79.96	1647609.93	14338447.72	39°29'5.2374"N	80°58'28.2204"W	110.71	226.236	0.37	-0.35	-0.67	
1614.00	10.180	218.690	1603.84	-55.01	-89.39	-91.01	1647598.89	14338434.92	39°29'5.1109"N	80°58'28.3614"W	127.57	225.516	0.80	-0.18	-4.40	
1708.00	10.200	216.280	1696.36	-64.20	-102.58	-101.13	1647588.77	14338421.73	39°29'4.9805"N	80°58'28.4905"W	144.05	224.592	0.45	0.02	-2.56	
1803.00	10.310	211.370	1789.84	-74.43	-116.62	-110.53	1647579.37	14338407.70	39°29'4.8418"N	80°58'28.6105"W	160.68	223.465	0.93	0.12	-5.17	
1897.00	10.610	208.660	1882.28	-85.64	-131.40	-119.06	1647570.85	14338392.93	39°29'4.6958"N	80°58'28.7193"W	177.31	222.181	0.61	0.32	-2.88	
1992.00	10.930	207.030	1975.61	-97.79	-147.09	-127.35	1647562.56	14338377.24	39°29'4.5406"N	80°58'28.8251"W	194.56	220.885	0.47	0.34	-1.72	
2086.00	11.120	204.730	2067.87	-110.55	-163.26	-135.19	1647554.72	14338361.07	39°29'4.3808"N	80°58'28.9252"W	211.97	219.626	0.51	0.20	-2.45	
2180.00	11.450	203.580	2160.05	-123.98	-180.05	-142.72	1647547.20	14338344.29	39°29'4.2150"N	80°58'29.0212"W	229.75	218.402	0.42	0.35	-1.22	
2275.00	11.780	202.350	2253.11	-138.22	-197.66	-150.18	1647539.75	14338326.69	39°29'4.0409"N	80°58'29.1164"W	248.24	217.226	0.43	0.35	-1.29	
2369.00	10.730	206.000	2345.30	-151.62	-214.40	-157.66	1647532.26	14338309.96	39°29'3.8755"N	80°58'29.2119"W	266.13	216.329	1.35	-1.12	3.88	
2463.00	9.790	203.120	2437.80	-163.75	-229.62	-164.63	1647525.29	14338294.75	39°29'3.7251"N	80°58'29.3009"W	282.54	215.641	1.14	-1.00	-3.06	
2558.00	10.970	208.950	2531.24	-175.81	-244.95	-172.18	1647517.75	14338279.41	39°29'3.5736"N	80°58'29.3972"W	299.41	215.104	1.66	1.24	6.14	
2652.00	11.060	207.470	2623.51	-188.02	-260.78	-180.67	1647509.26	14338263.59	39°29'3.4172"N	80°58'29.5055"W	317.25	214.714	0.32	0.10	-1.57	

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Actual Wellpath Report

Calvin Unit 1H AWP Proj: 22447'
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Operator	ANTERO RESOURCES CORPORATION	Well	Calvin Unit 1H
Field	Tyler	API	47-095-02847-0000
Facility	Roma Lou Pad	Wellbore	Calvin Unit 1H AWB
Slot	Slot #09		

WELLPATH DATA (245 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
2747.00	11.250	207.330	2716.72	-200.71	-277.10	-189.13	1647500.81	14338247.28	39°29'3.2559"N	80°58'29.6135"W	335.49	214.315	0.20	0.20	-0.15	
2841.00	11.300	206.030	2808.90	-213.56	-293.52	-197.38	1647492.56	14338230.87	39°29'3.0936"N	80°58'29.7188"W	353.71	213.919	0.28	0.05	-1.38	
2936.00	11.380	204.170	2902.05	-226.99	-310.43	-205.30	1647484.64	14338213.96	39°29'2.9265"N	80°58'29.8199"W	372.18	213.478	0.39	0.08	-1.96	
3010.00	10.620	206.480	2974.69	-237.11	-323.20	-211.33	1647478.61	14338201.20	39°29'2.8004"N	80°58'29.8968"W	386.16	213.180	1.19	-1.03	3.12	
3122.00	10.750	202.510	3084.75	-252.18	-342.08	-219.93	1647470.02	14338182.32	39°29'2.6137"N	80°58'30.0066"W	406.68	212.738	0.67	0.12	-3.54	APS EM <8-3/4"> (3010')(3122'-5293')
3217.00	9.900	198.720	3178.21	-265.29	-358.00	-225.94	1647464.01	14338166.41	39°29'2.4564"N	80°58'30.0833"W	423.34	212.257	1.14	-0.89	-3.99	
3311.00	10.260	211.880	3270.77	-276.97	-372.77	-232.96	1647456.99	14338151.65	39°29'2.3105"N	80°58'30.1728"W	439.58	212.003	2.47	0.38	14.00	
3406.00	10.700	220.880	3364.19	-286.75	-386.62	-243.20	1647446.76	14338137.80	39°29'2.1736"N	80°58'30.3035"W	456.75	212.172	1.78	0.46	9.47	
3500.00	9.890	215.670	3456.68	-295.81	-399.78	-253.62	1647436.34	14338124.65	39°29'2.0436"N	80°58'30.4364"W	473.44	212.391	1.31	-0.86	-5.54	
3595.00	9.750	216.910	3550.29	-305.05	-412.84	-263.21	1647426.76	14338111.60	39°29'1.9145"N	80°58'30.5588"W	489.61	212.520	0.27	-0.15	1.31	
3689.00	9.520	214.030	3642.96	-314.20	-425.64	-272.34	1647417.63	14338098.80	39°29'1.7880"N	80°58'30.6752"W	505.31	212.612	0.57	-0.24	-3.06	
3784.00	9.200	213.050	3736.70	-323.61	-438.52	-280.88	1647409.10	14338085.93	39°29'1.6608"N	80°58'30.7842"W	520.76	212.640	0.38	-0.34	-1.03	
3878.00	8.410	204.370	3829.60	-333.24	-451.08	-287.81	1647402.16	14338073.37	39°29'1.5366"N	80°58'30.8727"W	535.08	212.540	1.64	-0.84	-9.23	
3972.00	10.160	220.360	3922.38	-342.48	-463.66	-296.02	1647393.96	14338060.79	39°29'1.4123"N	80°58'30.9774"W	550.10	212.556	3.30	1.86	17.01	
4067.00	10.500	224.410	4015.84	-350.64	-476.23	-307.50	1647382.48	14338048.23	39°29'1.2881"N	80°58'31.1239"W	566.88	212.850	0.84	0.36	4.26	
4162.00	10.000	220.860	4109.32	-358.67	-488.65	-318.96	1647371.03	14338035.81	39°29'1.1654"N	80°58'31.2700"W	583.54	213.134	0.85	-0.53	-3.74	
4256.00	9.090	217.500	4202.02	-366.88	-500.72	-328.82	1647361.17	14338023.75	39°29'1.0462"N	80°58'31.3958"W	599.03	213.293	1.13	-0.97	-3.57	
4350.00	9.300	218.390	4294.81	-375.09	-512.56	-338.05	1647351.94	14338011.91	39°29'0.9291"N	80°58'31.5137"W	614.00	213.406	0.27	0.22	0.95	
4444.00	8.940	214.230	4387.62	-383.56	-524.55	-346.88	1647343.12	14337999.93	39°29'0.8106"N	80°58'31.6263"W	628.87	213.476	0.80	-0.38	-4.43	
4539.00	8.650	213.250	4481.51	-392.37	-536.63	-354.95	1647335.05	14337987.85	39°29'0.6913"N	80°58'31.7292"W	643.40	213.482	0.34	-0.31	-1.03	
4634.00	8.280	211.600	4575.47	-401.10	-548.43	-362.45	1647327.56	14337976.06	39°29'0.5747"N	80°58'31.8249"W	657.38	213.460	0.47	-0.39	-1.74	
4728.00	7.920	210.260	4668.53	-409.63	-559.79	-369.26	1647320.75	14337964.70	39°29'0.4624"N	80°58'31.9118"W	670.61	213.410	0.43	-0.38	-1.43	
4823.00	7.670	210.120	4762.66	-418.06	-570.93	-375.74	1647314.27	14337953.57	39°29'0.3524"N	80°58'31.9945"W	683.48	213.350	0.26	-0.26	-0.15	
4917.00	7.420	205.840	4855.84	-426.48	-581.82	-381.53	1647308.48	14337942.69	39°29'0.2448"N	80°58'32.0684"W	695.76	213.255	0.65	-0.27	-4.55	
5012.00	6.910	207.250	4950.10	-434.79	-592.42	-386.82	1647303.19	14337932.09	39°29'0.1400"N	80°58'32.1359"W	707.53	213.143	0.57	-0.54	1.48	
5106.00	6.550	203.480	5043.45	-442.66	-602.36	-391.55	1647298.47	14337922.15	39°29'0.0417"N	80°58'32.1962"W	718.44	213.025	0.61	-0.38	-4.01	
5201.00	6.330	201.780	5137.85	-450.63	-612.20	-395.65	1647294.37	14337912.32	39°28'59.9446"N	80°58'32.2486"W	728.92	212.874	0.31	-0.23	-1.79	
5293.00	7.320	211.290	5229.20	-458.22	-621.91	-400.58	1647289.44	14337902.61	39°28'59.8485"N	80°58'32.3114"W	739.76	212.786	1.63	1.08	10.34	
5346.00	8.000	214.480	5281.73	-462.58	-627.84	-404.42	1647285.60	14337896.68	39°28'59.7900"N	80°58'32.3605"W	746.82	212.787	1.51	1.28	6.02	BH AT Curve <8-1/2"> (5293')(5346'-22422')
5419.00	6.070	243.060	5354.20	-466.15	-633.78	-410.74	1647279.29	14337890.75	39°28'59.7313"N	80°58'32.4411"W	755.24	212.946	5.39	-2.64	39.15	

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Facility	Roma Lou Pad	Wellbore	Calvin Unit 1H AWB
Slot	Slot #09		

WELLPATH DATA (245 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
5514.00	7.940	290.020	5448.56	-462.72	-633.81	-421.39	1647268.64	14337890.72	39°28'59.7310"N	80°58'32.5769"W	761.11	213.618	6.14	1.97	49.43	
5608.00	14.810	314.760	5540.71	-447.84	-623.11	-436.05	1647253.99	14337901.41	39°28'59.8368"N	80°58'32.7638"W	760.52	214.984	8.81	7.31	26.32	
5703.00	20.980	328.600	5631.11	-420.31	-600.01	-453.55	1647236.49	14337924.50	39°29'0.0652"N	80°58'32.9870"W	752.14	217.086	7.85	6.49	14.57	
5797.00	29.230	329.610	5716.16	-381.32	-565.79	-473.97	1647216.08	14337958.71	39°29'0.4034"N	80°58'33.2472"W	738.08	219.953	8.79	8.78	1.07	
5892.00	36.300	325.550	5796.00	-331.42	-522.53	-501.65	1647188.42	14338001.95	39°29'0.8310"N	80°58'33.6001"W	724.35	223.832	7.79	7.44	-4.27	
5954.00†	42.004	326.311	5844.06	-293.64	-490.11	-523.55	1647166.52	14338034.36	39°29'1.1515"N	80°58'33.8794"W	717.16	226.890	9.23	9.20	1.23	Sycamore: 5954' MD
5986.00	44.950	326.640	5867.28	-272.33	-471.76	-535.71	1647154.36	14338052.70	39°29'1.3330"N	80°58'34.0344"W	713.82	228.632	9.23	9.21	1.03	
6081.00	53.790	328.640	5929.08	-202.26	-410.88	-574.19	1647115.90	14338113.56	39°29'1.9348"N	80°58'34.5249"W	706.05	234.413	9.44	9.31	2.11	
6091.00†	54.673	328.756	5934.93	-194.34	-403.94	-578.40	1647111.69	14338120.49	39°29'2.0033"N	80°58'34.5787"W	705.49	235.071	8.88	8.83	1.16	Middlesex: 6091' MD
6175.00	62.090	329.640	5978.93	-124.38	-342.53	-614.99	1647075.12	14338181.87	39°29'2.6103"N	80°58'35.0450"W	703.95	240.883	8.88	8.83	1.05	
6256.00†	69.181	328.094	6012.33	-52.31	-279.43	-653.14	1647036.99	14338244.95	39°29'3.2341"N	80°58'35.5314"W	710.40	246.837	8.92	8.75	-1.91	Burkett: 6256' MD
6269.00	70.320	327.860	6016.83	-40.43	-269.09	-659.60	1647030.52	14338255.29	39°29'3.3363"N	80°58'35.6138"W	712.38	247.806	8.92	8.76	-1.80	
6326.00†	71.940	327.637	6035.26	12.05	-223.48	-688.38	1647001.75	14338300.88	39°29'3.7872"N	80°58'35.9807"W	723.75	252.014	2.87	2.84	-0.39	Marcellus POE: 6326' MD
6364.00	73.020	327.490	6046.70	47.29	-192.90	-707.82	1646982.32	14338331.45	39°29'4.0895"N	80°58'36.2285"W	733.63	254.756	2.87	2.84	-0.39	
6458.00	80.170	327.180	6068.48	136.06	-115.97	-757.14	1646933.02	14338408.34	39°29'4.8499"N	80°58'36.8573"W	765.97	261.292	7.61	7.61	-0.33	
6553.00	86.890	330.630	6079.18	228.27	-35.19	-805.84	1646884.34	14338489.09	39°29'5.6484"N	80°58'37.4782"W	806.61	267.500	7.94	7.07	3.63	
6647.00	90.830	329.950	6081.05	320.58	46.42	-852.41	1646837.79	14338570.67	39°29'6.4551"N	80°58'38.0719"W	853.68	273.117	4.25	4.19	-0.72	
6742.00	90.000	333.090	6080.37	414.25	129.91	-897.71	1646792.51	14338654.13	39°29'7.2804"N	80°58'38.6493"W	907.06	278.234	3.42	-0.87	3.31	
6836.00	89.750	334.510	6080.57	507.50	214.25	-939.21	1646751.03	14338738.43	39°29'8.1141"N	80°58'39.1783"W	963.33	282.850	1.53	-0.27	1.51	
6928.00	90.220	336.760	6080.59	599.08	298.05	-977.16	1646713.09	14338822.20	39°29'8.9424"N	80°58'39.6621"W	1021.60	286.963	2.50	0.51	2.45	
7022.00	90.250	338.670	6080.21	692.91	385.03	-1012.80	1646677.46	14338909.14	39°29'9.8021"N	80°58'40.1164"W	1083.52	290.815	2.03	0.03	2.03	
7117.00	91.420	341.230	6078.82	787.88	474.25	-1045.37	1646644.91	14338998.33	39°29'10.6840"N	80°58'40.5315"W	1147.91	294.402	2.96	1.23	2.69	
7211.00	90.680	340.220	6077.10	881.86	562.96	-1076.39	1646613.90	14339087.01	39°29'11.5609"N	80°58'40.9269"W	1214.72	297.610	1.33	-0.79	-1.07	
7306.00	90.460	340.190	6076.16	976.84	652.35	-1108.56	1646581.75	14339176.35	39°29'12.4443"N	80°58'41.3369"W	1286.26	300.475	0.23	-0.23	-0.03	
7401.00	90.800	340.570	6075.11	1071.83	741.82	-1140.46	1646549.86	14339265.80	39°29'13.3288"N	80°58'41.7435"W	1360.49	303.042	0.54	0.36	0.40	
7495.00	91.320	340.850	6073.37	1165.81	830.53	-1171.50	1646518.83	14339354.47	39°29'14.2056"N	80°58'42.1392"W	1436.04	305.335	0.63	0.55	0.30	
7589.00	90.250	340.060	6072.09	1259.79	919.10	-1202.95	1646487.39	14339443.01	39°29'15.0810"N	80°58'42.5400"W	1513.88	307.381	1.41	-1.14	-0.84	
7683.00	90.830	338.210	6071.20	1353.73	1006.93	-1236.43	1646453.93	14339530.80	39°29'15.9492"N	80°58'42.9667"W	1594.57	309.159	2.06	0.62	-1.97	
7778.00	90.150	340.710	6070.39	1448.68	1095.88	-1269.75	1646420.62	14339619.71	39°29'16.8284"N	80°58'43.3915"W	1677.27	310.796	2.73	-0.72	2.63	
7873.00	90.090	341.400	6070.19	1543.68	1185.74	-1300.60	1646389.79	14339709.53	39°29'17.7165"N	80°58'43.7846"W	1759.98	312.355	0.73	-0.06	0.73	

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Actual Wellpath Report

Calvin Unit 1H AWP Proj: 22447'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Calvin Unit 1H
Field	Tyler	API	47-095-02847-0000
Facility	Roma Lou Pad	Wellbore	Calvin Unit 1H AWP
Slot	Slot #09		

WELLPATH DATA (245 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
7967.00	90.250	341.570	6069.91	1637.68	1274.87	-1330.45	1646359.95	14339798.63	39°29'18.5975"N	80°58'44.1650"W	1842.65	313.778	0.25	0.17	0.18	
8061.00	89.940	341.480	6069.75	1731.68	1364.02	-1360.23	1646330.17	14339887.75	39°29'19.4787"N	80°58'44.5447"W	1926.34	315.080	0.34	-0.33	-0.10	
8156.00	90.150	341.840	6069.68	1826.67	1454.20	-1390.12	1646300.29	14339977.88	39°29'20.3700"N	80°58'44.9257"W	2011.75	316.290	0.44	0.22	0.38	
8250.00	89.970	341.120	6069.58	1920.67	1543.33	-1419.98	1646270.45	14340066.98	39°29'21.2510"N	80°58'45.3063"W	2097.19	317.384	0.79	-0.19	-0.77	
8344.00	91.750	341.470	6068.17	2014.65	1632.35	-1450.12	1646240.32	14340155.97	39°29'22.1309"N	80°58'45.6904"W	2183.44	318.383	1.93	1.89	0.37	
8439.00	89.850	341.730	6066.84	2109.63	1722.48	-1480.11	1646210.35	14340246.06	39°29'23.0218"N	80°58'46.0726"W	2271.05	319.328	2.02	-2.00	0.27	
8533.00	89.880	341.610	6067.06	2203.63	1811.71	-1509.67	1646180.80	14340335.25	39°29'23.9037"N	80°58'46.4494"W	2358.26	320.196	0.13	0.03	-0.13	
8628.00	89.880	341.180	6067.26	2298.63	1901.75	-1539.98	1646150.50	14340425.25	39°29'24.7936"N	80°58'46.8357"W	2447.07	321.001	0.45	0.00	-0.45	
8722.00	90.090	340.130	6067.29	2392.62	1990.44	-1571.11	1646119.38	14340513.91	39°29'25.6703"N	80°58'47.2326"W	2535.79	321.715	1.14	0.22	-1.12	
8816.00	90.280	341.980	6066.98	2486.62	2079.34	-1601.63	1646088.87	14340602.78	39°29'26.5490"N	80°58'47.6216"W	2624.67	322.394	1.98	0.20	1.97	
8911.00	90.340	342.080	6066.47	2581.60	2169.71	-1630.94	1646059.58	14340693.10	39°29'27.4422"N	80°58'47.9952"W	2714.33	323.068	0.12	0.06	0.11	
9005.00	89.850	341.540	6066.31	2675.59	2259.01	-1660.28	1646030.24	14340782.37	39°29'28.3249"N	80°58'48.3692"W	2803.51	323.686	0.78	-0.52	-0.57	
9194.00	90.370	341.450	6065.95	2864.59	2438.24	-1720.27	1645970.28	14340961.53	39°29'30.0964"N	80°58'49.1339"W	2984.01	324.796	0.28	0.28	-0.05	
9289.00	90.430	341.610	6065.29	2959.58	2528.34	-1750.36	1645940.20	14341051.59	39°29'30.9870"N	80°58'49.5175"W	3075.11	325.305	0.18	0.06	0.17	
9383.00	90.740	341.680	6064.33	3053.57	2617.55	-1779.96	1645910.61	14341140.77	39°29'31.8687"N	80°58'49.8948"W	3165.42	325.784	0.34	0.33	0.07	
9478.00	90.650	340.700	6063.18	3148.56	2707.47	-1810.59	1645880.00	14341230.65	39°29'32.7575"N	80°58'50.2852"W	3257.09	326.228	1.04	-0.09	-1.03	
9572.00	91.480	335.280	6061.43	3242.38	2794.57	-1845.80	1645844.80	14341317.72	39°29'33.6184"N	80°58'50.7341"W	3349.12	326.555	5.83	0.88	-5.77	
9667.00	89.600	335.870	6060.53	3336.93	2881.06	-1885.08	1645805.54	14341404.17	39°29'34.4733"N	80°58'51.2349"W	3442.97	326.803	2.07	-1.98	0.62	
9761.00	89.570	338.390	6061.21	3430.70	2967.66	-1921.61	1645769.02	14341490.74	39°29'35.3293"N	80°58'51.7006"W	3535.48	327.076	2.68	-0.03	2.68	
9856.00	90.800	337.620	6060.91	3525.56	3055.75	-1957.19	1645733.46	14341578.79	39°29'36.1999"N	80°58'52.1542"W	3628.80	327.361	1.53	1.29	-0.81	
9950.00	89.540	338.760	6060.63	3619.44	3143.01	-1992.11	1645698.55	14341666.02	39°29'37.0625"N	80°58'52.5994"W	3721.16	327.633	1.81	-1.34	1.21	
10044.00	89.600	340.370	6061.33	3713.40	3231.09	-2024.93	1645665.75	14341754.06	39°29'37.9331"N	80°58'53.0178"W	3813.17	327.925	1.71	0.06	1.71	
10139.00	90.370	341.530	6061.36	3808.40	3320.89	-2055.93	1645634.75	14341843.82	39°29'38.8206"N	80°58'53.4130"W	3905.79	328.239	1.47	0.81	1.22	
10233.00	90.430	341.660	6060.70	3902.40	3410.08	-2085.61	1645605.09	14341932.98	39°29'39.7022"N	80°58'53.7914"W	3997.30	328.550	0.15	0.06	0.14	
10328.00	90.950	342.420	6059.56	3997.37	3500.44	-2114.90	1645575.81	14342023.30	39°29'40.5954"N	80°58'54.1648"W	4089.73	328.860	0.97	0.55	0.80	
10422.00	90.220	338.470	6058.60	4091.34	3589.00	-2146.36	1645544.37	14342111.82	39°29'41.4706"N	80°58'54.5658"W	4181.84	329.119	4.27	-0.78	-4.20	
10516.00	89.970	340.890	6058.44	4185.31	3677.14	-2179.00	1645511.74	14342199.93	39°29'42.3419"N	80°58'54.9819"W	4274.27	329.350	2.59	-0.27	2.57	
10611.00	90.250	341.340	6058.26	4280.31	3767.03	-2209.75	1645481.00	14342289.78	39°29'43.2303"N	80°58'55.3739"W	4367.32	329.604	0.56	0.29	0.47	
10705.00	90.580	340.790	6057.58	4374.31	3855.94	-2240.25	1645450.51	14342378.66	39°29'44.1091"N	80°58'55.7627"W	4459.48	329.844	0.68	0.35	-0.59	
10799.00	89.510	341.650	6057.51	4468.30	3944.93	-2270.51	1645420.26	14342467.61	39°29'44.9887"N	80°58'56.1485"W	4551.67	330.077	1.46	-1.14	0.91	

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Actual Wellpath Report

Calvin Unit 1H AWP Proj: 22447'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Calvin Unit 1H
Field	Tyler	API	47-095-02847-0000
Facility	Roma Lou Pad	Wellbore	Calvin Unit 1H AWP
Slot	Slot #09		

WELLPATH DATA (245 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
10894.00	90.120	341.560	6057.81	4563.30	4035.07	-2300.49	1645390.30	14342557.72	39°29'45.8797"N	80°58'56.5307"W	4644.79	330.312	0.65	0.64	-0.09	
10988.00	89.850	341.620	6057.84	4657.29	4124.26	-2330.17	1645360.62	14342646.88	39°29'46.7612"N	80°58'56.9092"W	4737.01	330.534	0.29	-0.29	0.06	
11083.00	89.850	341.570	6058.09	4752.29	4214.40	-2360.17	1645330.64	14342736.98	39°29'47.6522"N	80°58'57.2916"W	4830.28	330.750	0.05	0.00	-0.05	
11177.00	90.770	341.840	6057.58	4846.28	4303.65	-2389.68	1645301.15	14342826.19	39°29'48.5343"N	80°58'57.6677"W	4922.60	330.958	1.02	0.98	0.29	
11271.00	90.000	341.740	6056.95	4940.27	4392.94	-2419.05	1645271.78	14342915.44	39°29'49.4168"N	80°58'58.0422"W	5014.95	331.160	0.83	-0.82	-0.11	
11365.00	89.690	340.350	6057.20	5034.27	4481.84	-2449.58	1645241.26	14343004.31	39°29'50.2955"N	80°58'58.4315"W	5107.58	331.341	1.52	-0.33	-1.48	
11459.00	91.290	341.680	6056.40	5128.26	4570.72	-2480.16	1645210.70	14343093.15	39°29'51.1740"N	80°58'58.8213"W	5200.26	331.515	2.21	1.70	1.41	
11554.00	89.820	341.290	6055.48	5223.25	4660.79	-2510.32	1645180.54	14343183.19	39°29'52.0643"N	80°58'59.2059"W	5293.84	331.693	1.60	-1.55	-0.41	
11648.00	89.970	341.230	6055.65	5317.25	4749.81	-2540.52	1645150.36	14343272.17	39°29'52.9441"N	80°58'59.5909"W	5386.55	331.859	0.17	0.16	-0.06	
11743.00	90.340	341.470	6055.39	5412.25	4839.82	-2570.90	1645119.99	14343362.15	39°29'53.8338"N	80°58'59.9782"W	5480.28	332.023	0.46	0.39	0.25	
11837.00	90.890	341.950	6054.38	5506.24	4929.07	-2600.40	1645090.50	14343451.36	39°29'54.7159"N	80°59'0.3543"W	5572.95	332.185	0.78	0.59	0.51	
11932.00	90.220	341.510	6053.46	5601.22	5019.27	-2630.18	1645060.73	14343541.53	39°29'55.6075"N	80°59'0.7340"W	5666.65	332.345	0.84	-0.71	-0.46	
12026.00	90.490	342.370	6052.88	5695.21	5108.64	-2659.32	1645031.61	14343630.86	39°29'56.4908"N	80°59'1.1055"W	5759.36	332.501	0.96	0.29	0.91	
12121.00	90.550	341.680	6052.02	5790.19	5199.00	-2688.64	1645002.30	14343721.18	39°29'57.3839"N	80°59'1.4793"W	5853.06	332.654	0.73	0.06	-0.73	
12215.00	90.220	341.650	6051.39	5884.18	5288.22	-2718.21	1644972.74	14343810.37	39°29'58.2658"N	80°59'1.8563"W	5945.92	332.796	0.35	-0.35	-0.03	
12309.00	90.860	342.390	6050.50	5978.17	5377.63	-2747.22	1644943.74	14343899.74	39°29'59.1495"N	80°59'2.2262"W	6038.72	332.939	1.04	0.68	0.79	
12404.00	90.090	341.550	6049.71	6073.15	5467.96	-2776.62	1644914.35	14343989.03	39°30'0.0423"N	80°59'2.6011"W	6132.55	333.079	1.20	-0.81	-0.88	
12499.00	90.860	342.190	6048.92	6168.14	5558.24	-2806.18	1644884.80	14344080.27	39°30'0.9346"N	80°59'2.9780"W	6226.45	333.212	1.05	0.81	0.67	
12593.00	90.580	341.650	6047.74	6262.12	5647.59	-2835.35	1644855.64	14344169.59	39°30'1.8177"N	80°59'3.3499"W	6319.38	333.341	0.65	-0.30	-0.57	
12687.00	90.370	342.530	6046.96	6356.10	5737.03	-2864.26	1644826.75	14344258.99	39°30'2.7018"N	80°59'3.7184"W	6412.29	333.469	0.96	-0.22	0.94	
12782.00	90.400	341.640	6046.33	6451.08	5827.42	-2893.48	1644797.54	14344349.35	39°30'3.5952"N	80°59'4.0910"W	6506.23	333.594	0.94	0.03	-0.94	
12876.00	90.120	341.290	6045.90	6545.08	5916.54	-2923.36	1644767.67	14344438.44	39°30'4.4761"N	80°59'4.4720"W	6599.36	333.706	0.48	-0.30	-0.37	
12970.00	90.920	342.090	6045.05	6639.06	6005.78	-2952.89	1644738.15	14344527.64	39°30'5.3581"N	80°59'4.8485"W	6692.46	333.818	1.20	0.85	0.85	
13065.00	90.460	341.900	6043.90	6734.04	6096.12	-2982.25	1644708.80	14344617.94	39°30'6.2510"N	80°59'5.2229"W	6786.50	333.932	0.52	-0.48	-0.20	
13159.00	90.740	342.060	6042.92	6828.03	6185.50	-3011.33	1644679.74	14344707.29	39°30'7.1345"N	80°59'5.5936"W	6879.58	334.041	0.34	0.30	0.17	
13254.00	90.280	341.340	6042.07	6923.02	6275.70	-3041.16	1644649.92	14344797.44	39°30'8.0259"N	80°59'5.9740"W	6973.74	334.145	0.90	-0.48	-0.76	
13348.00	90.740	341.870	6041.23	7017.01	6364.89	-3070.82	1644620.27	14344886.60	39°30'8.9075"N	80°59'6.3522"W	7066.95	334.244	0.75	0.49	0.56	
13442.00	90.460	342.290	6040.25	7110.99	6454.32	-3099.74	1644591.36	14344976.00	39°30'9.7914"N	80°59'6.7210"W	7160.08	334.347	0.54	-0.30	0.45	
13537.00	90.060	341.390	6039.82	7205.98	6544.59	-3129.35	1644561.77	14345066.23	39°30'10.6836"N	80°59'7.0985"W	7254.27	334.445	1.04	-0.42	-0.95	
13632.00	89.970	341.050	6039.79	7300.98	6634.53	-3159.93	1644531.20	14345156.13	39°30'11.5726"N	80°59'7.4885"W	7348.62	334.532	0.37	-0.09	-0.36	

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Actual Wellpath Report

Calvin Unit 1H AWP Proj: 22447'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Calvin Unit 1H
Field	Tyler	API	47-095-02847-0000
Facility	Roma Lou Pad	Wellbore	Calvin Unit 1H AWB
Slot	Slot #09		

WELLPATH DATA (245 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
13726.00	90.280	341.020	6039.59	7394.98	6723.43	-3190.48	1644500.66	14345245.00	39°30'12.4512"N	80°59'7.8780"W	7442.02	334.614	0.33	0.33	-0.03	
13820.00	91.110	343.990	6038.45	7488.93	6813.06	-3218.74	1644472.42	14345334.59	39°30'13.3372"N	80°59'8.2383"W	7535.12	334.712	3.28	0.88	3.16	
13915.00	89.910	341.330	6037.60	7583.88	6903.73	-3247.05	1644444.12	14345425.23	39°30'14.2333"N	80°59'8.5992"W	7629.21	334.811	3.07	-1.26	-2.80	
14010.00	90.550	341.610	6037.22	7678.87	6993.81	-3277.24	1644413.94	14345515.26	39°30'15.1236"N	80°59'8.9842"W	7723.57	334.893	0.74	0.67	0.29	
14104.00	90.800	341.590	6036.11	7772.86	7082.99	-3306.91	1644384.28	14345604.42	39°30'16.0051"N	80°59'9.3625"W	7816.93	334.973	0.27	0.27	-0.02	
14198.00	90.800	342.140	6034.80	7866.84	7172.32	-3336.16	1644355.04	14345693.70	39°30'16.8880"N	80°59'9.7356"W	7910.25	335.055	0.59	0.00	0.59	
14293.00	90.220	342.370	6033.96	7961.82	7262.79	-3365.11	1644326.10	14345784.14	39°30'17.7822"N	80°59'10.1048"W	8004.51	335.140	0.66	-0.61	0.24	
14387.00	90.120	341.920	6033.68	8055.80	7352.26	-3393.94	1644297.29	14345873.58	39°30'18.6666"N	80°59'10.4723"W	8097.81	335.221	0.49	-0.11	-0.48	
14481.00	90.860	342.150	6032.87	8149.78	7441.68	-3422.93	1644268.31	14345962.96	39°30'19.5503"N	80°59'10.8420"W	8191.15	335.299	0.82	0.79	0.24	
14576.00	90.490	341.710	6031.75	8244.77	7531.98	-3452.39	1644238.86	14346053.23	39°30'20.4429"N	80°59'11.2177"W	8285.52	335.375	0.61	-0.39	-0.46	
14670.00	90.340	341.380	6031.07	8338.76	7621.15	-3482.15	1644209.11	14346142.35	39°30'21.3242"N	80°59'11.5972"W	8378.98	335.444	0.39	-0.16	-0.35	
14765.00	90.150	341.290	6030.67	8433.76	7711.15	-3512.55	1644178.72	14346232.32	39°30'22.2137"N	80°59'11.9849"W	8473.48	335.510	0.22	-0.20	-0.09	
14859.00	90.680	343.010	6029.99	8527.73	7800.62	-3541.36	1644149.92	14346321.75	39°30'23.0980"N	80°59'12.3523"W	8566.85	335.583	1.91	0.56	1.83	
14954.00	91.380	344.390	6028.28	8622.61	7891.78	-3568.02	1644123.27	14346412.88	39°30'23.9991"N	80°59'12.6922"W	8660.89	335.671	1.63	0.74	1.45	
15048.00	90.860	342.250	6026.44	8716.52	7981.81	-3594.99	1644096.31	14346502.87	39°30'24.8888"N	80°59'13.0362"W	8754.04	335.753	2.34	-0.55	-2.28	
15142.00	90.770	341.350	6025.10	8810.50	8071.09	-3624.35	1644066.97	14346592.12	39°30'25.7713"N	80°59'13.4105"W	8847.51	335.817	0.96	-0.10	-0.96	
15237.00	91.570	343.270	6023.16	8905.45	8161.58	-3653.21	1644038.12	14346682.57	39°30'26.6657"N	80°59'13.7786"W	8941.88	335.886	2.19	0.84	2.02	
15332.00	91.260	340.970	6020.82	9000.40	8251.95	-3682.37	1644008.97	14346772.91	39°30'27.5589"N	80°59'14.1504"W	9036.29	335.952	2.44	-0.33	-2.42	
15426.00	90.650	339.390	6019.25	9094.37	8340.37	-3714.23	1643977.12	14346861.29	39°30'28.4328"N	80°59'14.5568"W	9130.02	335.995	1.80	-0.65	-1.68	
15520.00	91.140	339.590	6017.78	9188.33	8428.40	-3747.16	1643944.20	14346949.28	39°30'29.3029"N	80°59'14.9768"W	9223.84	336.031	0.56	0.52	0.21	
15615.00	90.680	339.730	6016.27	9283.28	8517.47	-3780.18	1643911.20	14347038.31	39°30'30.1832"N	80°59'15.3979"W	9318.64	336.068	0.51	-0.48	0.15	
15709.00	90.490	339.860	6015.31	9377.26	8605.68	-3812.65	1643878.75	14347126.49	39°30'31.0551"N	80°59'15.8119"W	9412.44	336.105	0.24	-0.20	0.14	
15804.00	90.680	339.590	6014.34	9472.23	8694.79	-3845.56	1643845.84	14347215.56	39°30'31.9358"N	80°59'16.2317"W	9507.24	336.141	0.35	0.20	-0.28	
15898.00	90.460	340.350	6013.41	9566.20	8783.10	-3877.76	1643813.66	14347303.83	39°30'32.8086"N	80°59'16.6423"W	9601.03	336.178	0.84	-0.23	0.81	
15992.00	91.820	341.130	6011.54	9660.18	8871.81	-3908.76	1643782.67	14347392.52	39°30'33.6855"N	80°59'17.0377"W	9694.71	336.223	1.67	1.45	0.83	
16087.00	91.690	341.740	6008.63	9755.13	8961.83	-3938.99	1643752.45	14347482.50	39°30'34.5752"N	80°59'17.4232"W	9789.28	336.273	0.66	-0.14	0.64	
16181.00	91.600	340.790	6005.93	9849.09	9050.81	-3969.17	1643722.29	14347571.44	39°30'35.4547"N	80°59'17.8081"W	9882.89	336.320	1.01	-0.10	-1.01	
16275.00	90.890	339.230	6003.89	9943.05	9139.12	-4001.29	1643690.17	14347659.72	39°30'36.3275"N	80°59'18.2179"W	9976.67	336.355	1.82	-0.76	-1.66	
16370.00	90.490	339.390	6002.74	10038.00	9227.99	-4034.86	1643656.63	14347748.55	39°30'37.2059"N	80°59'18.6459"W	10071.54	336.383	0.45	-0.42	0.17	
16464.00	90.770	340.060	6001.71	10131.97	9316.16	-4067.43	1643624.07	14347836.68	39°30'38.0773"N	80°59'19.0613"W	10165.37	336.414	0.77	0.30	0.71	

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Actual Wellpath Report

Calvin Unit 1H AWP Proj: 22447'
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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Calvin Unit 1H
Field	Tyler		API	47-095-02847-0000
Facility	Roma Lou Pad		Wellbore	Calvin Unit 1H AWB
Slot	Slot #09			

WELLPATH DATA (245 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
16558.00	90.740	339.650	6000.47	10225.94	9404.40	-4099.80	1643591.71	14347924.89	39°30'38.9495"N	80°59'19.4742"W	10259.19	336.445	0.44	-0.03	-0.44	
16652.00	90.150	338.980	5999.74	10319.89	9492.34	-4133.00	1643558.52	14348012.79	39°30'39.8186"N	80°59'19.8977"W	10353.07	336.472	0.95	-0.63	-0.71	
16747.00	90.060	339.820	5999.57	10414.85	9581.26	-4166.42	1643525.11	14348101.68	39°30'40.6976"N	80°59'20.3240"W	10447.95	336.498	0.89	-0.09	0.88	
16841.00	90.060	339.640	5999.47	10508.83	9669.44	-4198.99	1643492.56	14348189.82	39°30'41.5691"N	80°59'20.7394"W	10541.80	336.527	0.19	0.00	-0.19	
16935.00	90.060	339.350	5999.37	10602.79	9757.48	-4231.92	1643459.64	14348277.83	39°30'42.4393"N	80°59'21.1593"W	10635.68	336.553	0.31	0.00	-0.31	
17029.00	90.280	339.440	5999.09	10696.75	9845.47	-4265.00	1643426.58	14348365.78	39°30'43.3089"N	80°59'21.5813"W	10729.56	336.578	0.25	0.23	0.10	
17123.00	90.090	339.320	5998.79	10790.71	9933.45	-4298.10	1643393.49	14348453.72	39°30'44.1785"N	80°59'22.0035"W	10823.45	336.602	0.24	-0.20	-0.13	
17218.00	90.120	340.050	5998.61	10885.68	10022.54	-4331.08	1643360.52	14348542.78	39°30'45.0590"N	80°59'22.4242"W	10918.31	336.629	0.77	0.03	0.77	
17312.00	90.580	340.510	5998.04	10979.67	10111.02	-4362.80	1643328.81	14348631.23	39°30'45.9336"N	80°59'22.8288"W	11012.12	336.660	0.69	0.49	0.49	
17407.00	90.400	340.990	5997.23	11074.67	10200.71	-4394.12	1643297.51	14348720.88	39°30'46.8200"N	80°59'23.2282"W	11106.88	336.695	0.54	-0.19	0.51	
17501.00	89.570	339.100	5997.25	11168.65	10289.06	-4426.20	1643265.44	14348809.19	39°30'47.6933"N	80°59'23.6374"W	11200.71	336.723	2.20	-0.88	-2.01	
17595.00	90.860	340.400	5996.90	11262.62	10377.24	-4458.73	1643232.92	14348897.34	39°30'48.5649"N	80°59'24.0524"W	11294.58	336.749	1.95	1.37	1.38	
17689.00	90.370	340.390	5995.89	11356.60	10465.79	-4490.27	1643201.39	14348985.85	39°30'49.4400"N	80°59'24.4547"W	11388.38	336.779	0.52	-0.52	-0.01	
17783.00	90.580	341.490	5995.11	11450.60	10554.63	-4520.97	1643170.71	14349074.66	39°30'50.3181"N	80°59'24.8462"W	11482.13	336.813	1.19	0.22	1.17	
17878.00	90.740	340.850	5994.02	11545.59	10644.54	-4551.63	1643140.06	14349164.53	39°30'51.2068"N	80°59'25.2373"W	11576.85	336.848	0.69	0.17	-0.67	
17972.00	90.490	340.600	5993.01	11639.58	10733.27	-4582.65	1643109.05	14349253.22	39°30'52.0837"N	80°59'25.6330"W	11670.64	336.880	0.38	-0.27	-0.27	
18067.00	90.650	340.860	5992.06	11734.58	10822.94	-4614.00	1643077.71	14349342.86	39°30'52.9700"N	80°59'26.0329"W	11765.42	336.911	0.32	0.17	0.27	
18161.00	90.340	340.250	5991.25	11828.57	10911.57	-4645.30	1643046.43	14349431.46	39°30'53.8460"N	80°59'26.4321"W	11859.23	336.939	0.73	-0.33	-0.65	
18255.00	90.890	341.300	5990.24	11922.56	11000.33	-4676.25	1643015.49	14349520.17	39°30'54.7232"N	80°59'26.8269"W	11953.01	336.970	1.26	0.59	1.12	
18350.00	90.490	341.000	5989.10	12017.56	11090.22	-4706.94	1642984.81	14349610.04	39°30'55.6117"N	80°59'27.2183"W	12047.75	337.003	0.53	-0.42	-0.32	
18444.00	90.620	340.830	5988.19	12111.55	11179.05	-4737.67	1642954.09	14349698.83	39°30'56.4897"N	80°59'27.6104"W	12141.53	337.033	0.23	0.14	-0.18	
18539.00	90.000	340.710	5987.67	12206.55	11268.75	-4768.96	1642922.82	14349788.49	39°30'57.3762"N	80°59'28.0095"W	12236.33	337.062	0.66	-0.65	-0.13	
18633.00	90.060	340.700	5987.62	12300.55	11357.47	-4800.02	1642891.77	14349877.18	39°30'58.2531"N	80°59'28.4057"W	12330.14	337.090	0.06	0.06	-0.01	
18727.00	90.030	340.570	5987.55	12394.54	11446.15	-4831.19	1642860.61	14349965.82	39°30'59.1296"N	80°59'28.8033"W	12423.96	337.116	0.14	-0.03	-0.14	
18822.00	89.850	340.680	5987.65	12489.54	11535.77	-4862.71	1642829.11	14350055.41	39°31'0.0154"N	80°59'29.2053"W	12518.78	337.143	0.22	-0.19	0.12	
18916.00	90.430	341.000	5987.42	12583.54	11624.56	-4893.56	1642798.27	14350144.16	39°31'0.8930"N	80°59'29.5989"W	12612.59	337.171	0.70	0.62	0.34	
19011.00	91.020	340.790	5986.22	12678.53	11714.32	-4924.65	1642767.19	14350233.89	39°31'1.7801"N	80°59'29.9955"W	12707.38	337.198	0.66	0.62	-0.22	
19105.00	90.520	341.350	5984.96	12772.52	11803.23	-4955.14	1642736.71	14350322.76	39°31'2.6589"N	80°59'30.3845"W	12801.16	337.227	0.80	-0.53	0.60	
19200.00	90.370	341.030	5984.22	12867.52	11893.15	-4985.77	1642706.09	14350412.64	39°31'3.5476"N	80°59'30.7752"W	12895.93	337.256	0.37	-0.16	-0.34	
19295.00	90.800	339.570	5983.25	12962.50	11982.59	-5017.79	1642674.09	14350502.04	39°31'4.4316"N	80°59'31.1837"W	12990.79	337.278	1.60	0.45	-1.54	

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Actual Wellpath Report

Calvin Unit 1H AWP Proj: 22447'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Calvin Unit 1H
Field	Tyler	API	47-095-02847-0000
Facility	Roma Lou Pad	Wellbore	Calvin Unit 1H AWB
Slot	Slot #09		

WELLPATH DATA (245 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
19389.00	90.770	340.960	5981.96	13056.48	12071.06	-5049.53	1642642.36	14350590.47	39°31'5.3060"N	80°59'31.5886"W	13084.65	337.300	1.48	-0.03	1.48	
19484.00	90.460	340.840	5980.94	13151.48	12160.82	-5080.61	1642611.29	14350680.20	39°31'6.1932"N	80°59'31.9851"W	13179.46	337.326	0.35	-0.33	-0.13	
19578.00	90.310	340.910	5980.31	13245.47	12249.63	-5111.41	1642580.51	14350768.98	39°31'7.0709"N	80°59'32.3780"W	13273.28	337.351	0.18	-0.16	0.07	
19673.00	90.650	341.100	5979.51	13340.47	12339.45	-5142.33	1642549.60	14350858.76	39°31'7.9587"N	80°59'32.7724"W	13368.08	337.377	0.41	0.36	0.20	
19767.00	90.550	340.910	5978.53	13434.46	12428.33	-5172.92	1642519.02	14350947.61	39°31'8.8371"N	80°59'33.1627"W	13461.89	337.402	0.23	-0.11	-0.20	
19861.00	90.460	340.710	5977.70	13528.46	12517.10	-5203.82	1642488.13	14351036.34	39°31'9.7145"N	80°59'33.5569"W	13555.72	337.426	0.23	-0.10	-0.21	
19956.00	90.400	340.870	5976.99	13623.46	12606.81	-5235.08	1642456.89	14351126.01	39°31'10.6012"N	80°59'33.9556"W	13650.56	337.449	0.18	-0.06	0.17	
20050.00	90.490	340.700	5976.26	13717.45	12695.57	-5266.01	1642425.97	14351214.74	39°31'11.4784"N	80°59'34.3503"W	13744.40	337.472	0.20	0.10	-0.18	
20144.00	90.460	340.910	5975.48	13811.45	12784.34	-5296.92	1642395.07	14351303.47	39°31'12.3558"N	80°59'34.7445"W	13838.23	337.494	0.23	-0.03	0.22	
20239.00	90.120	339.860	5975.00	13906.44	12873.83	-5328.81	1642363.20	14351392.92	39°31'13.2402"N	80°59'35.1514"W	13933.11	337.514	1.16	-0.36	-1.11	
20333.00	90.280	340.820	5974.67	14000.43	12962.35	-5360.43	1642331.58	14351481.41	39°31'14.1151"N	80°59'35.5549"W	14027.00	337.533	1.04	0.17	1.02	
20428.00	90.090	340.340	5974.36	14095.42	13051.94	-5392.02	1642300.01	14351570.96	39°31'15.0006"N	80°59'35.9578"W	14121.86	337.554	0.54	-0.20	-0.51	
20523.00	91.570	341.120	5972.99	14190.41	13141.61	-5423.37	1642268.67	14351660.59	39°31'15.8868"N	80°59'36.3578"W	14216.70	337.575	1.76	1.56	0.82	
20617.00	89.290	339.020	5972.28	14284.38	13229.96	-5455.40	1642236.65	14351748.91	39°31'16.7601"N	80°59'36.7665"W	14310.60	337.591	3.30	-2.43	-2.23	
20712.00	91.750	343.350	5971.42	14379.35	13319.85	-5486.03	1642206.03	14351838.77	39°31'17.6486"N	80°59'37.1573"W	14405.38	337.615	5.24	2.59	4.56	
20806.00	90.340	340.310	5969.70	14473.31	13409.14	-5515.34	1642176.74	14351928.02	39°31'18.5310"N	80°59'37.5311"W	14499.10	337.642	3.56	-1.50	-3.23	
20900.00	90.120	340.810	5969.33	14567.31	13497.78	-5546.62	1642145.47	14352016.62	39°31'19.4071"N	80°59'37.9303"W	14592.98	337.661	0.58	-0.23	0.53	
20995.00	90.830	340.670	5968.54	14662.30	13587.46	-5577.95	1642114.15	14352106.27	39°31'20.2935"N	80°59'38.3300"W	14687.84	337.681	0.76	0.75	-0.15	
21089.00	90.620	340.550	5967.35	14756.29	13676.12	-5609.16	1642082.95	14352194.89	39°31'21.1697"N	80°59'38.7282"W	14781.71	337.699	0.26	-0.22	-0.13	
21184.00	89.720	340.310	5967.07	14851.28	13765.63	-5640.98	1642051.15	14352284.37	39°31'22.0544"N	80°59'39.1341"W	14876.60	337.717	0.98	-0.95	-0.25	
21278.00	90.550	341.780	5966.84	14945.28	13854.53	-5671.51	1642020.63	14352373.23	39°31'22.9331"N	80°59'39.5237"W	14970.44	337.738	1.80	0.88	1.56	
21372.00	91.200	342.910	5965.41	15039.24	13944.09	-5700.02	1641992.13	14352462.76	39°31'23.8182"N	80°59'39.8874"W	15064.12	337.766	1.39	0.69	1.20	
21466.00	90.520	343.870	5964.00	15133.15	14034.16	-5726.88	1641965.28	14352552.78	39°31'24.7084"N	80°59'40.2302"W	15157.66	337.801	1.25	-0.72	1.02	
21560.00	89.970	342.430	5963.60	15227.09	14124.12	-5754.13	1641938.04	14352642.71	39°31'25.5975"N	80°59'40.5778"W	15251.25	337.834	1.64	-0.59	-1.53	
21655.00	90.890	342.860	5962.88	15322.05	14214.79	-5782.47	1641909.72	14352733.34	39°31'26.4937"N	80°59'40.9393"W	15345.92	337.864	1.07	0.97	0.45	
21749.00	90.800	342.920	5961.50	15415.99	14304.62	-5810.12	1641882.08	14352823.14	39°31'27.3815"N	80°59'41.2921"W	15439.55	337.894	0.12	-0.10	0.06	
21843.00	90.180	342.530	5960.69	15509.94	14394.37	-5838.03	1641854.17	14352912.86	39°31'28.2686"N	80°59'41.6483"W	15533.21	337.924	0.78	-0.66	-0.41	
21938.00	90.340	343.140	5960.26	15604.90	14485.14	-5866.07	1641826.15	14353003.59	39°31'29.1657"N	80°59'42.0060"W	15627.86	337.953	0.66	0.17	0.64	
22032.00	90.400	342.610	5959.66	15698.85	14574.97	-5893.75	1641798.48	14353093.38	39°31'30.0536"N	80°59'42.3591"W	15721.52	337.983	0.57	0.06	-0.56	
22126.00	90.580	342.980	5958.85	15792.80	14664.76	-5921.55	1641770.69	14353183.14	39°31'30.9410"N	80°59'42.7139"W	15815.18	338.011	0.44	0.19	0.39	

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Actual Wellpath Report

Calvin Unit 1H AWP Proj: 22447'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Calvin Unit 1H
Field	Tyler	API	47-095-02847-0000
Facility	Roma Lou Pad	Wellbore	Calvin Unit 1H AWB
Slot	Slot #09		

WELLPATH DATA (245 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
22220.00	90.520	342.290	5957.95	15886.76	14754.47	-5949.60	1641742.65	14353272.81	39°31'31.8276"N	80°59'43.0718"W	15908.87	338.039	0.74	-0.06	-0.73	
22314.00	91.050	343.100	5956.66	15980.71	14844.21	-5977.56	1641714.70	14353362.51	39°31'32.7145"N	80°59'43.4285"W	16002.55	338.066	1.03	0.56	0.86	
22409.00	90.550	342.710	5955.33	16075.65	14935.00	-6005.49	1641686.79	14353453.27	39°31'33.6119"N	80°59'43.7848"W	16097.21	338.095	0.67	-0.53	-0.41	
22422.00	90.550	342.710	5955.21	16088.65	14947.41	-6009.35	1641682.93	14353465.68	39°31'33.7346"N	80°59'43.8341"W	16110.17	338.098	0.00	0.00	0.00	
22447.00‡	90.550	342.710	5954.97	16113.64	14971.28	-6016.78	1641675.50	14353489.54	39°31'33.9705"N	80°59'43.9289"W	16135.08	338.105	0.00	0.00	0.00	Projected MD at TD: 22447'

HOLE & CASING SECTIONS - Ref Wellbore: Calvin Unit 1H AWB Ref Wellpath: Calvin Unit 1H AWP Proj: 22447'

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	-0.04	-0.01
17.5in Open Hole	130.00	380.00	250.00	130.00	379.99	-0.04	-0.01	1.14	0.75
13.375in Casing Surface	30.00	360.00	330.00	30.00	359.99	0.00	0.00	0.92	0.56
12.25in Open Hole	380.00	3085.00	2705.00	379.99	3048.40	1.14	0.75	-335.75	-217.22
9.625in Casing Intermediate	30.00	3061.00	3031.00	30.00	3024.81	0.00	0.00	-331.70	-215.40
8.75in Open Hole	3085.00	5369.00	2284.00	3048.40	5304.53	-335.75	-217.22	-630.24	-406.29
8.5in Open Hole	5369.00	22447.00	17078.00	5304.53	5954.97	-630.24	-406.29	14971.28	-6016.78
5.5in Casing Production	30.00	22427.00	22397.00	30.00	5955.16	0.00	0.00	14952.19	-6010.84

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Calvin Unit 1H AWP Proj: 22447'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Calvin Unit 1H
Field	Tyler	API	47-095-02847-0000
Facility	Roma Lou Pad	Wellbore	Calvin Unit 1H AWB
Slot	Slot #09		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Calvin Unit 1H POE Rev-3	6030.00	-259.94	-674.39	1647015.74	14338264.43	39°29'3.4267"N	80°58'35.8024"W	point
Calvin Unit 1H AZI Rev-1	6075.00	512.20	-1066.10	1646624.19	14339036.26	39°29'11.0591"N	80°58'40.7958"W	point
Calvin Unit 1H BHL Rev-3	6075.00	14948.73	-6019.04	1641673.24	14353466.99	39°31'33.7476"N	80°59'43.9578"W	point
Calvin Unit 1H LP Rev-1	6075.00	-46.45	-804.20	1646885.98	14338477.84	39°29'5.5372"N	80°58'37.4573"W	point
Calvin Unit 1H 50' L/R Hard Line	6250.00	7729.34	-3542.19	1644149.10	14346250.51	39°30'22.3936"N	80°59'12.3629"W	rectangle
2D Rectangle 15264.9 x 100.								

WELLPATH COMPOSITION - Ref Wellbore: Calvin Unit 1H AWB Ref Wellpath: Calvin Unit 1H AWP Proj: 22447'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
30.00	293.00	Gyrodata 2015 - GC+WIR+DPIPE	01 Gyrodata MS Gyro <17-1/2"> (100'-293')	Calvin Unit 1H AWB	5/13/2023
293.00	3010.00	BH NaviTrak (2019) (Axial Corr+HRGM)	02 APS EM <12-1/4"> (293')(417'-3010')	Calvin Unit 1H AWB	5/13/2023
3010.00	5293.00	BH NaviTrak (2019) (Axial Corr+HRGM)	03 APS EM <8-3/4"> (3010')(3122'-5293')	Calvin Unit 1H AWB	6/3/2023
5293.00	22447.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	04 BH AT Curve <8-1/2"> (5293')(5346'-22422')	Calvin Unit 1H AWB	6/3/2023

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Calvin Unit 1H AWP Proj: 22447'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Calvin Unit 1H
Field	Tyler	API	47-095-02847-0000
Facility	Roma Lou Pad	Wellbore	Calvin Unit 1H AWB
Slot	Slot #09		

COMMENTS
<p>Wellpath general comments API: 47-095-02847-0000 BH Job #: 111790770 Rig: H&P 519 Duration: 6/7/2023-6/10/2023 Gyrodata MS Gyro <17-1/2"> (100'-293') APS EM <12-1/4"> (293')(417'-3010') APS EM <8-3/4"> (3010')(3122'-5293') BH AT Curve <8-1/2"> (5293')(5346'-22422') Sycamore: 5954' MD Middlesex: 6091' MD Burkett: 6256' MD Marcellus POE: 6326' MD Projected MD at TD: 22447'</p>

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