



Actual Wellpath Report

Phebe Unit 1H AWP Proj: 22748'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Phebe Unit 1H
Field	Doddridge	API	47-017-06937-0000
Facility	Lemley Pad	Wellbore	Phebe Unit 1H AWB
Slot	Slot B		

REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Edsaryar
Scale	0.999609	Report Generated	12/11/2022 at 6:37:08 PM
Convergence at slot	0.20° 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	14.95	0.40	1730799.94	14280908.61	39°19'34.7500"N	80°40'49.3990"W
Facility Reference Pt			1730799.54	14280893.67	39°19'34.6023"N	80°40'49.4048"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 531 (RKB) to Facility Vertical Datum	1334.00ft
Horizontal Reference Pt	Slot	H&P 531 (RKB) to Mean Sea Level	1334.00ft
Vertical Reference Pt	H&P 531 (RKB)	H&P 531 (RKB) to Ground Level at Slot (Slot B)	30.00ft
MD Reference Pt	H&P 531 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	161.15°

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Facility	Lemley Pad	Wellbore	Phebe Unit 1H AWP
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WELLPATH DATA (249 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	0.00	219.110	0.00	0.00	0.00	0.00	1730799.94	14280908.61	39°19'34.7500"N	80°40'49.3990"W	0.00	0.000	0.00	0.00	0.00	
30.00	0.00	219.110	30.00	0.00	0.00	0.00	1730799.94	14280908.61	39°19'34.7500"N	80°40'49.3990"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.050	219.110	100.00	0.02	-0.02	-0.02	1730799.92	14280908.59	39°19'34.7498"N	80°40'49.3993"W	0.03	219.110	0.07	0.07	0.00	Gyrodata MS Gyro <17-1/2"> (100'-917')
200.00	0.220	97.400	200.00	0.12	-0.08	0.14	1730800.08	14280908.53	39°19'34.7492"N	80°40'49.3972"W	0.17	119.814	0.25	0.17	-121.71	
300.00	0.210	104.630	300.00	0.31	-0.15	0.51	1730800.45	14280908.46	39°19'34.7485"N	80°40'49.3925"W	0.53	106.690	0.03	-0.01	7.23	
400.00	0.260	165.860	400.00	0.64	-0.42	0.74	1730800.68	14280908.19	39°19'34.7458"N	80°40'49.3896"W	0.85	119.421	0.24	0.05	61.23	
500.00	0.410	170.180	500.00	1.22	-0.99	0.86	1730800.80	14280907.62	39°19'34.7402"N	80°40'49.3881"W	1.31	139.065	0.15	0.15	4.32	
600.00	0.460	181.800	599.99	1.95	-1.75	0.91	1730800.85	14280906.86	39°19'34.7327"N	80°40'49.3876"W	1.97	152.499	0.10	0.05	11.62	
700.00	0.140	103.990	699.99	2.39	-2.18	1.01	1730800.95	14280906.43	39°19'34.7284"N	80°40'49.3862"W	2.40	155.004	0.45	-0.32	-77.81	
800.00	0.270	63.860	799.99	2.42	-2.10	1.34	1730801.28	14280906.51	39°19'34.7292"N	80°40'49.3820"W	2.50	147.393	0.19	0.13	-40.13	
900.00	0.600	99.900	899.99	2.65	-2.09	2.07	1730802.01	14280906.52	39°19'34.7293"N	80°40'49.3728"W	2.94	135.226	0.41	0.33	36.04	
917.00	0.600	94.210	916.99	2.72	-2.11	2.25	1730802.19	14280906.50	39°19'34.7291"N	80°40'49.3705"W	3.08	133.184	0.35	0.00	-33.47	
953.00	0.720	105.560	952.99	2.93	-2.18	2.65	1730802.59	14280906.43	39°19'34.7283"N	80°40'49.3654"W	3.44	129.458	0.49	0.33	31.53	APS EM <12-1/4"> (917')(953'-3291')
1048.00	2.450	63.840	1047.95	3.00	-1.45	5.05	1730804.99	14280907.16	39°19'34.7355"N	80°40'49.3348"W	5.26	106.011	2.08	1.82	-43.92	
1142.00	5.560	57.160	1141.71	1.65	1.91	10.68	1730810.62	14280910.52	39°19'34.7685"N	80°40'49.2630"W	10.85	79.883	3.34	3.31	-7.11	
1237.00	7.780	48.610	1236.06	-1.93	8.65	19.38	1730819.31	14280917.26	39°19'34.8348"N	80°40'49.1521"W	21.22	65.931	2.55	2.34	-9.00	
1331.00	10.200	40.270	1328.90	-8.64	19.21	29.53	1730829.46	14280927.82	39°19'34.9389"N	80°40'49.0224"W	35.23	56.950	2.92	2.57	-8.87	
1426.00	11.700	34.990	1422.17	-18.64	33.52	40.49	1730840.42	14280942.12	39°19'35.0799"N	80°40'48.8823"W	52.57	50.378	1.90	1.58	-5.56	
1521.00	13.390	32.030	1514.90	-31.27	50.74	51.85	1730851.77	14280959.33	39°19'35.2497"N	80°40'48.7370"W	72.55	45.619	1.90	1.78	-3.12	
1615.00	14.830	28.880	1606.07	-46.23	70.50	63.43	1730863.35	14280979.09	39°19'35.4446"N	80°40'48.5887"W	94.84	41.978	1.74	1.53	-3.35	
1709.00	14.730	28.160	1696.96	-62.47	91.57	74.88	1730874.79	14281000.15	39°19'35.6525"N	80°40'48.4420"W	118.29	39.274	0.22	-0.11	-0.77	
1804.00	16.570	25.740	1788.43	-80.35	114.43	86.47	1730886.37	14281022.99	39°19'35.8779"N	80°40'48.2936"W	143.42	37.077	2.05	1.94	-2.55	
1899.00	16.920	22.900	1879.40	-100.31	139.36	97.73	1730897.63	14281047.92	39°19'36.1240"N	80°40'48.1491"W	170.22	35.040	0.94	0.37	-2.99	
1994.00	17.700	23.370	1970.10	-121.32	165.36	108.84	1730908.74	14281073.90	39°19'36.3805"N	80°40'48.0066"W	197.96	33.353	0.83	0.82	0.49	
2088.00	18.720	26.640	2059.39	-142.48	191.96	121.27	1730921.16	14281100.49	39°19'36.6430"N	80°40'47.8472"W	227.06	32.283	1.54	1.09	3.48	
2183.00	17.810	32.470	2149.61	-162.25	217.84	135.91	1730935.79	14281126.37	39°19'36.8983"N	80°40'47.6598"W	256.76	31.959	2.15	-0.96	6.14	
2277.00	16.770	37.540	2239.37	-178.74	240.73	151.89	1730951.77	14281149.24	39°19'37.1239"N	80°40'47.4554"W	284.64	32.250	1.95	-1.11	5.39	
2372.00	14.700	42.900	2330.81	-192.04	260.43	168.45	1730968.32	14281168.93	39°19'37.3181"N	80°40'47.2438"W	310.16	32.895	2.66	-2.18	5.64	
2466.00	11.520	46.420	2422.35	-201.61	275.64	183.37	1730983.24	14281184.14	39°19'37.4679"N	80°40'47.0532"W	331.06	33.634	3.49	-3.38	3.74	
2561.00	9.260	43.310	2515.79	-209.15	287.74	195.49	1730995.35	14281196.24	39°19'37.5871"N	80°40'46.8985"W	347.87	34.191	2.45	-2.38	-3.27	



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Facility	Lemley Pad	Wellbore	Phebe Unit 1H AWB
Slot	Slot B		

WELLPATH DATA (249 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	
2656.00	8.510	40.950	2609.65	-216.25	298.61	205.34	1731005.20	14281207.11	39°19'37.6942"N	80°40'46.7727"W	362.40	34.514	0.88	-0.79	-2.48		
2750.00	7.150	27.140	2702.78	-223.82	309.07	212.56	1731012.42	14281217.56	39°19'37.7973"N	80°40'46.6802"W	375.11	34.518	2.46	-1.45	-14.69		
2845.00	6.640	11.790	2797.10	-232.65	319.71	216.38	1731016.24	14281228.20	39°19'37.9023"N	80°40'46.6311"W	386.05	34.091	2.01	-0.54	-16.16		
2939.00	5.000	19.410	2890.61	-240.55	328.90	218.86	1731018.71	14281237.38	39°19'37.9930"N	80°40'46.5993"W	395.06	33.641	1.92	-1.74	8.11		
3034.00	1.490	1.060	2985.45	-244.96	334.04	220.26	1731020.11	14281242.52	39°19'38.0438"N	80°40'46.5812"W	400.12	33.400	3.81	-3.69	-19.32		
3129.00	0.800	279.050	3080.43	-246.43	335.38	219.62	1731019.48	14281243.85	39°19'38.0570"N	80°40'46.5892"W	400.89	33.219	1.67	-0.73	-86.33		
3224.00	0.610	267.380	3175.42	-246.88	335.46	218.46	1731018.32	14281243.94	39°19'38.0579"N	80°40'46.6040"W	400.32	33.074	0.25	-0.20	-12.28		
3291.00	0.640	278.190	3242.42	-247.15	335.49	217.74	1731017.59	14281243.97	39°19'38.0583"N	80°40'46.6132"W	399.96	32.984	0.18	0.04	16.13		
3416.00	0.270	301.900	3367.42	-247.70	335.75	216.80	1731016.65	14281244.23	39°19'38.0608"N	80°40'46.6252"W	399.66	32.851	0.33	-0.30	18.97	APS EM <8-3/4"> (3291')(3416'-6635')	
3510.00	0.440	286.850	3461.41	-248.08	335.97	216.26	1731016.12	14281244.45	39°19'38.0630"N	80°40'46.6319"W	399.56	32.769	0.20	0.18	-16.01		
3605.00	0.500	304.890	3556.41	-248.63	336.31	215.57	1731015.43	14281244.79	39°19'38.0664"N	80°40'46.6407"W	399.47	32.659	0.17	0.06	18.99		
3699.00	0.520	320.040	3650.41	-249.36	336.88	214.96	1731014.82	14281245.35	39°19'38.0720"N	80°40'46.6484"W	399.62	32.542	0.14	0.02	16.12		
3794.00	0.660	316.170	3745.40	-250.25	337.60	214.31	1731014.16	14281246.08	39°19'38.0792"N	80°40'46.6568"W	399.88	32.407	0.15	0.15	-4.07		
3888.00	0.820	308.220	3839.39	-251.31	338.41	213.40	1731013.26	14281246.88	39°19'38.0872"N	80°40'46.6682"W	400.08	32.236	0.20	0.17	-8.46		
3983.00	0.540	295.170	3934.39	-252.19	339.02	212.46	1731012.32	14281247.50	39°19'38.0933"N	80°40'46.6801"W	400.09	32.075	0.33	-0.29	-13.74		
4077.00	0.450	294.320	4028.38	-252.75	339.36	211.73	1731011.58	14281247.84	39°19'38.0967"N	80°40'46.6895"W	399.99	31.960	0.10	-0.10	-0.90		
4172.00	0.370	254.660	4123.38	-253.03	339.43	211.09	1731010.95	14281247.91	39°19'38.0974"N	80°40'46.6976"W	399.72	31.877	0.30	-0.08	-41.75		
4266.00	1.730	72.920	4217.37	-253.00	339.77	212.15	1731012.01	14281248.24	39°19'38.1007"N	80°40'46.6840"W	400.56	31.981	2.23	1.45	189.64		
4361.00	4.620	65.400	4312.21	-253.34	341.78	217.01	1731016.86	14281250.26	39°19'38.1204"N	80°40'46.6222"W	404.85	32.412	3.07	3.04	-7.92		
4456.00	6.540	56.580	4406.76	-255.08	346.36	225.00	1731024.85	14281254.83	39°19'38.1654"N	80°40'46.5203"W	413.02	33.009	2.21	2.02	-9.28		
4550.00	7.960	53.280	4500.01	-258.43	353.20	234.69	1731034.53	14281261.67	39°19'38.2326"N	80°40'46.3967"W	424.06	33.603	1.57	1.51	-3.51		
4644.00	9.370	52.160	4592.93	-262.92	361.78	245.95	1731045.79	14281270.25	39°19'38.3171"N	80°40'46.2530"W	437.47	34.209	1.51	1.50	-1.19		
4739.00	11.490	49.390	4686.36	-268.94	372.69	259.24	1731059.08	14281281.15	39°19'38.4244"N	80°40'46.0834"W	453.98	34.822	2.29	2.23	-2.92		
4834.00	12.630	45.620	4779.26	-276.92	386.11	273.85	1731073.68	14281294.57	39°19'38.5566"N	80°40'45.8969"W	473.36	35.346	1.46	1.20	-3.97		
4929.00	17.290	42.400	4871.02	-288.20	403.81	290.80	1731090.62	14281312.26	39°19'38.7309"N	80°40'45.6804"W	497.62	35.759	4.98	4.91	-3.39		
5026.00	22.010	38.060	4962.35	-305.06	428.78	311.74	1731111.55	14281337.22	39°19'38.9770"N	80°40'45.4128"W	530.12	36.018	5.09	4.87	-4.47		
5120.00	23.870	38.340	5048.91	-324.99	457.57	334.39	1731134.20	14281366.00	39°19'39.2607"N	80°40'45.1232"W	566.74	36.160	1.98	1.98	0.30		
5215.00	25.250	40.300	5135.31	-345.80	488.10	359.43	1731159.22	14281396.52	39°19'39.5616"N	80°40'44.8033"W	606.16	36.367	1.69	1.45	2.06		
5310.00	27.320	42.510	5220.49	-366.64	519.63	387.27	1731187.05	14281428.03	39°19'39.8722"N	80°40'44.4476"W	648.07	36.696	2.41	2.18	2.33		
5404.00	24.370	62.210	5305.23	-380.02	544.62	419.06	1731218.84	14281453.02	39°19'40.1182"N	80°40'44.0418"W	687.19	37.577	9.61	-3.14	20.96		

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5499.00	22.380	66.170	5392.44	-384.63	561.07	452.95	1731252.71	14281469.46	39°19'40.2795"N	80°40'43.6098"W	721.09	38.914	2.67	-2.09	4.17	
5594.00	23.160	64.180	5480.04	-388.47	576.52	486.31	1731286.06	14281484.90	39°19'40.4310"N	80°40'43.1846"W	754.24	40.149	1.15	0.82	-2.09	
5688.00	24.810	61.940	5565.92	-393.87	593.85	520.36	1731320.10	14281502.22	39°19'40.6011"N	80°40'42.7506"W	789.57	41.227	2.00	1.76	-2.38	
5783.00	26.070	59.210	5651.71	-401.38	613.91	555.88	1731355.61	14281522.28	39°19'40.7981"N	80°40'42.2976"W	828.18	42.160	1.81	1.33	-2.87	
5878.00	25.200	56.240	5737.36	-410.90	635.83	590.63	1731390.34	14281544.19	39°19'41.0136"N	80°40'41.8544"W	867.83	42.889	1.63	-0.92	-3.13	
5972.00	23.190	53.500	5823.10	-421.67	657.97	622.15	1731421.85	14281566.32	39°19'41.2313"N	80°40'41.4523"W	905.53	43.397	2.45	-2.14	-2.91	
6067.00	22.310	55.530	5910.71	-432.19	679.30	652.05	1731451.74	14281587.64	39°19'41.4410"N	80°40'41.0708"W	941.61	43.828	1.24	-0.93	2.14	
6162.00	22.650	58.050	5998.49	-441.19	699.18	682.44	1731482.11	14281607.52	39°19'41.6365"N	80°40'40.6832"W	977.03	44.306	1.08	0.36	2.65	
6257.00	22.900	54.710	6086.09	-450.57	719.54	713.05	1731512.71	14281627.87	39°19'41.8367"N	80°40'40.2928"W	1013.01	44.740	1.39	0.26	-3.52	
6351.00	23.530	49.090	6172.49	-462.80	742.40	742.16	1731541.81	14281650.72	39°19'42.0615"N	80°40'39.9213"W	1049.75	44.991	2.45	0.67	-5.98	
6446.00	21.130	45.480	6260.36	-477.34	766.83	768.71	1731568.35	14281675.14	39°19'42.3020"N	80°40'39.5824"W	1085.79	45.070	2.91	-2.53	-3.80	
6541.00	18.780	44.300	6349.65	-491.67	789.78	791.60	1731591.23	14281698.08	39°19'42.5281"N	80°40'39.2900"W	1118.21	45.066	2.51	-2.47	-1.24	
6635.00	20.470	57.400	6438.23	-502.41	809.48	816.03	1731615.65	14281717.77	39°19'42.7219"N	80°40'38.9783"W	1149.42	45.231	5.00	1.80	13.94	
6656.00	21.150	61.600	6457.86	-503.91	813.26	822.46	1731622.07	14281721.55	39°19'42.7590"N	80°40'38.8963"W	1156.64	45.322	7.81	3.24	20.00	BH AT Curve <8-1/2"> (6635')(6656'-22723')
6748.00	23.220	68.420	6543.06	-507.53	827.83	853.93	1731653.53	14281736.11	39°19'42.9019"N	80°40'38.4951"W	1189.33	45.889	3.59	2.25	7.41	
6845.00	23.400	88.070	6632.28	-502.83	835.52	891.02	1731690.61	14281743.80	39°19'42.9767"N	80°40'38.0228"W	1221.48	46.841	7.99	0.19	20.26	
6939.00	25.300	111.490	6718.12	-484.35	828.78	928.45	1731728.03	14281737.06	39°19'42.9087"N	80°40'37.5467"W	1244.55	48.247	10.40	2.02	24.91	
7014.00†	28.368	125.885	6785.10	-459.40	812.44	957.84	1731757.40	14281720.73	39°19'42.7462"N	80°40'37.1735"W	1255.99	49.695	9.55	4.09	19.19	Sycamore: 7014' MD
7034.00	29.410	129.200	6802.62	-451.35	806.55	965.50	1731765.06	14281714.84	39°19'42.6877"N	80°40'37.0764"W	1258.06	50.125	9.55	5.21	16.58	
7128.00	36.700	138.670	6881.40	-405.72	770.80	1002.00	1731801.55	14281679.11	39°19'42.3331"N	80°40'36.6134"W	1264.18	52.430	9.48	7.76	10.07	
7193.00†	41.077	143.601	6931.99	-367.38	739.00	1027.52	1731827.06	14281647.32	39°19'42.0179"N	80°40'36.2901"W	1265.67	54.276	8.24	6.73	7.59	Middlesex: 7193' MD
7223.00	43.160	145.590	6954.25	-348.10	722.60	1039.17	1731838.70	14281630.93	39°19'41.8554"N	80°40'36.1427"W	1265.71	55.187	8.24	6.94	6.63	
7318.00	52.230	149.650	7018.14	-279.85	663.26	1076.59	1731876.11	14281571.61	39°19'41.2675"N	80°40'35.6692"W	1264.50	58.364	10.05	9.55	4.27	
7412.00	54.800	150.120	7074.03	-205.73	597.88	1114.50	1731914.01	14281506.26	39°19'40.6200"N	80°40'35.1897"W	1264.75	61.788	2.76	2.73	0.50	
7423.00†	55.355	150.385	7080.32	-196.87	590.05	1118.98	1731918.48	14281498.43	39°19'40.5425"N	80°40'35.1331"W	1265.02	62.197	5.42	5.04	2.41	Burkett: 7423' MD
7473.00†	57.884	151.547	7107.83	-155.78	553.55	1139.23	1731938.73	14281461.94	39°19'40.1810"N	80°40'34.8770"W	1266.60	64.085	5.42	5.06	2.32	Tully: 7473' MD
7507.00	59.610	152.300	7125.47	-127.09	527.90	1152.91	1731952.40	14281436.31	39°19'39.9270"N	80°40'34.7041"W	1268.03	65.398	5.42	5.08	2.22	
7596.00†	68.715	154.992	7164.22	-47.76	456.18	1188.36	1731987.84	14281364.61	39°19'39.2169"N	80°40'34.2563"W	1272.91	69.000	10.58	10.23	3.02	Hamilton: 7596' MD
7602.00	69.330	155.160	7166.37	-42.19	451.10	1190.72	1731990.20	14281359.53	39°19'39.1666"N	80°40'34.2264"W	1273.31	69.251	10.58	10.26	2.80	
7681.00†	74.723	157.298	7190.74	32.65	382.35	1220.98	1732020.44	14281290.81	39°19'38.4860"N	80°40'33.8446"W	1279.45	72.612	7.30	6.83	2.71	Marcellus POE: 7681' MD

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Actual Wellpath Report

Phebe Unit 1H AWP Proj: 22748'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Phebe Unit 1H
Field	Doddridge	API	47-017-06937-0000
Facility	Lemley Pad	Wellbore	Phebe Unit 1H AWP
Slot	Slot B		

WELLPATH DATA (249 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
7696.00	75.750	157.690	7194.57	47.12	368.95	1226.53	1732025.99	14281277.41	39°19'38.3534"N	80°40'33.7745"W	1280.82	73.258	7.30	6.84	2.62	
7791.00	83.090	161.890	7212.00	140.39	281.38	1258.73	1732058.17	14281189.88	39°19'37.4868"N	80°40'33.3688"W	1289.79	77.399	8.86	7.73	4.42	
7885.00	90.400	160.820	7217.34	234.18	192.52	1288.71	1732088.15	14281101.06	39°19'36.6074"N	80°40'32.9913"W	1303.01	81.503	7.86	7.78	-1.14	
7980.00	90.860	161.510	7216.29	329.17	102.61	1319.38	1732118.80	14281011.18	39°19'35.7177"N	80°40'32.6052"W	1323.36	85.553	0.87	0.48	0.73	
8074.00	90.680	161.550	7215.03	423.16	13.46	1349.16	1732148.57	14280922.07	39°19'34.8356"N	80°40'32.2303"W	1349.22	89.428	0.20	-0.19	0.04	
8169.00	90.370	161.660	7214.16	518.15	-76.68	1379.13	1732178.53	14280831.96	39°19'33.9436"N	80°40'31.8530"W	1381.26	93.182	0.35	-0.33	0.12	
8264.00	90.060	160.150	7213.80	613.15	-166.45	1410.21	1732209.60	14280742.23	39°19'33.0552"N	80°40'31.4616"W	1420.00	96.731	1.62	-0.33	-1.59	
8359.00	92.250	160.670	7211.89	708.11	-255.92	1442.06	1732241.43	14280652.79	39°19'32.1697"N	80°40'31.0605"W	1464.59	100.064	2.37	2.31	0.55	
8453.00	90.090	161.890	7209.97	802.09	-344.93	1472.22	1732271.58	14280563.82	39°19'31.2890"N	80°40'30.6808"W	1512.08	103.186	2.64	-2.30	1.30	
8548.00	90.220	157.060	7209.71	897.02	-433.87	1505.51	1732304.86	14280474.91	39°19'30.4088"N	80°40'30.2611"W	1566.78	106.076	5.09	0.14	-5.08	
8642.00	91.420	162.450	7208.37	990.94	-522.02	1538.03	1732337.36	14280386.80	39°19'29.5364"N	80°40'29.8515"W	1624.20	108.748	5.87	1.28	5.73	
8737.00	89.200	158.040	7207.85	1085.90	-611.40	1570.13	1732369.45	14280297.45	39°19'28.6518"N	80°40'29.4471"W	1684.96	111.276	5.20	-2.34	-4.64	
8926.00	90.680	159.470	7208.05	1274.73	-787.54	1638.61	1732437.90	14280121.38	39°19'26.9084"N	80°40'28.5837"W	1818.04	115.670	1.09	0.78	0.76	
9115.00	90.490	159.940	7206.12	1463.66	-964.80	1704.16	1732503.43	14279944.19	39°19'25.1542"N	80°40'27.7577"W	1958.32	119.516	0.27	-0.10	0.25	
9209.00	90.710	160.060	7205.14	1557.63	-1053.13	1736.31	1732535.57	14279855.90	39°19'24.2801"N	80°40'27.3527"W	2030.72	121.238	0.27	0.23	0.13	
9304.00	91.390	163.520	7203.39	1652.60	-1143.34	1765.99	1732565.23	14279765.72	39°19'23.3874"N	80°40'26.9792"W	2103.79	122.920	3.71	0.72	3.64	
9399.00	89.420	159.800	7202.72	1747.57	-1233.49	1795.87	1732595.11	14279675.60	39°19'22.4953"N	80°40'26.6031"W	2178.68	124.483	4.43	-2.07	-3.92	
9493.00	91.170	164.200	7202.24	1841.53	-1322.86	1824.91	1732624.13	14279586.27	39°19'21.6109"N	80°40'26.2377"W	2253.94	125.938	5.04	1.86	4.68	
9588.00	90.150	162.850	7201.14	1936.44	-1413.95	1851.85	1732651.06	14279495.21	39°19'20.7097"N	80°40'25.8991"W	2329.94	127.363	1.78	-1.07	-1.42	
9682.00	90.280	163.380	7200.79	2030.38	-1503.90	1879.15	1732678.35	14279405.30	39°19'19.8197"N	80°40'25.5558"W	2406.85	128.671	0.58	0.14	0.56	
9777.00	90.060	163.100	7200.51	2125.32	-1594.87	1906.55	1732705.74	14279314.37	39°19'18.9197"N	80°40'25.2114"W	2485.66	129.913	0.37	-0.23	-0.29	
9871.00	90.890	163.090	7199.73	2219.26	-1684.80	1933.88	1732733.06	14279224.47	39°19'18.0298"N	80°40'24.8677"W	2564.85	131.062	0.88	0.88	-0.01	
9966.00	90.550	163.350	7198.54	2314.19	-1775.75	1961.30	1732760.47	14279133.56	39°19'17.1300"N	80°40'24.5230"W	2645.75	132.157	0.45	-0.36	0.27	
10061.00	89.540	163.000	7198.46	2409.13	-1866.68	1988.80	1732787.96	14279042.66	39°19'16.2302"N	80°40'24.1773"W	2727.60	133.186	1.13	-1.06	-0.37	
10155.00	88.980	162.190	7199.68	2503.09	-1956.37	2016.91	1732816.06	14278953.01	39°19'15.3428"N	80°40'23.8237"W	2809.86	134.127	1.05	-0.60	-0.86	
10250.00	90.990	162.790	7199.70	2598.06	-2046.96	2045.50	1732844.63	14278862.45	39°19'14.4464"N	80°40'23.4642"W	2893.80	135.020	2.21	2.12	0.63	
10344.00	91.050	162.690	7198.03	2692.01	-2136.71	2073.38	1732872.51	14278772.74	39°19'13.5583"N	80°40'23.1135"W	2977.32	135.862	0.12	0.06	-0.11	
10439.00	91.170	162.230	7196.19	2786.97	-2227.28	2102.01	1732901.12	14278682.21	39°19'12.6622"N	80°40'22.7534"W	3062.55	136.657	0.50	0.13	-0.48	
10534.00	89.880	161.750	7195.32	2881.95	-2317.62	2131.38	1732930.48	14278591.90	39°19'11.7682"N	80°40'22.3839"W	3148.67	137.397	1.45	-1.36	-0.51	
10628.00	90.950	160.810	7194.64	2975.94	-2406.64	2161.54	1732960.64	14278502.91	39°19'10.8873"N	80°40'22.0041"W	3234.84	138.071	1.52	1.14	-1.00	

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Actual Wellpath Report

Phebe Unit 1H AWP Proj: 22748'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Phebe Unit 1H
Field	Doddridge	API	47-017-06937-0000
Facility	Lemley Pad	Wellbore	Phebe Unit 1H AWB
Slot	Slot B		

WELLPATH DATA (249 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
10723.00	90.310	159.180	7193.59	3070.91	-2495.90	2194.04	1732993.12	14278413.69	39°19'10.0039"N	80°40'21.5947"W	3323.15	138.683	1.84	-0.67	-1.72	
10818.00	89.010	162.370	7194.15	3165.90	-2585.59	2225.32	1733024.38	14278324.04	39°19'9.1164"N	80°40'21.2009"W	3411.35	139.283	3.63	-1.37	3.36	
10912.00	91.820	161.110	7193.47	3259.88	-2674.84	2254.77	1733053.82	14278234.82	39°19'8.2332"N	80°40'20.8303"W	3498.39	139.871	3.28	2.99	-1.34	
11007.00	90.060	163.020	7191.91	3354.84	-2765.20	2284.01	1733083.06	14278144.49	39°19'7.3390"N	80°40'20.4624"W	3586.51	140.444	2.73	-1.85	2.01	
11102.00	90.310	161.200	7191.61	3449.83	-2855.61	2313.19	1733112.23	14278054.13	39°19'6.4445"N	80°40'20.0952"W	3674.96	140.991	1.93	0.26	-1.92	
11197.00	90.650	160.590	7190.81	3544.82	-2945.37	2344.29	1733143.31	14277964.40	39°19'5.5562"N	80°40'19.7038"W	3764.42	141.483	0.74	0.36	-0.64	
11291.00	90.830	160.840	7189.60	3638.81	-3034.09	2375.33	1733174.34	14277875.71	39°19'4.6782"N	80°40'19.3129"W	3853.29	141.943	0.33	0.19	0.27	
11386.00	91.350	161.400	7187.79	3733.79	-3123.96	2406.06	1733205.06	14277785.88	39°19'3.7888"N	80°40'18.9260"W	3943.13	142.397	0.80	0.55	0.59	
11480.00	90.800	161.340	7186.03	3827.78	-3213.02	2436.09	1733235.07	14277696.85	39°19'2.9075"N	80°40'18.5481"W	4032.12	142.831	0.59	-0.59	-0.06	
11575.00	91.510	161.640	7184.11	3922.75	-3303.08	2466.24	1733265.21	14277606.82	39°19'2.0163"N	80°40'18.1686"W	4122.22	143.253	0.81	0.75	0.32	
11669.00	90.920	162.370	7182.12	4016.72	-3392.47	2495.27	1733294.23	14277517.48	39°19'1.1318"N	80°40'17.8033"W	4211.32	143.664	1.00	-0.63	0.78	
11764.00	90.090	160.770	7181.28	4111.71	-3482.59	2525.31	1733324.25	14277427.39	39°19'0.2400"N	80°40'17.4254"W	4301.81	144.053	1.90	-0.87	-1.68	
11859.00	92.400	162.280	7179.22	4206.68	-3572.66	2555.40	1733354.34	14277337.35	39°18'59.3487"N	80°40'17.0467"W	4392.49	144.425	2.90	2.43	1.59	
11953.00	90.090	161.310	7177.18	4300.64	-3661.93	2584.76	1733383.68	14277248.12	39°18'58.4654"N	80°40'16.6773"W	4482.26	144.784	2.67	-2.46	-1.03	
12048.00	91.480	161.830	7175.87	4395.63	-3752.04	2614.79	1733413.70	14277158.04	39°18'57.5736"N	80°40'16.2993"W	4573.29	145.127	1.56	1.46	0.55	
12142.00	91.230	162.040	7173.65	4489.59	-3841.38	2643.93	1733442.83	14277068.73	39°18'56.6896"N	80°40'15.9327"W	4663.32	145.461	0.35	-0.27	0.22	
12237.00	90.890	160.620	7171.89	4584.57	-3931.37	2674.34	1733473.22	14276978.79	39°18'55.7991"N	80°40'15.5500"W	4754.76	145.774	1.54	-0.36	-1.49	
12332.00	91.320	160.610	7170.06	4679.55	-4020.96	2705.86	1733504.74	14276889.22	39°18'54.9124"N	80°40'15.1531"W	4846.63	146.062	0.45	0.45	-0.01	
12426.00	90.890	159.660	7168.25	4773.52	-4109.35	2737.80	1733536.66	14276800.87	39°18'54.0377"N	80°40'14.7509"W	4937.84	146.327	1.11	-0.46	-1.01	
12520.00	91.110	158.910	7166.61	4867.45	-4197.26	2771.04	1733569.89	14276713.00	39°18'53.1676"N	80°40'14.3320"W	5029.48	146.567	0.83	0.23	-0.80	
12615.00	91.420	161.700	7164.51	4962.41	-4286.67	2803.05	1733601.89	14276623.62	39°18'52.2828"N	80°40'13.9289"W	5121.78	146.819	2.95	0.33	2.94	
12710.00	91.170	159.090	7162.36	5057.37	-4376.14	2834.91	1733633.74	14276534.19	39°18'51.3974"N	80°40'13.5276"W	5214.14	147.064	2.76	-0.26	-2.75	
12804.00	91.850	160.600	7159.89	5151.31	-4464.35	2867.29	1733666.10	14276446.02	39°18'50.5244"N	80°40'13.1198"W	5305.82	147.289	1.76	0.72	1.61	
12899.00	89.940	160.640	7158.40	5246.29	-4553.95	2898.81	1733697.61	14276356.45	39°18'49.6377"N	80°40'12.7230"W	5398.29	147.521	2.01	-2.01	0.04	
12994.00	90.460	160.170	7158.07	5341.28	-4643.44	2930.67	1733729.46	14276266.99	39°18'48.7520"N	80°40'12.3218"W	5490.94	147.742	0.74	0.55	-0.49	
13089.00	91.170	159.620	7156.72	5436.25	-4732.65	2963.32	1733762.09	14276177.82	39°18'47.8692"N	80°40'11.9105"W	5583.83	147.948	0.95	0.75	-0.58	
13183.00	91.260	161.440	7154.73	5530.22	-4821.25	2994.64	1733793.40	14276089.26	39°18'46.9923"N	80°40'11.5161"W	5675.59	148.154	1.94	0.10	1.94	
13277.00	89.820	159.970	7153.84	5624.20	-4909.96	3025.70	1733824.45	14276000.58	39°18'46.1144"N	80°40'11.1251"W	5767.37	148.357	2.19	-1.53	-1.56	
13372.00	91.690	159.840	7152.59	5719.17	-4999.16	3058.33	1733857.07	14275911.41	39°18'45.2316"N	80°40'10.7140"W	5860.46	148.543	1.97	1.97	-0.14	
13466.00	89.050	160.960	7151.98	5813.15	-5087.71	3089.86	1733888.59	14275822.90	39°18'44.3553"N	80°40'10.3170"W	5952.48	148.729	3.05	-2.81	1.19	

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Field	Doddridge	API	47-017-06937-0000
Facility	Lemley Pad	Wellbore	Phebe Unit 1H AWB
Slot	Slot B		

WELLPATH DATA (249 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
13561.00	92.220	161.700	7150.93	5908.13	-5177.69	3120.27	1733918.98	14275732.95	39°18'43.4649"N	80°40'9.9344"W	6045.21	148.925	3.43	3.34	0.78	
13656.00	90.220	160.090	7148.91	6003.10	-5267.43	3151.35	1733950.05	14275643.25	39°18'42.5768"N	80°40'9.5431"W	6138.14	149.109	2.70	-2.11	-1.69	
13751.00	90.950	160.320	7147.94	6098.08	-5356.81	3183.52	1733982.21	14275553.90	39°18'41.6922"N	80°40'9.1379"W	6231.39	149.277	0.81	0.77	0.24	
13845.00	91.660	160.240	7145.80	6192.05	-5445.27	3215.23	1734013.91	14275465.47	39°18'40.8167"N	80°40'8.7386"W	6323.66	149.440	0.76	0.76	-0.09	
13940.00	90.400	160.920	7144.09	6287.02	-5534.85	3246.81	1734045.48	14275375.93	39°18'39.9302"N	80°40'8.3410"W	6416.88	149.604	1.51	-1.33	0.72	
14035.00	90.220	160.460	7143.57	6382.02	-5624.51	3278.23	1734076.88	14275286.31	39°18'39.0430"N	80°40'7.9455"W	6510.13	149.764	0.52	-0.19	-0.48	
14130.00	90.650	160.970	7142.85	6477.01	-5714.17	3309.60	1734108.24	14275196.68	39°18'38.1556"N	80°40'7.5506"W	6603.42	149.921	0.70	0.45	0.54	
14224.00	91.760	160.660	7140.88	6570.99	-5802.93	3340.48	1734139.11	14275107.96	39°18'37.2773"N	80°40'7.1618"W	6695.73	150.073	1.23	1.18	-0.33	
14319.00	90.120	160.790	7139.32	6665.97	-5892.59	3371.84	1734170.45	14275018.33	39°18'36.3900"N	80°40'6.7671"W	6789.10	150.221	1.73	-1.73	0.14	
14414.00	89.880	160.460	7139.32	6760.96	-5982.21	3403.35	1734201.96	14274928.75	39°18'35.5031"N	80°40'6.3703"W	6882.56	150.364	0.43	-0.25	-0.35	
14508.00	92.490	159.860	7137.37	6854.92	-6070.60	3435.25	1734233.84	14274840.39	39°18'34.6283"N	80°40'5.9687"W	6975.18	150.495	2.85	2.78	-0.64	
14603.00	90.740	161.030	7134.70	6949.87	-6160.08	3467.03	1734265.61	14274750.95	39°18'33.7427"N	80°40'5.5685"W	7068.73	150.628	2.22	-1.84	1.23	
14697.00	90.650	160.600	7133.56	7043.86	-6248.86	3497.92	1734296.48	14274662.21	39°18'32.8642"N	80°40'5.1797"W	7161.26	150.761	0.47	-0.10	-0.46	
14792.00	90.920	160.380	7132.25	7138.85	-6338.39	3529.64	1734328.20	14274572.71	39°18'31.9781"N	80°40'4.7803"W	7254.90	150.888	0.37	0.28	-0.23	
14886.00	90.650	161.050	7130.97	7232.84	-6427.11	3560.68	1734359.23	14274484.02	39°18'31.1001"N	80°40'4.3895"W	7347.53	151.013	0.77	-0.29	0.71	
14981.00	90.580	160.880	7129.95	7327.83	-6516.91	3591.67	1734390.20	14274394.26	39°18'30.2115"N	80°40'3.9996"W	7441.11	151.140	0.19	-0.07	-0.18	
15075.00	90.400	160.600	7129.14	7421.82	-6605.64	3622.67	1734421.19	14274305.56	39°18'29.3333"N	80°40'3.6093"W	7533.81	151.259	0.35	-0.19	-0.30	
15170.00	90.180	160.450	7128.66	7516.82	-6695.21	3654.34	1734452.85	14274216.03	39°18'28.4470"N	80°40'3.2106"W	7627.58	151.374	0.28	-0.23	-0.16	
15264.00	90.650	161.750	7127.98	7610.81	-6784.14	3684.79	1734483.28	14274127.14	39°18'27.5669"N	80°40'2.8274"W	7720.24	151.491	1.47	0.50	1.38	
15359.00	90.060	161.950	7127.39	7705.80	-6874.41	3714.38	1734512.86	14274036.90	39°18'26.6736"N	80°40'2.4552"W	7813.71	151.617	0.66	-0.62	0.21	
15453.00	90.000	162.010	7127.34	7799.79	-6963.80	3743.46	1734541.93	14273947.55	39°18'25.7891"N	80°40'2.0894"W	7906.20	151.739	0.09	-0.06	0.06	
15548.00	90.310	159.980	7127.09	7894.79	-7053.61	3774.40	1734572.85	14273857.77	39°18'24.9003"N	80°40'1.7001"W	7999.97	151.849	2.16	0.33	-2.14	
15642.00	91.750	163.460	7125.40	7988.75	-7142.84	3803.87	1734602.32	14273768.58	39°18'24.0173"N	80°40'1.3293"W	8092.56	151.963	4.01	1.53	3.70	
15737.00	89.820	160.960	7124.09	8083.71	-7233.28	3832.89	1734631.33	14273678.17	39°18'23.1224"N	80°40'0.9644"W	8186.04	152.081	3.32	-2.03	-2.63	
15832.00	90.180	161.240	7124.09	8178.71	-7323.15	3863.66	1734662.09	14273588.33	39°18'22.2330"N	80°40'0.5771"W	8279.88	152.184	0.48	0.38	0.29	
15927.00	90.250	160.280	7123.74	8273.71	-7412.85	3894.97	1734693.38	14273498.68	39°18'21.3453"N	80°40'0.1831"W	8373.83	152.281	1.01	0.07	-1.01	
16021.00	91.290	161.370	7122.47	8367.70	-7501.62	3925.84	1734724.24	14273409.94	39°18'20.4668"N	80°39'59.7945"W	8466.79	152.375	1.60	1.11	1.16	
16115.00	90.680	161.760	7120.86	8461.68	-7590.78	3955.56	1734753.95	14273320.81	39°18'19.5845"N	80°39'59.4206"W	8559.58	152.476	0.77	-0.65	0.41	
16210.00	90.620	161.540	7119.78	8556.67	-7680.95	3985.46	1734783.84	14273230.68	39°18'18.6922"N	80°39'59.0444"W	8653.37	152.576	0.24	-0.06	-0.23	
16304.00	90.620	161.400	7118.76	8650.66	-7770.07	4015.34	1734813.70	14273141.59	39°18'17.8103"N	80°39'58.6686"W	8746.25	152.671	0.15	0.00	-0.15	

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Actual Wellpath Report

Phebe Unit 1H AWP Proj: 22748'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Phebe Unit 1H
Field	Doddridge	API	47-017-06937-0000
Facility	Lemley Pad	Wellbore	Phebe Unit 1H AWP
Slot	Slot B		

WELLPATH DATA (249 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
16399.00	90.680	161.950	7117.69	8745.65	-7860.24	4045.20	1734843.55	14273051.45	39°18'16.9180"N	80°39'58.2929"W	8840.08	152.768	0.58	0.06	0.58	
16493.00	90.860	161.140	7116.42	8839.64	-7949.40	4074.96	1734873.30	14272962.33	39°18'16.0357"N	80°39'57.9186"W	8932.99	152.860	0.88	0.19	-0.86	
16588.00	91.050	163.230	7114.84	8934.61	-8039.83	4104.02	1734902.34	14272871.94	39°18'15.1409"N	80°39'57.5531"W	9026.73	152.957	2.21	0.20	2.20	
16683.00	91.230	161.810	7112.95	9029.56	-8130.42	4132.54	1734930.86	14272781.38	39°18'14.2444"N	80°39'57.1945"W	9120.40	153.057	1.51	0.19	-1.49	
16777.00	90.770	161.950	7111.31	9123.54	-8219.74	4161.78	1734960.08	14272692.09	39°18'13.3605"N	80°39'56.8268"W	9213.28	153.146	0.51	-0.49	0.15	
16872.00	89.940	161.930	7110.72	9218.52	-8310.06	4191.23	1734989.52	14272601.81	39°18'12.4668"N	80°39'56.4564"W	9307.17	153.236	0.87	-0.87	-0.02	
16967.00	90.310	161.500	7110.51	9313.52	-8400.26	4221.03	1735019.31	14272511.64	39°18'11.5742"N	80°39'56.0815"W	9401.15	153.321	0.60	0.39	-0.45	
17061.00	89.660	159.670	7110.54	9407.51	-8488.92	4252.28	1735050.55	14272423.03	39°18'10.6968"N	80°39'55.6882"W	9494.39	153.393	2.07	-0.69	-1.95	
17156.00	89.820	160.870	7110.97	9502.50	-8578.34	4284.35	1735082.60	14272333.64	39°18'9.8119"N	80°39'55.2845"W	9588.72	153.461	1.27	0.17	1.26	
17250.00	90.740	160.570	7110.51	9596.49	-8667.06	4315.38	1735113.63	14272244.95	39°18'8.9338"N	80°39'54.8939"W	9681.97	153.531	1.03	0.98	-0.32	
17345.00	89.450	162.260	7110.35	9691.48	-8757.10	4345.66	1735143.89	14272154.95	39°18'8.0428"N	80°39'54.5130"W	9776.07	153.607	2.24	-1.36	1.78	
17439.00	89.940	162.350	7110.85	9785.46	-8846.65	4374.23	1735172.45	14272065.43	39°18'7.1566"N	80°39'54.1538"W	9869.00	153.690	0.53	0.52	0.10	
17534.00	88.770	158.900	7111.92	9880.44	-8936.25	4405.74	1735203.95	14271975.87	39°18'6.2699"N	80°39'53.7572"W	9963.29	153.756	3.83	-1.23	-3.63	
17629.00	90.770	163.180	7112.30	9975.41	-9026.07	4436.59	1735234.79	14271886.08	39°18'5.3810"N	80°39'53.3689"W	10057.50	153.824	4.97	2.11	4.51	
17723.00	89.510	161.150	7112.07	10069.39	-9115.55	4465.38	1735263.57	14271796.64	39°18'4.4956"N	80°39'53.0069"W	10150.51	153.901	2.54	-1.34	-2.16	
17817.00	90.030	161.760	7112.45	10163.38	-9204.67	4495.28	1735293.45	14271707.56	39°18'3.6137"N	80°39'52.6308"W	10243.70	153.971	0.85	0.55	0.65	
17912.00	89.940	161.530	7112.48	10258.38	-9294.83	4525.19	1735323.36	14271617.43	39°18'2.7215"N	80°39'52.2545"W	10337.86	154.041	0.26	-0.09	-0.24	
18007.00	89.970	161.600	7112.55	10353.38	-9384.96	4555.24	1735353.39	14271527.34	39°18'1.8296"N	80°39'51.8766"W	10432.05	154.109	0.08	0.03	0.07	
18101.00	90.990	161.700	7111.76	10447.37	-9474.17	4584.83	1735382.97	14271438.16	39°18'0.9468"N	80°39'51.5044"W	10525.24	154.176	1.09	1.09	0.11	
18196.00	90.400	162.660	7110.61	10542.35	-9564.61	4613.90	1735412.03	14271347.76	39°18'0.0519"N	80°39'51.1389"W	10619.31	154.248	1.19	-0.62	1.01	
18290.00	90.460	161.840	7109.90	10636.33	-9654.13	4642.55	1735440.67	14271258.27	39°17'59.1660"N	80°39'50.7786"W	10712.40	154.318	0.87	0.06	-0.87	
18385.00	90.150	161.580	7109.40	10731.32	-9744.33	4672.37	1735470.47	14271168.11	39°17'58.2734"N	80°39'50.4037"W	10806.62	154.382	0.43	-0.33	-0.27	
18479.00	90.090	161.680	7109.20	10825.32	-9833.54	4701.99	1735500.09	14271078.93	39°17'57.3906"N	80°39'50.0311"W	10899.87	154.445	0.12	-0.06	0.11	
18574.00	89.600	161.630	7109.46	10920.31	-9923.71	4731.89	1735529.97	14270988.80	39°17'56.4983"N	80°39'49.6550"W	10994.13	154.507	0.52	-0.52	-0.05	
18669.00	89.850	161.330	7109.92	11015.31	-10013.79	4762.07	1735560.14	14270898.75	39°17'55.6069"N	80°39'49.2754"W	11088.43	154.567	0.41	0.26	-0.32	
18763.00	89.720	161.360	7110.27	11109.31	-10102.85	4792.13	1735590.19	14270809.73	39°17'54.7255"N	80°39'48.8972"W	11181.78	154.623	0.14	-0.14	0.03	
18857.00	89.970	161.830	7110.52	11203.30	-10192.04	4821.81	1735619.86	14270720.57	39°17'53.8429"N	80°39'48.5239"W	11275.09	154.681	0.57	0.27	0.50	
18951.00	89.750	161.940	7110.75	11297.30	-10281.38	4851.04	1735649.07	14270631.27	39°17'52.9588"N	80°39'48.1563"W	11368.35	154.741	0.26	-0.23	0.12	
19046.00	90.400	162.440	7110.63	11392.28	-10371.83	4880.10	1735678.12	14270540.86	39°17'52.0638"N	80°39'47.7910"W	11462.55	154.802	0.86	0.68	0.53	
19141.00	88.860	161.330	7111.24	11487.27	-10462.11	4909.63	1735707.64	14270450.61	39°17'51.1704"N	80°39'47.4196"W	11556.83	154.860	2.00	-1.62	-1.17	

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Actual Wellpath Report

Phebe Unit 1H AWP Proj: 22748'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Phebe Unit 1H
Field	Doddridge	API	47-017-06937-0000
Facility	Lemley Pad	Wellbore	Phebe Unit 1H AWP
Slot	Slot B		

WELLPATH DATA (249 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
19235.00	88.520	161.170	7113.39	11581.24	-10551.10	4939.84	1735737.84	14270361.65	39°17'50.2898"N	80°39'47.0396"W	11650.22	154.912	0.40	-0.36	-0.17	
19329.00	89.350	161.390	7115.14	11675.22	-10640.11	4970.00	1735767.99	14270272.68	39°17'49.4089"N	80°39'46.6601"W	11743.63	154.963	0.91	0.88	0.23	
19424.00	89.230	161.600	7116.31	11770.21	-10730.19	5000.15	1735798.13	14270182.63	39°17'48.5175"N	80°39'46.2809"W	11838.01	155.015	0.25	-0.13	0.22	
19519.00	89.350	161.810	7117.49	11865.20	-10820.38	5029.97	1735827.94	14270092.48	39°17'47.6249"N	80°39'45.9059"W	11932.36	155.068	0.25	0.13	0.22	
19613.00	89.200	161.840	7118.68	11959.19	-10909.69	5059.29	1735857.24	14270003.21	39°17'46.7412"N	80°39'45.5372"W	12025.71	155.121	0.16	-0.16	0.03	
19708.00	89.260	161.930	7119.96	12054.17	-10999.97	5088.82	1735886.77	14269912.96	39°17'45.8478"N	80°39'45.1658"W	12120.04	155.174	0.11	0.06	0.09	
19802.00	89.320	161.490	7121.12	12148.16	-11089.21	5118.32	1735916.25	14269823.75	39°17'44.9647"N	80°39'44.7949"W	12213.43	155.224	0.47	0.06	-0.47	
19897.00	89.320	161.550	7122.25	12243.15	-11179.31	5148.43	1735946.35	14269733.69	39°17'44.0731"N	80°39'44.4162"W	12307.85	155.272	0.06	0.00	0.06	
19991.00	89.230	161.560	7123.44	12337.14	-11268.47	5178.17	1735976.08	14269644.56	39°17'43.1907"N	80°39'44.0421"W	12401.29	155.320	0.10	-0.10	0.01	
20086.00	89.170	161.710	7124.77	12432.13	-11358.62	5208.10	1736005.99	14269554.45	39°17'42.2986"N	80°39'43.6657"W	12495.71	155.368	0.17	-0.06	0.16	
20181.00	89.200	161.830	7126.12	12527.11	-11448.85	5237.82	1736035.70	14269464.26	39°17'41.4058"N	80°39'43.2921"W	12590.11	155.416	0.13	0.03	0.13	
20276.00	89.450	161.700	7127.24	12622.10	-11539.07	5267.54	1736065.41	14269374.07	39°17'40.5129"N	80°39'42.9183"W	12684.52	155.463	0.30	0.26	-0.14	
20370.00	89.110	161.710	7128.42	12716.09	-11628.31	5297.05	1736094.91	14269284.86	39°17'39.6298"N	80°39'42.5472"W	12777.96	155.509	0.36	-0.36	0.01	
20465.00	89.290	160.570	7129.74	12811.08	-11718.20	5327.75	1736125.60	14269195.01	39°17'38.7403"N	80°39'42.1610"W	12872.50	155.551	1.21	0.19	-1.20	
20560.00	89.260	160.950	7130.95	12906.07	-11807.89	5359.05	1736156.89	14269105.36	39°17'37.8527"N	80°39'41.7671"W	12967.10	155.589	0.40	-0.03	0.40	
20654.00	89.320	160.890	7132.11	13000.06	-11896.72	5389.78	1736187.60	14269016.56	39°17'36.9736"N	80°39'41.3805"W	13060.69	155.627	0.09	0.06	-0.06	
20749.00	89.260	160.570	7133.29	13095.05	-11986.39	5421.13	1736218.94	14268926.93	39°17'36.0861"N	80°39'40.9860"W	13155.31	155.664	0.34	-0.06	-0.34	
20844.00	89.140	160.780	7134.61	13190.04	-12076.03	5452.56	1736250.36	14268837.33	39°17'35.1990"N	80°39'40.5905"W	13249.94	155.700	0.25	-0.13	0.22	
20939.00	89.320	160.590	7135.89	13285.03	-12165.67	5483.98	1736281.77	14268747.72	39°17'34.3118"N	80°39'40.1951"W	13344.57	155.735	0.28	0.19	-0.20	
21033.00	89.570	160.940	7136.80	13379.02	-12254.42	5514.95	1736312.72	14268659.00	39°17'33.4335"N	80°39'39.8055"W	13438.21	155.770	0.46	0.27	0.37	
21128.00	89.690	160.780	7137.42	13474.02	-12344.17	5546.10	1736343.86	14268569.29	39°17'32.5454"N	80°39'39.4136"W	13532.83	155.806	0.21	0.13	-0.17	
21222.00	88.950	160.530	7138.53	13568.01	-12432.85	5577.23	1736374.98	14268480.64	39°17'31.6677"N	80°39'39.0218"W	13626.49	155.840	0.83	-0.79	-0.27	
21317.00	89.110	160.830	7140.14	13662.99	-12522.49	5608.66	1736406.40	14268391.04	39°17'30.7806"N	80°39'38.6264"W	13721.14	155.873	0.36	0.17	0.32	
21411.00	88.400	160.340	7142.18	13756.96	-12611.12	5639.90	1736437.62	14268302.44	39°17'29.9034"N	80°39'38.2333"W	13814.80	155.905	0.92	-0.76	-0.52	
21506.00	88.860	160.700	7144.45	13851.93	-12700.66	5671.57	1736469.28	14268212.94	39°17'29.0173"N	80°39'37.8348"W	13909.47	155.937	0.61	0.48	0.38	
21600.00	88.860	160.330	7146.32	13945.90	-12789.26	5702.92	1736500.62	14268124.38	39°17'28.1404"N	80°39'37.4403"W	14003.15	155.967	0.39	0.00	-0.39	
21695.00	88.980	161.010	7148.11	14040.88	-12878.88	5734.36	1736532.04	14268034.78	39°17'27.2534"N	80°39'37.0447"W	14097.82	155.999	0.73	0.13	0.72	
21790.00	88.400	160.970	7150.29	14135.86	-12968.68	5765.29	1736562.97	14267945.02	39°17'26.3648"N	80°39'36.6555"W	14192.44	156.032	0.61	-0.61	-0.04	
21884.00	88.180	160.460	7153.09	14229.81	-13057.36	5796.32	1736593.99	14267856.37	39°17'25.4871"N	80°39'36.2651"W	14286.08	156.063	0.59	-0.23	-0.54	
21979.00	88.370	161.100	7155.95	14324.77	-13147.03	5827.58	1736625.23	14267766.74	39°17'24.5997"N	80°39'35.8718"W	14380.72	156.094	0.70	0.20	0.67	

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Actual Wellpath Report

Phebe Unit 1H AWP Proj: 22748'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Phebe Unit 1H
Field	Doddridge	API	47-017-06937-0000
Facility	Lemley Pad	Wellbore	Phebe Unit 1H AWB
Slot	Slot B		

WELLPATH DATA (249 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
22074.00	88.000	160.740	7158.96	14419.72	-13236.76	5858.62	1736656.26	14267677.04	39°17'23.7117"N	80°39'35.4813"W	14475.34	156.126	0.54	-0.39	-0.38	
22168.00	88.460	160.490	7161.86	14513.67	-13325.39	5889.81	1736687.43	14267588.45	39°17'22.8345"N	80°39'35.0889"W	14569.00	156.155	0.56	0.49	-0.27	
22263.00	88.340	160.870	7164.51	14608.63	-13415.01	5921.22	1736718.84	14267498.87	39°17'21.9476"N	80°39'34.6936"W	14663.67	156.184	0.42	-0.13	0.40	
22358.00	89.510	160.370	7166.30	14703.60	-13504.61	5952.74	1736750.34	14267409.31	39°17'21.0609"N	80°39'34.2971"W	14758.37	156.212	1.34	1.23	-0.53	
22452.00	89.750	160.570	7166.90	14797.60	-13593.20	5984.17	1736781.76	14267320.75	39°17'20.1841"N	80°39'33.9017"W	14852.11	156.239	0.33	0.26	0.21	
22547.00	89.600	160.530	7167.44	14892.59	-13682.77	6015.80	1736813.38	14267231.21	39°17'19.2976"N	80°39'33.5036"W	14946.84	156.267	0.16	-0.16	-0.04	
22642.00	89.450	160.490	7168.23	14987.58	-13772.33	6047.49	1736845.06	14267141.69	39°17'18.4113"N	80°39'33.1048"W	15041.58	156.293	0.16	-0.16	-0.04	
22723.00	89.720	160.750	7168.82	15068.57	-13848.74	6074.37	1736871.93	14267065.31	39°17'17.6551"N	80°39'32.7666"W	15122.35	156.317	0.46	0.33	0.32	
22748.00‡	89.720	160.750	7168.94	15093.57	-13872.34	6082.61	1736880.16	14267041.72	39°17'17.4215"N	80°39'32.6630"W	15147.27	156.324	0.00	0.00	0.00	Projected MD at TD: 22748'

HOLE & CASING SECTIONS - Ref Wellbore: Phebe Unit 1H AWB Ref Wellpath: Phebe Unit 1H AWP Proj: 22748'

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	-0.02
17.5in Open Hole	130.00	916.00	786.00	130.00	915.99	-0.04	-0.02	-2.11	2.24
13.375in Casing Surface	30.00	896.00	866.00	30.00	895.99	0.00	0.00	-2.08	2.03
12.25in Open Hole	916.00	3365.00	2449.00	915.99	3316.42	-2.11	2.24	335.63	217.07
9.625in Casing Intermediate	30.00	3345.00	3315.00	30.00	3296.42	0.00	0.00	335.59	217.22
8.75in Open Hole	3365.00	6711.00	3346.00	3316.42	6508.95	335.63	217.07	822.26	840.73
8.5in Open Hole	6711.00	22748.00	16037.00	6508.95	7168.94	822.26	840.73	-13872.34	6082.61
5.5in Casing Production	30.00	22728.00	22698.00	30.00	7168.84	0.00	0.00	-13853.46	6076.02

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Operator	ANTERO RESOURCES CORPORATION	Well	Phebe Unit 1H
Field	Doddridge	API	47-017-06937-0000
Facility	Lemley Pad	Wellbore	Phebe Unit 1H AWB
Slot	Slot B		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Phebe Unit 1H POE Rev-2	7184.00	430.56	1202.94	1732002.41	14281339.00	39°19'38.9631"N	80°40'34.0719"W	point
Phebe Unit 1H BHL Rev-2	7212.00	-13881.38	6088.74	1736886.29	14267032.68	39°17'17.3319"N	80°39'32.5855"W	point
Phebe Unit 1H LP Rev-2	7212.00	242.89	1267.01	1732066.45	14281151.41	39°19'37.1061"N	80°40'33.2652"W	point
Phebe Unit 1H 50' L/R Hard Line	7500.00	-6725.41	3645.84	1734444.35	14274185.84	39°18'28.1487"N	80°40'3.3201"W	rectangle
2D Rectangle 15122.9 x 100.								

WELLPATH COMPOSITION - Ref Wellbore: Phebe Unit 1H AWB Ref Wellpath: Phebe Unit 1H AWP Proj: 22748'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
30.00	917.00	Gyrodata 2015 - GC+WIR+DPIPE	01 Gyrodata MS Gyro <17-1/2"> (100'-917')	Phebe Unit 1H AWB	11/1/2022
917.00	3291.00	BH NaviTrak (2019) (Axial Corr+HRGM)	02 APS EM <12-1/4"> (917')(953'-3291')	Phebe Unit 1H AWB	11/1/2022
3291.00	6635.00	BH NaviTrak (2019) (Axial Corr+HRGM)	03 APS EM <8-3/4"> (3291')(3416'-6635')	Phebe Unit 1H AWB	11/15/2022
6635.00	22748.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	04 BH AT Curve <8-1/2"> (6635')(6656'-22723')	Phebe Unit 1H AWB	11/15/2022

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Operator	ANTERO RESOURCES CORPORATION	Well	Phebe Unit 1H
Field	Doddridge	API	47-017-06937-0000
Facility	Lemley Pad	Wellbore	Phebe Unit 1H AWB
Slot	Slot B		

COMMENTS

Wellpath general comments

API: 47-017-06937-0000
BH Job #: 111534779
Rig: H&P 531
Duration: 11/18/2022-11/23/2022
Gyrodatta MS Gyro <17-1/2"> (100'-917')
APS EM <12-1/4"> (917')(953'-3291')
APS EM <8-3/4"> (3291')(3416'-6635')
BH AT Curve <8-1/2"> (6635')(6656'-22723')
Sycamore: 7014' MD
Middlesex: 7193' MD
Burkett: 7423' MD
Tully: 7473' MD
Hamilton: 7596' MD
Marcellus POE: 7681' MD
Projected MD at TD: 22748'

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