



ANTERO RESOURCES CORPORATION

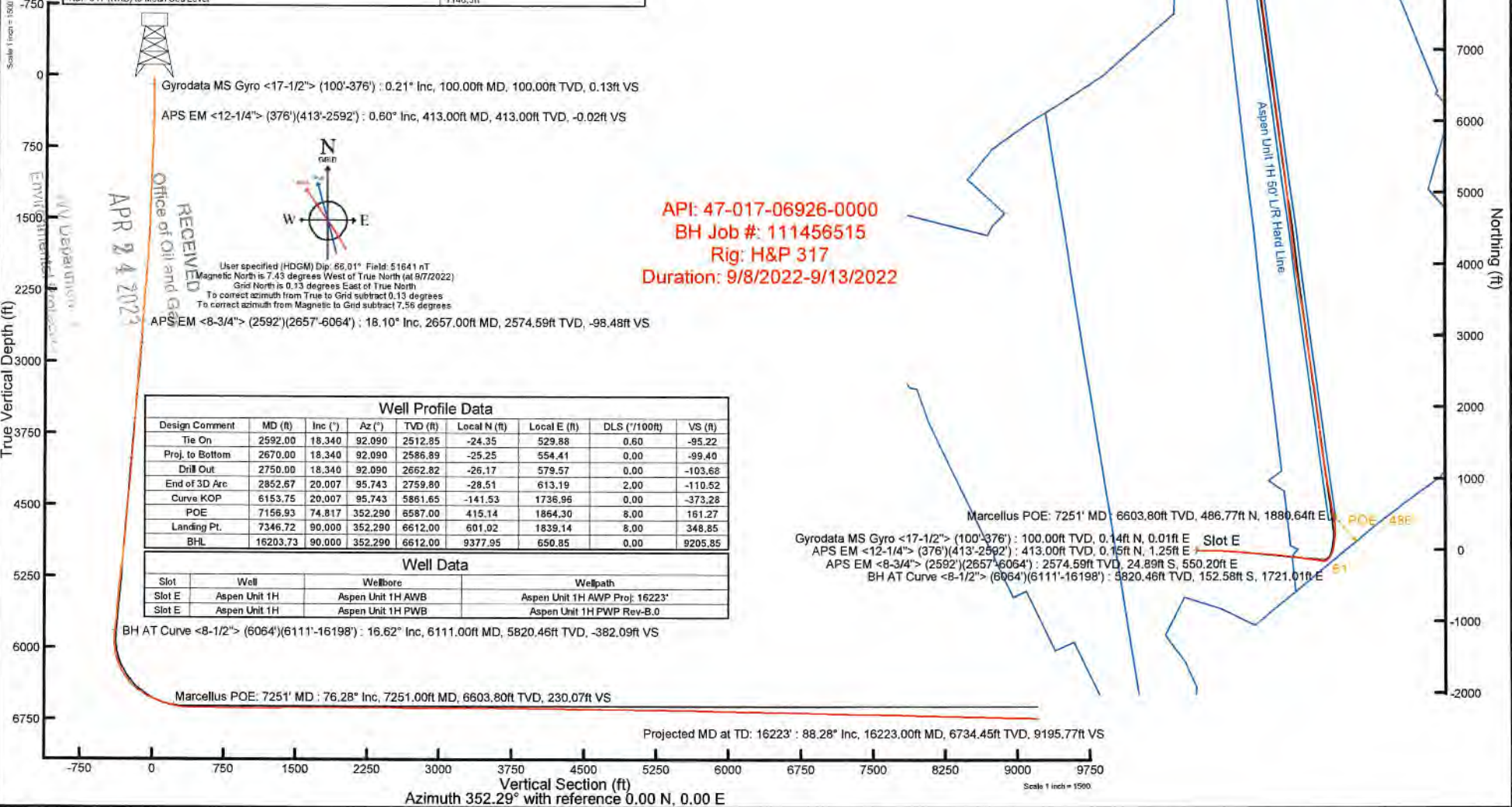


Location: Doddridge Co., WV
 Field: Doddridge
 Facility: OXF 98 Pad

Slot: Slot E
 Well: Aspen Unit 1H
 Wellbore: Aspen Unit 1H PWB

Plot reference wellpath is Aspen Unit 1H PWB Rev-B.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to H&P 317 (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to H&P 317 (RKB)	Scale: True distance
H&P 317 (RKB) to Mean Sea Level: 1146.5 feet	Coordinates are in feet referenced to Sd1
Mean Sea Level to Ground level (At Slot Slot E): -1121 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: subanyar on 2022-10-01, Database: WA MPL_EASTERNUS_Doh

Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
OXFD 98 Pad	1697152.730	14254203.830	39°15'11.6600"N	80°47'58.4860"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
Slot E	0.00	0.00	1697152.730	14254203.830	39°15'11.6600"N
Comment	Aspen Unit 1H				
H&P 317 (RKB) to Ground level (At Slot Slot E)	25.5ft				
Mean Sea Level to Ground level (At Slot Slot E)	-1121ft				
H&P 317 (RKB) to Mean Sea Level	1146.5ft				



Gyrodata MS Gyro <17-1/2"> (100'-376') : 0.21° Inc, 100.00ft MD, 100.00ft TVD, 0.13ft VS
 APS EM <12-1/4"> (376')(413'-2592') : 0.60° Inc, 413.00ft MD, 413.00ft TVD, -0.02ft VS

APSEM <8-3/4"> (2592')(2657'-6064') : 18.10° Inc, 2657.00ft MD, 2574.59ft TVD, -98.48ft VS

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	2592.00	18.340	92.090	2512.85	-24.35	529.88	0.60	-95.22
Proj. to Bottom	2670.00	18.340	92.090	2586.89	-25.25	554.41	0.00	-99.40
Drill Out	2750.00	18.340	92.090	2662.82	-26.17	579.57	0.00	-103.68
End of 3D Arc	2852.67	20.007	95.743	2759.80	-28.51	613.19	2.00	-110.52
Curve KOP	6153.75	20.007	95.743	5861.65	-141.53	1736.96	0.00	-373.28
POE	7156.93	74.817	352.290	6587.00	415.14	1864.30	8.00	161.27
Landing Pt.	7346.72	90.000	352.290	6612.00	601.02	1839.14	8.00	348.85
BHL	16203.73	90.000	352.290	6612.00	9377.95	650.85	0.00	9205.85

Well Data			
Slot	Well	Wellbore	Wellpath
Slot E	Aspen Unit 1H	Aspen Unit 1H AWB	Aspen Unit 1H AWP Proj: 16223'
Slot E	Aspen Unit 1H	Aspen Unit 1H PWB	Aspen Unit 1H PWP Rev-B.0

BH AT Curve <8-1/2"> (6064')(6111'-16198') : 16.62° Inc, 6111.00ft MD, 5820.46ft TVD, -382.09ft VS

Marcellus POE: 7251' MD : 76.28° Inc, 7251.00ft MD, 6603.80ft TVD, 230.07ft VS

API: 47-017-06926-0000
 BH Job #: 111456515
 Rig: H&P 317
 Duration: 9/8/2022-9/13/2022

Projected MD at TD: 16223' : 88.28° Inc, 16223.00ft MD, 6734.45ft TVD, 9195.77ft VS

Vertical Section (ft)
 Azimuth 352.29° with reference 0.00 N, 0.00 E



Actual Wellpath Report

Aspen Unit 1H AWP Proj: 16223'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Aspen Unit 1H
Field	Doddridge	API	47-017-06926-0000
Facility	OXFD 98 Pad	Wellbore	Aspen Unit 1H AWB
Slot	Slot E		

REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Edsaryar
Scale	0.999604	Report Generated	10/1/2022 at 11:47:18 PM
Convergence at slot	0.13° 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	0.00	0.00	1697152.73	14254203.83	39°15'11.6600"N	80°47'58.4860"W
Facility Reference Pt			1697152.73	14254203.83	39°15'11.6600"N	80°47'58.4860"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 317 (RKB) to Facility Vertical Datum	1146.50ft
Horizontal Reference Pt	Slot	H&P 317 (RKB) to Mean Sea Level	1146.50ft
Vertical Reference Pt	H&P 317 (RKB)	H&P 317 (RKB) to Ground Level at Slot (Slot E)	25.50ft
MD Reference Pt	H&P 317 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	352.29°

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Aspen Unit 1H AWP Proj: 16223'
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Field	Doddridge		API	47-017-06926-0000
Facility	OXFD 98 Pad		Wellbore	Aspen Unit 1H AWB
Slot	Slot E			

WELLPATH DATA (185 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	2.860	0.00	0.00	0.00	0.00	1697152.73	14254203.83	39°15'11.6600"N	80°47'58.4860"W	0.00	0.000	0.00	0.00	0.00	
25.50	0.000	2.860	25.50	0.00	0.00	0.00	1697152.73	14254203.83	39°15'11.6600"N	80°47'58.4860"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.210	2.860	100.00	0.13	0.14	0.01	1697152.74	14254203.97	39°15'11.6614"N	80°47'58.4859"W	0.14	2.860	0.28	0.28	0.00	Gyrodata MS Gyro <17-1/2"> (100'-376')
200.00	0.140	52.670	200.00	0.37	0.39	0.11	1697152.84	14254204.22	39°15'11.6639"N	80°47'58.4846"W	0.41	16.037	0.16	-0.07	49.81	
300.00	0.230	106.300	300.00	0.35	0.41	0.40	1697153.13	14254204.24	39°15'11.6641"N	80°47'58.4809"W	0.58	44.413	0.19	0.09	53.63	
376.00	0.550	107.520	376.00	0.14	0.26	0.90	1697153.63	14254204.09	39°15'11.6626"N	80°47'58.4746"W	0.93	73.920	0.42	0.42	1.61	
413.00	0.600	105.960	413.00	-0.02	0.15	1.25	1697153.98	14254203.98	39°15'11.6615"N	80°47'58.4701"W	1.26	83.088	0.14	0.14	-4.22	APS EM <12-1/4"> (376')(413'-2592')
505.00	2.130	102.030	504.97	-0.79	-0.34	3.39	1697156.12	14254203.49	39°15'11.6566"N	80°47'58.4430"W	3.40	95.679	1.67	1.66	-4.27	
595.00	3.070	105.520	594.87	-2.30	-1.33	7.35	1697160.07	14254202.50	39°15'11.6467"N	80°47'58.3927"W	7.47	100.265	1.06	1.04	3.88	
686.00	3.130	104.550	685.74	-4.21	-2.61	12.10	1697164.82	14254201.22	39°15'11.6340"N	80°47'58.3323"W	12.38	102.158	0.09	0.07	-1.07	
775.00	4.500	104.760	774.54	-6.46	-4.11	17.83	1697170.55	14254199.73	39°15'11.6190"N	80°47'58.2595"W	18.29	102.972	1.54	1.54	0.24	
866.00	6.670	102.600	865.10	-9.66	-6.17	26.44	1697179.16	14254197.66	39°15'11.5985"N	80°47'58.1501"W	27.15	103.135	2.40	2.38	-2.37	
957.00	9.090	95.180	955.24	-13.10	-7.97	38.76	1697191.47	14254195.86	39°15'11.5804"N	80°47'57.9936"W	39.57	101.622	2.88	2.66	-8.15	
1047.00	11.340	92.070	1043.81	-16.19	-8.93	54.68	1697207.39	14254194.90	39°15'11.5705"N	80°47'57.7912"W	55.41	99.278	2.57	2.50	-3.46	
1142.00	13.560	89.970	1136.57	-19.26	-9.26	75.16	1697227.86	14254194.57	39°15'11.5668"N	80°47'57.5309"W	75.72	97.028	2.38	2.34	-2.21	
1236.00	15.550	89.160	1227.55	-22.24	-9.07	98.78	1697251.47	14254194.76	39°15'11.5682"N	80°47'57.2307"W	99.19	95.249	2.13	2.12	-0.86	
1331.00	17.400	88.660	1318.64	-25.34	-8.56	125.71	1697278.39	14254195.28	39°15'11.5727"N	80°47'56.8882"W	126.00	93.893	1.95	1.95	-0.53	
1425.00	17.770	89.150	1408.25	-28.62	-8.01	154.10	1697306.77	14254195.82	39°15'11.5774"N	80°47'56.5273"W	154.31	92.977	0.42	0.39	0.52	
1520.00	17.400	88.940	1498.81	-31.99	-7.54	182.80	1697335.46	14254196.30	39°15'11.5815"N	80°47'56.1625"W	182.96	92.361	0.40	-0.39	-0.22	
1615.00	18.750	90.620	1589.12	-35.85	-7.44	212.27	1697364.92	14254196.39	39°15'11.5819"N	80°47'55.7878"W	212.40	92.007	1.52	1.42	1.77	
1710.00	19.040	90.300	1679.00	-40.22	-7.68	243.04	1697395.67	14254196.15	39°15'11.5787"N	80°47'55.3968"W	243.16	91.811	0.32	0.31	-0.34	
1804.00	18.660	91.830	1767.96	-44.85	-8.25	273.40	1697426.02	14254195.59	39°15'11.5725"N	80°47'55.0108"W	273.52	91.727	0.66	-0.40	1.63	
1899.00	18.940	93.830	1857.89	-50.45	-9.76	303.97	1697456.58	14254194.07	39°15'11.5569"N	80°47'54.6222"W	304.13	91.839	0.74	0.29	2.11	
1994.00	18.890	92.500	1947.76	-56.26	-11.46	334.72	1697487.32	14254192.37	39°15'11.5394"N	80°47'54.2314"W	334.92	91.961	0.46	-0.05	-1.40	
2088.00	18.720	92.100	2036.75	-61.53	-12.68	365.00	1697517.58	14254191.16	39°15'11.5267"N	80°47'53.8466"W	365.22	91.989	0.23	-0.18	-0.43	
2183.00	19.340	94.720	2126.56	-67.51	-14.53	395.91	1697548.48	14254189.31	39°15'11.5077"N	80°47'53.4537"W	396.18	92.102	1.11	0.65	2.76	
2277.00	19.560	95.680	2215.19	-74.51	-17.37	427.08	1697579.64	14254186.47	39°15'11.4790"N	80°47'53.0575"W	427.43	92.329	0.41	0.23	1.02	
2372.00	19.480	94.510	2304.73	-81.54	-20.19	458.69	1697611.24	14254183.65	39°15'11.4504"N	80°47'52.6557"W	459.14	92.520	0.42	-0.08	-1.23	
2466.00	19.000	93.610	2393.48	-87.86	-22.38	489.59	1697642.13	14254181.45	39°15'11.4280"N	80°47'52.2630"W	490.10	92.618	0.60	-0.51	-0.96	
2561.00	18.510	92.340	2483.44	-93.53	-23.97	520.09	1697672.62	14254179.87	39°15'11.4116"N	80°47'51.8753"W	520.65	92.639	0.67	-0.52	-1.34	

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Aspen Unit 1H AWP Proj: 16223'
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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Aspen Unit 1H
Field	Doddridge		API	47-017-06926-0000
Facility	OXFD 98 Pad		Wellbore	Aspen Unit 1H AWB
Slot	Slot E			

WELLPATH DATA (185 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
2592.00	18.340	92.090	2512.85	-95.22	-24.35	529.88	1697682.40	14254179.49	39°15'11.4077"N	80°47'51.7509"W	530.44	92.631	0.60	-0.55	-0.81	
2657.00	18.100	90.940	2574.59	-98.48	-24.89	550.20	1697702.71	14254178.95	39°15'11.4019"N	80°47'51.4927"W	550.76	92.590	0.67	-0.37	-1.77	APS EM <8-3/4"> (2592')(2657'-6064')
2752.00	19.630	94.580	2664.49	-104.10	-26.41	580.86	1697733.36	14254177.43	39°15'11.3862"N	80°47'51.1029"W	581.46	92.603	2.03	1.61	3.83	
2846.00	21.810	98.140	2752.40	-112.23	-30.14	613.89	1697766.38	14254173.70	39°15'11.3486"N	80°47'50.6831"W	614.63	92.811	2.68	2.32	3.79	
2941.00	22.110	96.300	2840.51	-121.38	-34.60	649.13	1697801.61	14254169.24	39°15'11.3037"N	80°47'50.2353"W	650.06	93.051	0.79	0.32	-1.94	
3035.00	20.220	93.710	2928.17	-128.88	-37.59	682.93	1697835.39	14254166.25	39°15'11.2734"N	80°47'49.8057"W	683.97	93.151	2.24	-2.01	-2.76	
3129.00	20.590	96.810	3016.27	-136.24	-40.61	715.56	1697868.00	14254163.24	39°15'11.2429"N	80°47'49.3911"W	716.71	93.248	1.22	0.39	3.30	
3224.00	20.970	94.960	3105.10	-144.15	-44.06	749.08	1697901.51	14254159.79	39°15'11.2081"N	80°47'48.9651"W	750.37	93.366	0.80	0.40	-1.95	
3318.00	20.750	90.460	3192.94	-150.21	-45.64	782.49	1697934.91	14254158.20	39°15'11.1916"N	80°47'48.5404"W	783.82	93.338	1.72	-0.23	-4.79	
3413.00	20.130	93.740	3281.96	-155.85	-46.85	815.63	1697968.04	14254157.00	39°15'11.1790"N	80°47'48.1192"W	816.98	93.287	1.37	-0.65	3.45	
3507.00	19.990	91.730	3370.26	-161.69	-48.39	847.83	1698000.22	14254155.46	39°15'11.1631"N	80°47'47.7099"W	849.21	93.266	0.75	-0.15	-2.14	
3602.00	19.680	97.110	3459.63	-168.45	-50.86	879.94	1698032.32	14254152.99	39°15'11.1380"N	80°47'47.3018"W	881.41	93.308	1.95	-0.33	5.66	
3695.00	19.440	97.030	3547.26	-176.39	-54.69	910.84	1698063.21	14254149.16	39°15'11.0994"N	80°47'46.9091"W	912.48	93.436	0.26	-0.26	-0.09	
3791.00	18.840	92.820	3637.96	-183.29	-57.41	942.18	1698094.53	14254146.45	39°15'11.0718"N	80°47'46.5108"W	943.92	93.487	1.57	-0.62	-4.39	
3885.00	19.800	93.800	3726.67	-189.24	-59.21	973.22	1698125.56	14254144.64	39°15'11.0533"N	80°47'46.1162"W	975.02	93.481	1.08	1.02	1.04	
3980.00	21.080	96.430	3815.69	-196.62	-62.19	1006.26	1698158.59	14254141.67	39°15'11.0232"N	80°47'45.6964"W	1008.18	93.536	1.66	1.35	2.77	
4075.00	20.910	94.940	3904.38	-204.51	-65.56	1040.12	1698192.44	14254138.29	39°15'10.9891"N	80°47'45.2660"W	1042.19	93.607	0.59	-0.18	-1.57	
4170.00	20.140	96.250	3993.35	-212.17	-68.80	1073.27	1698225.57	14254135.06	39°15'10.9563"N	80°47'44.8447"W	1075.47	93.668	0.94	-0.81	1.38	
4264.00	17.940	92.840	4082.20	-218.72	-71.28	1103.82	1698256.11	14254132.58	39°15'10.9311"N	80°47'44.4564"W	1106.12	93.695	2.62	-2.34	-3.63	
4359.00	18.640	95.510	4172.40	-224.88	-73.46	1133.55	1698285.83	14254130.39	39°15'10.9089"N	80°47'44.0786"W	1135.93	93.708	1.15	0.74	2.81	
4453.00	20.470	98.830	4260.98	-232.99	-77.43	1164.75	1698317.01	14254126.43	39°15'10.8690"N	80°47'43.6821"W	1167.32	93.803	2.28	1.95	3.53	
4548.00	21.390	98.250	4349.71	-242.48	-82.47	1198.31	1698350.56	14254121.40	39°15'10.8185"N	80°47'43.2557"W	1201.14	93.937	0.99	0.97	-0.61	
4642.00	19.970	95.820	4437.66	-250.95	-86.55	1231.24	1698383.48	14254117.31	39°15'10.7773"N	80°47'42.8371"W	1234.28	94.021	1.76	-1.51	-2.59	
4737.00	20.000	98.240	4526.94	-259.21	-90.53	1263.46	1698415.69	14254113.34	39°15'10.7373"N	80°47'42.4277"W	1266.70	94.098	0.87	0.03	2.55	
4831.00	18.240	95.440	4615.75	-266.98	-94.23	1294.02	1698446.23	14254109.64	39°15'10.7001"N	80°47'42.0394"W	1297.44	94.165	2.11	-1.87	-2.98	
4926.00	18.370	95.060	4705.94	-273.67	-96.96	1323.73	1698475.93	14254106.91	39°15'10.6724"N	80°47'41.6617"W	1327.27	94.189	0.19	0.14	-0.40	
5023.00	18.150	97.830	4798.06	-281.10	-100.36	1353.92	1698506.11	14254103.51	39°15'10.6381"N	80°47'41.2780"W	1357.64	94.239	0.92	-0.23	2.86	
5118.00	19.400	98.040	4888.00	-289.34	-104.59	1384.20	1698536.38	14254099.29	39°15'10.5957"N	80°47'40.8932"W	1388.15	94.321	1.32	1.32	0.22	
5212.00	20.740	97.420	4976.29	-297.93	-108.92	1416.17	1698566.33	14254094.96	39°15'10.5521"N	80°47'40.4870"W	1420.35	94.398	1.44	1.43	-0.66	
5307.00	21.260	99.530	5064.98	-307.42	-113.94	1449.83	1698601.99	14254089.93	39°15'10.5017"N	80°47'40.0592"W	1454.30	94.494	0.97	0.55	2.22	

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Field	Doddridge	API	47-017-06926-0000
Facility	OXFD 98 Pad	Wellbore	Aspen Unit 1H AWP
Slot	Slot E		

WELLPATH DATA (185 stations) † = interpolated, ‡ = extrapolated station																
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]			[ft]	[°]	[°/100ft]	[°/100ft]	[°/100ft]	
5401.00	22.160	100.460	5152.31	-318.00	-119.98	1484.08	1698636.21	14254083.90	39°15'10.4413"N	80°47'39.6241"W	1488.92	94.622	1.02	0.96	0.99	
5496.00	21.430	97.740	5240.53	-328.21	-125.57	1518.89	1698671.02	14254078.31	39°15'10.3852"N	80°47'39.1817"W	1524.07	94.726	1.31	-0.77	-2.86	
5591.00	21.730	97.170	5328.87	-337.35	-130.11	1553.54	1698705.65	14254073.78	39°15'10.3396"N	80°47'38.7414"W	1558.98	94.787	0.39	0.32	-0.60	
5685.00	19.710	93.410	5416.79	-344.88	-133.22	1586.63	1698738.73	14254070.66	39°15'10.3081"N	80°47'38.3208"W	1592.21	94.800	2.57	-2.15	-4.00	
5780.00	19.220	94.720	5506.36	-351.33	-135.46	1618.21	1698770.29	14254068.42	39°15'10.2853"N	80°47'37.9195"W	1623.87	94.785	0.69	-0.52	1.38	
5874.00	18.910	97.860	5595.20	-358.75	-138.82	1648.72	1698800.79	14254065.07	39°15'10.2514"N	80°47'37.5318"W	1654.55	94.813	1.14	-0.33	3.34	
5969.00	18.380	100.330	5685.22	-367.52	-143.61	1678.70	1698830.76	14254060.28	39°15'10.2034"N	80°47'37.1507"W	1684.83	94.890	1.00	-0.56	2.60	
6064.00	17.680	102.690	5775.55	-377.19	-149.46	1707.51	1698859.56	14254054.43	39°15'10.1449"N	80°47'36.7847"W	1714.04	95.002	1.06	-0.74	2.48	
6111.00	16.620	103.310	5820.46	-382.09	-152.58	1721.01	1698873.06	14254051.31	39°15'10.1138"N	80°47'36.6131"W	1727.76	95.066	2.29	-2.26	1.32	BH AT Curve <8-1/2"> (6064')(6111'-16198')
6177.00	18.930	95.780	5883.32	-387.97	-155.83	1740.86	1698892.89	14254048.06	39°15'10.0812"N	80°47'36.3610"W	1747.82	95.115	4.93	3.50	-11.41	
6271.00	19.260	69.720	5972.31	-388.16	-151.98	1770.62	1698922.65	14254051.91	39°15'10.1185"N	80°47'35.9825"W	1777.13	94.906	9.01	0.35	-27.72	
6365.00	22.450	51.720	6060.23	-375.64	-135.47	1799.29	1698951.30	14254068.41	39°15'10.2811"N	80°47'35.6176"W	1804.38	94.306	7.58	3.39	-19.15	
6460.00	26.560	36.430	6146.74	-351.13	-107.10	1826.18	1698978.18	14254096.77	39°15'10.5608"N	80°47'35.2749"W	1829.32	93.357	7.92	4.33	-16.09	
6555.00	31.070	26.220	6230.01	-315.51	-67.98	1849.65	1699001.64	14254135.88	39°15'10.9470"N	80°47'34.9755"W	1850.90	92.105	7.01	4.75	-10.75	
6597.00†	33.948	21.863	6265.43	-296.31	-47.37	1858.81	1699010.80	14254156.48	39°15'11.1505"N	80°47'34.8584"W	1859.41	91.460	8.83	6.85	-10.37	Sycamore: 6597' MD
6649.00	37.690	17.310	6307.59	-269.27	-18.70	1868.95	1699020.94	14254185.14	39°15'11.4336"N	80°47'34.7287"W	1869.04	90.573	8.83	7.20	-8.76	
6744.00	44.970	9.960	6378.92	-210.85	42.21	1883.43	1699035.41	14254246.02	39°15'12.0353"N	80°47'34.5429"W	1883.90	88.716	9.20	7.66	-7.74	
6771.00†	47.608	8.766	6397.58	-192.20	61.46	1886.60	1699038.57	14254265.27	39°15'12.2256"N	80°47'34.5020"W	1887.60	88.134	10.28	9.77	-4.42	Middlesex: 6771' MD
6838.00	54.200	6.190	6439.81	-142.04	112.99	1893.30	1699045.28	14254316.77	39°15'12.7347"N	80°47'34.4153"W	1896.67	86.585	10.28	9.84	-3.85	
6933.00	59.060	2.730	6492.06	-64.51	192.05	1899.40	1699051.38	14254395.80	39°15'13.5159"N	80°47'34.3354"W	1909.09	84.226	5.95	5.12	-3.64	
6980.00	62.520	1.900	6514.99	-24.12	233.03	1901.06	1699053.03	14254436.77	39°15'13.9210"N	80°47'34.3132"W	1915.29	83.012	7.52	7.36	-1.77	
7016.00†	65.215	0.828	6530.85	7.79	265.34	1901.82	1699053.79	14254469.06	39°15'14.2403"N	80°47'34.3026"W	1920.24	82.057	7.95	7.49	-2.98	Burkett: 7016' MD
7027.00	66.040	0.510	6535.39	17.71	275.36	1901.94	1699053.91	14254479.08	39°15'14.3393"N	80°47'34.3008"W	1921.77	81.762	7.95	7.50	-2.89	
7074.00	69.740	358.400	6553.08	60.90	318.89	1901.51	1699053.49	14254522.59	39°15'14.7696"N	80°47'34.3049"W	1928.07	80.480	8.90	7.87	-4.49	
7099.00†	71.274	357.381	6561.42	84.36	342.44	1900.65	1699052.62	14254546.13	39°15'15.0023"N	80°47'34.3153"W	1931.25	79.787	7.24	6.14	-4.08	Tully: 7099' MD
7122.00	72.690	356.460	6568.53	106.16	364.28	1899.47	1699051.44	14254567.96	39°15'15.2182"N	80°47'34.3296"W	1934.09	79.144	7.24	6.16	-4.00	
7216.00	74.640	348.160	6595.01	196.27	453.57	1887.38	1699039.36	14254657.22	39°15'16.1011"N	80°47'34.4807"W	1941.12	76.487	8.72	2.07	-8.83	
7222.00†	74.920	348.283	6596.59	202.04	459.24	1886.20	1699038.18	14254662.89	39°15'16.1571"N	80°47'34.4955"W	1941.30	76.316	5.07	4.67	2.05	Hamilton: 7222' MD
7251.00†	76.277	348.872	6603.80	230.07	486.77	1880.64	1699032.62	14254690.41	39°15'16.4294"N	80°47'34.5655"W	1942.61	75.488	5.07	4.68	2.03	Marcellus POE: 7251' MD
7310.00	79.040	350.050	6616.41	287.63	543.43	1870.10	1699022.08	14254747.05	39°15'16.9896"N	80°47'34.6978"W	1947.46	73.797	5.07	4.68	2.00	

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Actual Wellpath Report

Aspen Unit 1H AWP Proj: 16223'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Aspen Unit 1H
Field	Doddridge		API	47-017-06926-0000
Facility	OXFD 98 Pad		Wellbore	Aspen Unit 1H AWB
Slot	Slot E			

WELLPATH DATA (185 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
7405.00	89.910	349.130	6625.54	381.94	636.29	1853.03	1699005.02	14254839.87	39°15'17.9078"N	80°47'34.9120"W	1959.23	71.049	11.48	11.44	-0.97	
7498.00	89.850	350.060	6625.74	474.84	727.76	1836.24	1698988.23	14254931.30	39°15'18.8122"N	80°47'35.1229"W	1975.20	68.380	1.00	-0.06	1.00	
7592.00	89.540	349.780	6626.24	568.75	820.31	1819.78	1698971.79	14255023.81	39°15'19.7273"N	80°47'35.3293"W	1996.13	65.735	0.44	-0.33	-0.30	
7687.00	88.830	349.900	6627.59	663.66	913.81	1803.03	1698955.04	14255117.28	39°15'20.6518"N	80°47'35.5396"W	2021.37	63.123	0.76	-0.75	0.13	
7781.00	89.050	350.360	6629.33	757.57	1006.40	1786.92	1698938.94	14255209.83	39°15'21.5674"N	80°47'35.7417"W	2050.83	60.612	0.54	0.23	0.49	
7876.00	89.200	353.820	6630.78	852.55	1100.47	1773.85	1698925.87	14255303.87	39°15'22.4974"N	80°47'35.9052"W	2087.48	58.185	3.65	0.16	3.64	
7970.00	90.920	351.990	6630.68	946.53	1193.75	1762.24	1698914.27	14255397.10	39°15'23.4196"N	80°47'36.0500"W	2128.50	55.886	2.67	1.83	-1.95	
8064.00	88.860	346.400	6630.86	1040.35	1286.04	1744.62	1698896.66	14255489.36	39°15'24.3322"N	80°47'36.2713"W	2167.40	53.604	6.34	-2.19	-5.95	
8159.00	91.750	353.190	6630.36	1135.20	1379.47	1727.80	1698879.85	14255582.75	39°15'25.2560"N	80°47'36.4824"W	2210.94	51.396	7.77	3.04	7.15	
8253.00	89.230	349.290	6629.55	1229.15	1472.34	1713.49	1698865.54	14255675.59	39°15'26.1743"N	80°47'36.6616"W	2259.17	49.329	4.94	-2.68	-4.15	
8348.00	91.080	358.780	6629.29	1324.00	1566.72	1703.63	1698855.68	14255769.92	39°15'27.1072"N	80°47'36.7843"W	2314.51	47.397	10.18	1.95	9.99	
8442.00	92.030	353.000	6626.74	1417.73	1660.40	1696.90	1698848.95	14255863.57	39°15'28.0333"N	80°47'36.8671"W	2374.11	45.623	6.23	1.01	-6.15	
8536.00	90.460	353.070	6624.70	1511.70	1753.68	1685.50	1698837.56	14255956.81	39°15'28.9556"N	80°47'37.0093"W	2432.35	43.864	1.67	-1.67	0.07	
8631.00	90.340	352.760	6624.04	1606.69	1847.95	1673.79	1698825.85	14256051.05	39°15'29.8876"N	80°47'37.1555"W	2493.29	42.169	0.35	-0.13	-0.33	
8725.00	90.220	352.620	6623.58	1700.69	1941.19	1661.83	1698813.90	14256144.24	39°15'30.8094"N	80°47'37.3049"W	2555.36	40.566	0.20	-0.13	-0.15	
8820.00	90.250	352.680	6623.19	1795.69	2035.41	1649.67	1698801.75	14256238.43	39°15'31.7409"N	80°47'37.4566"W	2619.98	39.024	0.07	0.03	0.06	
8914.00	89.600	353.340	6623.31	1889.68	2128.71	1638.23	1698790.31	14256331.69	39°15'32.6633"N	80°47'37.5993"W	2686.11	37.582	0.99	-0.69	0.70	
9009.00	88.430	351.670	6624.94	1984.66	2222.88	1625.85	1698777.93	14256425.82	39°15'33.5943"N	80°47'37.7541"W	2754.01	36.182	2.15	-1.23	-1.76	
9103.00	90.770	351.830	6625.60	2078.65	2315.89	1612.36	1698764.45	14256518.80	39°15'34.5140"N	80°47'37.9229"W	2821.89	34.846	2.50	2.49	0.17	
9197.00	89.230	352.910	6625.60	2172.64	2409.06	1599.88	1698751.97	14256611.93	39°15'35.4351"N	80°47'38.0789"W	2891.92	33.589	2.00	-1.64	1.15	
9292.00	90.620	350.380	6625.72	2267.63	2503.04	1586.08	1698738.17	14256705.87	39°15'36.3643"N	80°47'38.2516"W	2963.25	32.361	3.04	1.46	-2.66	
9386.00	88.610	349.860	6626.36	2361.55	2595.64	1569.95	1698722.05	14256798.44	39°15'37.2799"N	80°47'38.4540"W	3033.49	31.167	2.21	-2.14	-0.55	
9481.00	90.090	353.410	6627.43	2456.52	2689.60	1556.13	1698708.24	14256892.36	39°15'38.2089"N	80°47'38.6269"W	3107.33	30.052	4.05	1.56	3.74	
9576.00	90.550	349.760	6626.90	2551.50	2783.56	1542.23	1698694.35	14256986.29	39°15'39.1379"N	80°47'38.8009"W	3182.25	28.989	3.87	0.48	-3.84	
9671.00	87.230	351.340	6628.74	2646.42	2877.24	1526.64	1698678.76	14257079.93	39°15'40.0641"N	80°47'38.9964"W	3257.17	27.950	3.87	-3.49	1.66	
9765.00	89.940	351.660	6631.06	2740.37	2970.17	1512.75	1698664.88	14257172.82	39°15'40.9829"N	80°47'39.1703"W	3333.22	26.990	2.90	2.88	0.34	
9860.00	89.110	353.120	6631.85	2835.36	3064.33	1500.17	1698652.30	14257266.94	39°15'41.9138"N	80°47'39.3275"W	3411.84	26.084	1.77	-0.87	1.54	
9954.00	91.140	353.010	6631.65	2929.35	3157.64	1488.82	1698640.96	14257360.21	39°15'42.8363"N	80°47'39.4691"W	3491.02	25.244	2.16	2.16	-0.12	
10048.00	89.540	350.830	6631.09	3023.34	3250.69	1475.61	1698627.75	14257453.23	39°15'43.7564"N	80°47'39.6344"W	3569.93	24.415	2.88	-1.70	-2.32	
10143.00	90.860	354.100	6630.76	3118.32	3344.86	1463.15	1698615.30	14257547.35	39°15'44.6873"N	80°47'39.7900"W	3650.87	23.626	3.71	1.39	3.44	

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Actual Wellpath Report

Aspen Unit 1H AWP Proj: 16223'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Aspen Unit 1H
Field	Doddridge		API	47-017-06926-0000
Facility	OXFD 98 Pad		Wellbore	Aspen Unit 1H AWB
Slot	Slot E			

WELLPATH DATA (185 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
10238.00	91.260	349.560	6629.00	3213.28	3438.85	1449.66	1698601.81	14257641.31	39°15'45.6166"N	80°47'39.9589"W	3731.92	22.858	4.80	0.42	-4.78	
10333.00	90.030	347.830	6627.93	3308.08	3532.00	1431.04	1698583.20	14257734.42	39°15'46.5377"N	80°47'40.1929"W	3810.89	22.056	2.23	-1.29	-1.82	
10427.00	89.260	352.170	6628.51	3401.98	3624.54	1414.72	1698566.89	14257826.93	39°15'47.4528"N	80°47'40.3977"W	3890.85	21.322	4.69	-0.82	4.62	
10522.00	90.990	351.580	6628.30	3496.97	3718.59	1401.29	1698553.47	14257920.94	39°15'48.3826"N	80°47'40.5657"W	3973.85	20.648	1.92	1.82	-0.62	
10617.00	89.290	351.720	6628.07	3591.96	3812.58	1387.50	1698539.68	14258014.89	39°15'49.3118"N	80°47'40.7384"W	4057.20	19.998	1.80	-1.79	0.15	
10711.00	89.110	350.050	6629.38	3685.92	3905.38	1372.61	1698524.79	14258107.65	39°15'50.2294"N	80°47'40.9250"W	4139.57	19.365	1.79	-0.19	-1.78	
10806.00	89.450	351.990	6630.58	3780.89	3999.20	1357.78	1698509.97	14258201.44	39°15'51.1570"N	80°47'41.1108"W	4223.41	18.753	2.07	0.36	2.04	
10901.00	88.980	349.400	6631.88	3875.83	4092.93	1342.43	1698494.62	14258295.13	39°15'52.0838"N	80°47'41.3034"W	4307.46	18.159	2.77	-0.49	-2.73	
10995.00	88.740	353.280	6633.75	3969.78	4185.82	1328.28	1698480.48	14258387.99	39°15'53.0023"N	80°47'41.4806"W	4391.52	17.606	4.13	-0.26	4.13	
11090.00	89.260	353.650	6635.41	4064.75	4280.19	1317.47	1698469.67	14258482.32	39°15'53.9352"N	80°47'41.6153"W	4478.37	17.109	0.67	0.55	0.39	
11185.00	89.350	353.500	6636.56	4159.72	4374.59	1306.84	1698459.05	14258576.68	39°15'54.8684"N	80°47'41.7477"W	4565.62	16.633	0.18	0.09	-0.16	
11279.00	89.510	354.860	6637.50	4253.66	4468.10	1297.31	1698449.52	14258670.15	39°15'55.7929"N	80°47'41.8662"W	4652.62	16.191	1.46	0.17	1.45	
11372.00	89.230	353.940	6638.52	4346.59	4560.65	1288.23	1698440.45	14258762.66	39°15'56.7078"N	80°47'41.9789"W	4739.10	15.773	1.03	-0.30	-0.99	
11467.00	89.600	353.490	6639.49	4441.55	4655.07	1277.83	1698430.05	14258857.05	39°15'57.6413"N	80°47'42.1084"W	4827.27	15.350	0.61	0.38	-0.47	
11562.00	89.350	354.850	6640.36	4536.50	4749.57	1268.18	1698420.41	14258951.51	39°15'58.5755"N	80°47'42.2284"W	4915.97	14.950	1.46	-0.26	1.43	
11656.00	88.980	354.160	6641.73	4630.42	4843.13	1259.18	1698411.41	14259045.03	39°15'59.5004"N	80°47'42.3401"W	5004.14	14.574	0.83	-0.39	-0.73	
11751.00	88.460	353.320	6643.85	4725.36	4937.54	1248.83	1698401.06	14259139.40	39°16'0.4338"N	80°47'42.4691"W	5093.02	14.194	1.04	-0.55	-0.88	
11846.00	89.260	352.950	6645.74	4820.33	5031.84	1237.47	1698389.71	14259233.66	39°16'1.3661"N	80°47'42.6107"W	5181.77	13.816	0.93	0.84	-0.39	
11940.00	89.570	354.520	6646.70	4914.29	5125.27	1227.22	1698379.46	14259327.06	39°16'2.2897"N	80°47'42.7384"W	5270.15	13.466	1.70	0.33	1.67	
12035.00	89.110	352.240	6647.80	5009.26	5219.62	1216.27	1698368.51	14259421.37	39°16'3.2226"N	80°47'42.8749"W	5359.46	13.117	2.45	-0.48	-2.40	
12130.00	89.660	352.970	6648.82	5104.26	5313.83	1204.04	1698356.29	14259515.54	39°16'4.1539"N	80°47'43.0277"W	5448.53	12.767	0.96	0.58	0.77	
12224.00	89.110	353.440	6649.83	5198.24	5407.16	1192.92	1698345.17	14259608.84	39°16'5.0766"N	80°47'43.1664"W	5537.19	12.441	0.77	-0.59	0.50	
12319.00	88.740	352.430	6651.61	5293.21	5501.42	1181.24	1698333.50	14259703.06	39°16'6.0086"N	80°47'43.3122"W	5626.81	12.118	1.13	-0.39	-1.06	
12414.00	89.140	352.640	6653.36	5388.20	5595.60	1168.90	1698321.16	14259797.20	39°16'6.9397"N	80°47'43.4664"W	5716.38	11.799	0.48	0.42	0.22	
12508.00	89.290	350.420	6654.65	5482.17	5688.56	1155.05	1698307.32	14259890.12	39°16'7.8588"N	80°47'43.6398"W	5804.64	11.478	2.37	0.16	-2.36	
12602.00	89.570	353.520	6655.59	5576.16	5781.62	1141.92	1698294.20	14259983.15	39°16'8.7789"N	80°47'43.8040"W	5893.31	11.173	3.31	0.30	3.30	
12697.00	87.910	353.160	6657.68	5671.11	5875.95	1130.91	1698283.19	14260077.44	39°16'9.7115"N	80°47'43.9414"W	5983.79	10.894	1.79	-1.75	-0.38	
12791.00	88.240	352.380	6660.83	5765.06	5969.15	1119.09	1698271.37	14260170.61	39°16'10.6329"N	80°47'44.0890"W	6073.15	10.618	0.90	0.35	-0.83	
12886.00	88.710	352.460	6663.36	5860.02	6063.29	1106.56	1698258.85	14260264.70	39°16'11.5636"N	80°47'44.2456"W	6163.44	10.343	0.50	0.49	0.08	
12981.00	88.980	352.570	6665.28	5955.00	6157.46	1094.19	1698246.48	14260358.84	39°16'12.4946"N	80°47'44.4002"W	6253.92	10.076	0.31	0.28	0.12	

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Aspen Unit 1H AWP Proj: 16223'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Aspen Unit 1H
Field	Doddridge	API	47-017-06926-0000
Facility	OXFD 98 Pad	Wellbore	Aspen Unit 1H AWB
Slot	Slot E		

WELLPATH DATA (185 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
13075.00	88.710	352.980	6667.17	6048.98	6250.70	1082.37	1698234.67	14260452.04	39°16'13.4164"N	80°47'44.5478"W	6343.71	9.824	0.52	-0.29	0.44	
13170.00	88.620	352.790	6669.39	6143.95	6344.94	1070.60	1698222.91	14260546.24	39°16'14.3481"N	80°47'44.6947"W	6434.63	9.577	0.22	-0.09	-0.20	
13264.00	89.480	352.510	6670.94	6237.93	6438.15	1058.58	1698210.89	14260639.42	39°16'15.2697"N	80°47'44.8449"W	6524.60	9.337	0.96	0.91	-0.30	
13359.00	88.980	353.120	6672.22	6332.92	6532.40	1046.70	1698199.01	14260733.62	39°16'16.2014"N	80°47'44.9933"W	6615.72	9.103	0.83	-0.53	0.64	
13454.00	89.110	353.130	6673.80	6427.90	6626.70	1035.33	1698187.65	14260827.89	39°16'17.1338"N	80°47'45.1351"W	6707.09	8.880	0.14	0.14	0.01	
13548.00	89.290	353.010	6675.12	6521.88	6720.00	1023.99	1698176.31	14260921.16	39°16'18.0562"N	80°47'45.2766"W	6797.57	8.664	0.23	0.19	-0.13	
13643.00	88.340	353.190	6677.08	6616.85	6814.30	1012.58	1698164.90	14261015.41	39°16'18.9884"N	80°47'45.4190"W	6889.12	8.452	1.02	-1.00	0.19	
13738.00	88.740	352.470	6679.50	6711.81	6908.52	1000.72	1698153.05	14261109.60	39°16'19.9200"N	80°47'45.5670"W	6980.62	8.242	0.87	0.42	-0.76	
13832.00	88.240	351.650	6681.98	6805.78	7001.59	987.74	1698140.08	14261202.63	39°16'20.8401"N	80°47'45.7294"W	7070.92	8.030	1.02	-0.53	-0.87	
13927.00	88.920	353.990	6684.33	6900.74	7095.81	975.87	1698128.22	14261296.81	39°16'21.7716"N	80°47'45.8776"W	7162.80	7.831	2.56	0.72	2.46	
14021.00	87.880	352.940	6686.96	6994.68	7189.16	965.18	1698117.53	14261390.12	39°16'22.6945"N	80°47'46.0109"W	7253.66	7.647	1.57	-1.11	-1.12	
14116.00	89.660	351.010	6689.00	7089.64	7283.20	951.92	1698104.27	14261484.12	39°16'23.6243"N	80°47'46.1768"W	7345.14	7.446	2.76	1.87	-2.03	
14211.00	88.090	352.790	6690.86	7184.62	7377.22	938.54	1698090.90	14261578.11	39°16'24.5539"N	80°47'46.3443"W	7436.68	7.250	2.50	-1.65	1.87	
14306.00	88.280	350.020	6693.87	7279.55	7471.10	924.35	1698076.71	14261671.95	39°16'25.4821"N	80°47'46.5221"W	7528.06	7.053	2.92	0.20	-2.92	
14400.00	88.770	354.810	6696.29	7373.49	7564.22	911.95	1698064.32	14261765.04	39°16'26.4027"N	80°47'46.6771"W	7618.99	6.874	5.12	0.52	5.10	
14495.00	90.920	352.590	6696.55	7468.45	7658.63	901.53	1698053.90	14261859.41	39°16'27.3361"N	80°47'46.8069"W	7711.51	6.714	3.25	2.26	-2.34	
14590.00	88.250	351.590	6697.24	7563.44	7752.72	888.46	1698040.83	14261953.46	39°16'28.2663"N	80°47'46.9704"W	7803.46	6.538	3.00	-2.81	-1.05	
14684.00	88.090	351.580	6700.24	7657.38	7845.66	874.71	1698027.09	14262046.36	39°16'29.1852"N	80°47'47.1426"W	7894.27	6.362	0.17	-0.17	-0.01	
14779.00	89.660	351.490	6702.11	7752.35	7939.60	860.72	1698013.11	14262140.27	39°16'30.1140"N	80°47'47.3177"W	7986.12	6.187	1.66	1.65	-0.09	
14874.00	87.780	352.650	6704.23	7847.32	8033.66	847.62	1698000.01	14262234.29	39°16'31.0440"N	80°47'47.4816"W	8078.26	6.023	2.33	-1.98	1.22	
14968.00	88.060	350.590	6707.64	7941.25	8126.59	833.93	1697986.33	14262327.19	39°16'31.9628"N	80°47'47.6530"W	8169.27	5.859	2.21	0.30	-2.19	
15062.00	89.850	354.300	6709.35	8035.21	8219.74	821.58	1697973.98	14262420.30	39°16'32.8837"N	80°47'47.8075"W	8260.70	5.708	4.38	1.90	3.95	
15157.00	88.000	351.490	6711.14	8130.18	8313.98	809.83	1697962.24	14262514.50	39°16'33.8154"N	80°47'47.9541"W	8353.33	5.563	3.54	-1.95	-2.96	
15252.00	88.400	351.320	6714.12	8225.12	8407.87	795.64	1697948.06	14262608.35	39°16'34.7437"N	80°47'48.1319"W	8445.43	5.406	0.46	0.42	-0.18	
15346.00	88.860	351.750	6716.37	8319.08	8500.82	781.81	1697934.23	14262701.26	39°16'35.6627"N	80°47'48.3051"W	8536.69	5.255	0.67	0.49	0.46	
15441.00	89.260	351.860	6717.93	8414.07	8594.84	768.27	1697920.69	14262795.24	39°16'36.5922"N	80°47'48.4746"W	8629.10	5.108	0.44	0.42	0.12	
15535.00	89.880	351.070	6718.63	8508.05	8687.79	754.32	1697906.75	14262888.16	39°16'37.5113"N	80°47'48.6494"W	8720.48	4.962	1.07	0.66	-0.84	
15630.00	87.480	351.980	6720.82	8603.01	8781.72	740.32	1697892.76	14262982.05	39°16'38.4400"N	80°47'48.8247"W	8812.87	4.819	2.70	-2.53	0.96	
15724.00	88.620	351.630	6724.02	8696.95	8874.71	726.93	1697879.37	14263075.00	39°16'39.3593"N	80°47'48.9923"W	8904.43	4.683	1.27	1.21	-0.37	
15819.00	88.370	350.170	6726.51	8791.89	8968.47	711.91	1697864.36	14263168.73	39°16'40.2864"N	80°47'49.1806"W	8996.69	4.539	1.56	-0.26	-1.54	

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Aspen Unit 1H AWP Proj: 16223'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Aspen Unit 1H
Field	Doddridge	API	47-017-06926-0000
Facility	OXFD 98 Pad	Wellbore	Aspen Unit 1H AWB
Slot	Slot E		

WELLPATH DATA (185 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
15913.00	89.020	351.710	6728.66	8885.83	9061.27	697.11	1697849.57	14263261.50	39°16'41.2039"N	80°47'49.3661"W	9088.05	4.399	1.78	0.69	1.64	
16008.00	88.620	351.730	6730.61	8980.81	9155.26	683.44	1697835.89	14263355.45	39°16'42.1332"N	80°47'49.5374"W	9180.74	4.269	0.42	-0.42	0.02	
16102.00	89.690	352.030	6732.00	9074.80	9248.31	670.16	1697822.62	14263448.46	39°16'43.0531"N	80°47'49.7036"W	9272.56	4.145	1.18	1.14	0.32	
16198.00	88.280	352.630	6733.70	9170.78	9343.43	657.35	1697809.82	14263543.54	39°16'43.9936"N	80°47'49.8638"W	9366.53	4.024	1.60	-1.47	0.63	
16223.00‡	88.280	352.630	6734.45	9195.77	9368.22	654.15	1697806.61	14263568.31	39°16'44.2386"N	80°47'49.9038"W	9391.03	3.994	0.00	0.00	0.00	Projected MD at TD: 16223'

HOLE & CASING SECTIONS - Ref Wellbore: Aspen Unit 1H AWB Ref Wellpath: Aspen Unit 1H AWP Proj: 16223'									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
20in Conductor	25.50	126.00	100.50	25.50	126.00	0.00	0.00	0.22	0.02
17.5in Open Hole	126.00	385.00	259.00	126.00	385.00	0.22	0.02	0.23	0.98
13.375in Casing Surface	25.50	365.00	339.50	25.50	365.00	0.00	0.00	0.29	0.80
12.25in Open Hole	385.00	2670.00	2285.00	385.00	2586.94	0.23	0.98	-24.98	554.26
9.625in Casing Intermediate	25.50	2650.00	2624.50	25.50	2567.94	0.00	0.00	-24.85	548.02
8.75in Open Hole	2670.00	6139.00	3469.00	2586.94	5847.23	-24.98	554.26	-154.22	1729.07
8.5in Open Hole	6139.00	16223.00	10084.00	5847.23	6734.45	-154.22	1729.07	9368.22	654.15
5.5in Casing Production	25.50	16203.00	16177.50	25.50	6733.85	0.00	0.00	9348.39	656.71

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Aspen Unit 1H AWP Proj: 16223'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Aspen Unit 1H
Field	Doddridge	API	47-017-06926-0000
Facility	OXFD 98 Pad	Wellbore	Aspen Unit 1H AWB
Slot	Slot E		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Aspen Unit 1H POE Rev-3	6587.00	415.14	1864.30	1699016.29	14254618.80	39°15'15.7217"N	80°47'34.7752"W	point
Aspen Unit 1H BHL Rev-3	6612.00	9377.95	650.85	1697803.32	14263578.04	39°16'44.3349"N	80°47'49.9455"W	point
Aspen Unit 1H LP Rev-3	6612.00	601.02	1839.14	1698991.13	14254804.61	39°15'17.5594"N	80°47'35.0897"W	point
Aspen Unit 1H 50' L/R Hard Line	7000.00	4896.54	1257.58	1698409.81	14259098.42	39°16'0.0284"N	80°47'42.3590"W	rectangle
2D Rectangle 9044.58 x 100.								

WELLPATH COMPOSITION - Ref Wellbore: Aspen Unit 1H AWB Ref Wellpath: Aspen Unit 1H AWP Proj: 16223'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
25.50	376.00	Gyrodata 2015 - GC+WIR+DPIPE	01 Gyrodata MS Gyro <17-1/2"> (100'-376')	Aspen Unit 1H AWB	8/21/2022
376.00	2592.00	BH NaviTrak (2019) (Axial Corr+HRGM)	02 APS EM <12-1/4"> (376')(413'-2592')	Aspen Unit 1H AWB	8/21/2022
2592.00	6064.00	BH NaviTrak (2019) (Axial Corr+HRGM)	03 APS EM <8-3/4"> (2592')(2657'-6064')	Aspen Unit 1H AWB	9/8/2022
6064.00	16223.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	04 BH AT Curve <8-1/2"> (6064')(6111'-16198')	Aspen Unit 1H AWB	9/8/2022

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Aspen Unit 1H AWP Proj: 16223'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Aspen Unit 1H
Field	Doddridge	API	47-017-06926-0000
Facility	OXFD 98 Pad	Wellbore	Aspen Unit 1H AWB
Slot	Slot E		

COMMENTS

Wellpath general comments

API: 47-017-06926-0000
 BH Job #: 111456515
 Rig: H&P 317
 Duration: 9/8/2022-9/13/2022
 Gyrodata MS Gyro <17-1/2"> (100'-376')
 APS EM <12-1/4"> (376')(413'-2592')
 APS EM <8-3/4"> (2592')(2657'-6064')
 BH AT Curve <8-1/2"> (6064')(6111'-16198')
 Sycamore: 6597' MD
 Middlesex: 6771' MD
 Burkett: 7016' MD
 Tully: 7099' MD
 Hamilton: 7222' MD
 Marcellus POE: 7251' MD
 Projected MD at TD: 16223'

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