



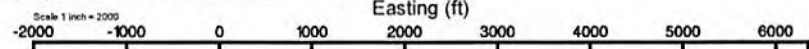
ANTERO RESOURCES CORPORATION

Location: Doddridge Co., WV
 Field: Doddridge
 Facility: James Webb Pad

Slot: Slot #04
 Well: Mahogany Unit 2H
 Wellbore: Mahogany Unit 2H PWB

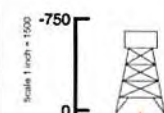


Plot reference wellpath is Mahogany Unit 2H PWB Rev-A.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to Patterson 343 (RKB)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to Patterson 343 (RKB)	North Reference: Grid north
Patterson 343 (RKB) to Mean Sea Level: 1016 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot Slot #04): -991 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by editor on 2016-09-15
	Database: WA_MPL_EASTERNUS_Delm



Location Information					
Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
James Webb Pad		1676270.820	14248823.840	39°14'18.837"N	80°52'24.137"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
Slot #04	-5.15	-8.92	1676261.900	14248818.690	39°14'18.786"N
Comment		Mahogany Unit 2H			
Patterson 343 (RKB) to Mud line (At Slot Slot #04)				25ft	
Mean Sea Level to Mud line (At Slot Slot #04)				-991ft	
Patterson 343 (RKB) to Mean Sea Level				1016ft	

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #04	Mahogany Unit 2H	Mahogany Unit 2H AWP	Mahogany Unit 2H AWP Proj. 17233
Slot #04	Mahogany Unit 2H	Mahogany Unit 2H PWB	Mahogany Unit 2H PWB Rev-A.0



Scale 1 inch = 1000

SDI Keeper <8-3/4"> (100'-5806.99') : 0.39° Inc, 112.00ft MD, 112.00ft TVD, 0.16ft VS

Scale 1 inch = 2000

True Vertical Depth (ft)

750

1500

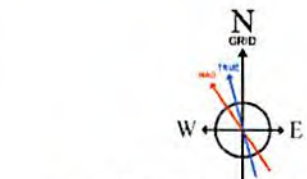
2250

3000

3750

4500

5250



User specified Dip: 66.57° Field: 52086 nT
 Magnetic North is 7.64 degrees West of True North (at 8/10/2016)
 Grid North is 0.08 degrees East of True North
 To correct azimuth from True to Grid subtract 0.08 degrees
 To correct azimuth from Magnetic to Grid subtract 7.72 degrees

BHI AT Curve <8-1/2"> (5818.99')(5907'-17208') : 1.78° Inc, 5907.00ft MD, 5904.91ft TVD, 16.96ft VS

Marcellus: 6686' MD / 6492.4' TVD : 73.37° Inc, 6686.00ft MD, 6492.40ft TVD, 426.45ft VS

Projected MD at TD: 17233' : 89.66° Inc, 17233.00ft MD, 6517.95ft TVD, 10961.61ft VS

API: 47-017-06702-0000
 BHI Job #: 8105986
 Rig: Patterson 343
 Duration: 8/10/2016-8/15/2016

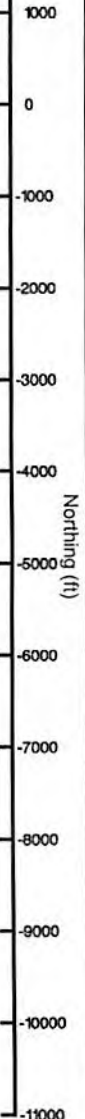
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SDI Keeper <8-3/4"> (100'-5806.99') : 112.00ft TVD, 0.25ft S, 0.16ft W
 BHI AT Curve <8-1/2"> (5818.99')(5907'-17208') : 5904.91ft TVD, 14.48ft S, 9.15ft E
 Marcellus: 6686' MD / 6492.4' TVD : 6492.40ft TVD, 337.86ft S, 288.71ft E

Slot #04

330'

83'



Vertical Section (ft)

Azimuth 155.83° with reference 0.00 N, 0.00 E

Scale 1 inch = 1500



Actual Wellpath Report

Mahogany Unit 2H AWP Proj: 17233'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Doddridge Co., WV	Well	Mahogany Unit 2H
Field	Doddridge	Wellbore	Mahogany Unit 2H AWB
Facility	James Webb Pad		

REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Edsaryar
Scale	0.999601	Report Generated	9/15/2016 at 2:10:25 PM
Convergence at slot	0.09° East	Database/Source file	WA_MPL_EASTERNUS_Defn/Mahogany_Unit_2H_AWP_Proj_17233_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-5.15	-8.92	1676261.90	14248818.69	39°14'18.786"N	80°52'24.250"W
Facility Reference Pt			1676270.82	14248823.84	39°14'18.837"N	80°52'24.137"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM

Calculation method	Minimum curvature	Patterson 343 (RKB) to Facility Vertical Datum	25.00ft
Horizontal Reference Pt	Slot	Patterson 343 (RKB) to Mean Sea Level	1016.00ft
Vertical Reference Pt	Patterson 343 (RKB)	Patterson 343 (RKB) to Mud Line at Slot (Slot #04)	25.00ft
MD Reference Pt	Patterson 343 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	155.83°

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Actual Wellpath Report

Mahogany Unit 2H AWP Proj: 17233'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Doddridge Co., WV	Well	Mahogany Unit 2H
Field	Doddridge	Wellbore	Mahogany Unit 2H AWB
Facility	James Webb Pad		

WELLPATH DATA (369 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]	[°]	[ft/100ft]	[ft/100ft]	[ft/100ft]	
0.00	0.000	212.080	0.00	0.00	0.00	0.00	1676261.90	14248818.69	39°14'18.786"N	80°52'24.250"W	0.00	0.000	0.00	0.00	0.00	
25.00	0.000	212.080	25.00	0.00	0.00	0.00	1676261.90	14248818.69	39°14'18.786"N	80°52'24.250"W	0.00	0.000	0.00	0.00	0.00	
112.00	0.390	212.080	112.00	0.16	-0.25	-0.16	1676261.74	14248818.44	39°14'18.784"N	80°52'24.252"W	0.30	212.080	0.45	0.45	-170.02	SDI Keeper <8-3/4"> (100'-5806.99')
137.00	0.430	235.510	137.00	0.23	-0.38	-0.28	1676261.62	14248818.31	39°14'18.782"N	80°52'24.254"W	0.47	216.644	0.68	0.16	93.72	
162.00	0.350	252.580	162.00	0.24	-0.45	-0.43	1676261.47	14248818.24	39°14'18.782"N	80°52'24.256"W	0.62	223.562	0.56	-0.32	68.28	
187.00	0.230	235.060	187.00	0.24	-0.50	-0.54	1676261.36	14248818.19	39°14'18.781"N	80°52'24.257"W	0.74	227.201	0.59	-0.48	-70.08	
212.00	0.290	220.000	212.00	0.27	-0.58	-0.63	1676261.27	14248818.11	39°14'18.780"N	80°52'24.258"W	0.85	227.129	0.36	0.24	-60.24	
237.00	0.330	218.670	237.00	0.33	-0.69	-0.71	1676261.19	14248818.00	39°14'18.779"N	80°52'24.259"W	0.99	226.059	0.16	0.16	-5.32	
262.00	0.280	241.830	262.00	0.37	-0.77	-0.81	1676261.09	14248817.92	39°14'18.779"N	80°52'24.261"W	1.12	226.436	0.53	-0.20	92.64	
287.00	0.340	220.620	287.00	0.41	-0.86	-0.91	1676260.99	14248817.83	39°14'18.778"N	80°52'24.262"W	1.25	226.834	0.51	0.24	-84.84	
312.00	0.420	240.360	312.00	0.45	-0.96	-1.04	1676260.86	14248817.73	39°14'18.777"N	80°52'24.263"W	1.41	227.377	0.61	0.32	78.96	
337.00	0.520	232.020	337.00	0.48	-1.07	-1.21	1676260.69	14248817.62	39°14'18.776"N	80°52'24.266"W	1.62	228.432	0.48	0.40	-33.36	
362.00	0.440	220.410	361.99	0.55	-1.22	-1.36	1676260.54	14248817.48	39°14'18.774"N	80°52'24.268"W	1.82	228.235	0.50	-0.32	-46.44	
387.00	0.570	240.310	386.99	0.60	-1.35	-1.53	1676260.37	14248817.34	39°14'18.773"N	80°52'24.270"W	2.04	228.598	0.87	0.52	79.60	
412.00	0.330	264.740	411.99	0.59	-1.42	-1.71	1676260.19	14248817.27	39°14'18.772"N	80°52'24.272"W	2.22	230.344	1.21	-0.96	97.72	
437.00	0.260	255.750	436.99	0.56	-1.44	-1.84	1676260.06	14248817.25	39°14'18.772"N	80°52'24.274"W	2.33	231.940	0.33	-0.28	-35.96	
462.00	0.360	310.380	461.99	0.48	-1.40	-1.95	1676259.95	14248817.29	39°14'18.772"N	80°52'24.275"W	2.40	234.321	1.19	0.40	218.52	
487.00	0.480	322.790	486.99	0.31	-1.27	-2.08	1676259.83	14248817.42	39°14'18.774"N	80°52'24.277"W	2.43	238.586	0.60	0.48	49.64	
512.00	0.580	333.370	511.99	0.08	-1.07	-2.20	1676259.71	14248817.62	39°14'18.776"N	80°52'24.278"W	2.44	243.995	0.56	0.40	42.32	
537.00	0.750	345.000	536.99	-0.21	-0.80	-2.29	1676259.61	14248817.89	39°14'18.778"N	80°52'24.279"W	2.43	250.781	0.86	0.68	46.52	
562.00	1.180	350.470	561.98	-0.62	-0.39	-2.38	1676259.52	14248818.30	39°14'18.782"N	80°52'24.280"W	2.41	260.738	1.76	1.72	21.88	
587.00	1.310	349.000	586.98	-1.15	0.15	-2.48	1676259.42	14248818.84	39°14'18.788"N	80°52'24.282"W	2.48	273.381	0.54	0.52	-5.88	
612.00	1.350	349.600	611.97	-1.71	0.72	-2.58	1676259.32	14248819.41	39°14'18.793"N	80°52'24.283"W	2.68	285.495	0.17	0.16	2.40	
637.00	1.480	351.800	636.96	-2.31	1.33	-2.68	1676259.22	14248820.02	39°14'18.799"N	80°52'24.284"W	2.99	296.289	0.56	0.52	8.80	
662.00	1.770	352.870	661.95	-2.99	2.03	-2.78	1676259.12	14248820.72	39°14'18.806"N	80°52'24.285"W	3.44	306.138	1.17	1.16	4.28	
687.00	2.050	352.610	686.94	-3.79	2.85	-2.88	1676259.02	14248821.54	39°14'18.814"N	80°52'24.287"W	4.06	314.718	1.12	1.12	-1.04	
712.00	2.190	350.130	711.92	-4.68	3.77	-3.02	1676258.88	14248822.46	39°14'18.823"N	80°52'24.289"W	4.83	321.272	0.67	0.56	-9.92	
737.00	2.530	351.260	736.90	-5.67	4.78	-3.19	1676258.71	14248823.47	39°14'18.833"N	80°52'24.291"W	5.75	326.324	1.37	1.36	4.52	
762.00	2.950	349.840	761.87	-6.83	5.96	-3.39	1676258.52	14248824.65	39°14'18.845"N	80°52'24.293"W	6.86	330.416	1.70	1.68	-5.68	
787.00	3.330	350.790	786.84	-8.15	7.31	-3.62	1676258.29	14248826.00	39°14'18.858"N	80°52'24.296"W	8.16	333.695	1.53	1.52	3.80	

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Actual Wellpath Report
Mahogany Unit 2H AWP Proj: 17233



REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Doddridge Co., WV	Well	Mahogany Unit 2H
Field	Doddridge	Wellbore	Mahogany Unit 2H AWB
Facility	James Webb Pad		

WELLPATH DATA (369 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
812.00	3.280	349.590	811.79	-9.55	8.73	-3.86	1676258.04	14248827.42	39°14'18.87"N	80°52'24.29"W	9.55	336.152	0.34	-0.20	-4.80	
837.00	3.330	349.240	836.75	-10.95	10.15	-4.13	1676257.78	14248828.84	39°14'18.887"N	80°52'24.302"W	10.96	337.881	0.22	0.20	-1.40	
862.00	3.460	348.990	861.71	-12.39	11.60	-4.41	1676257.50	14248830.29	39°14'18.901"N	80°52'24.306"W	12.41	339.213	0.52	0.52	-1.00	
887.00	3.460	349.580	866.66	-13.86	13.09	-4.69	1676257.22	14248831.77	39°14'18.916"N	80°52'24.310"W	13.90	340.300	0.14	0.00	2.36	
912.00	3.520	349.720	911.62	-15.34	14.58	-4.96	1676256.94	14248833.27	39°14'18.930"N	80°52'24.317"W	15.40	341.220	0.24	0.24	0.56	
937.00	3.620	349.400	936.57	-16.85	16.11	-5.24	1676256.66	14248834.80	39°14'18.945"N	80°52'24.317"W	16.95	341.983	0.41	0.40	-1.28	
962.00	3.600	349.150	961.52	-18.38	17.66	-5.53	1676256.37	14248836.34	39°14'18.961"N	80°52'24.320"W	18.51	342.602	0.10	-0.08	-1.00	
987.00	3.630	349.430	986.47	-19.91	19.21	-5.83	1676256.08	14248837.89	39°14'18.976"N	80°52'24.324"W	20.07	343.126	0.14	0.12	1.12	
1012.00	3.690	348.570	1011.42	-21.47	20.78	-6.13	1676255.77	14248839.46	39°14'18.992"N	80°52'24.328"W	21.66	343.558	0.33	0.24	-3.44	
1037.00	3.740	348.470	1036.37	-23.05	22.36	-6.45	1676255.45	14248841.05	39°14'19.007"N	80°52'24.332"W	23.28	343.902	0.20	0.20	-0.40	
1062.00	3.830	348.750	1061.31	-24.66	23.98	-6.78	1676255.12	14248842.66	39°14'19.023"N	80°52'24.336"W	24.92	344.214	0.37	0.36	1.12	
1087.00	3.640	349.130	1086.26	-26.24	25.58	-7.09	1676254.81	14248844.26	39°14'19.039"N	80°52'24.340"W	26.55	344.503	0.77	-0.76	1.52	
1112.00	3.420	349.780	1111.21	-27.74	28.52	-7.37	1676254.53	14248845.77	39°14'19.054"N	80°52'24.343"W	28.08	344.774	0.89	-0.88	2.60	
1137.00	3.280	346.850	1136.17	-29.16	28.59	-7.67	1676254.23	14248847.20	39°14'19.068"N	80°52'24.347"W	29.54	344.950	0.88	-0.56	-11.72	
1162.00	3.020	346.580	1161.13	-30.51	29.86	-7.98	1676253.92	14248848.54	39°14'19.081"N	80°52'24.351"W	30.91	345.029	1.04	-1.04	-1.08	
1187.00	2.890	347.570	1186.10	-31.78	31.12	-8.27	1676253.63	14248849.79	39°14'19.094"N	80°52'24.355"W	32.20	345.110	0.56	-0.52	3.96	
1212.00	2.640	348.170	1211.07	-32.96	32.30	-8.53	1676253.38	14248850.97	39°14'19.105"N	80°52'24.358"W	33.40	345.210	1.01	-1.00	2.40	
1237.00	2.240	348.310	1236.04	-34.00	33.34	-8.74	1676253.16	14248852.01	39°14'19.116"N	80°52'24.361"W	34.47	345.303	1.60	-1.60	0.56	
1262.00	2.020	346.580	1261.03	-34.91	34.24	-8.95	1676252.96	14248852.92	39°14'19.125"N	80°52'24.363"W	35.39	345.360	0.92	-0.88	-6.92	
1287.00	2.050	346.140	1286.01	-35.78	35.11	-9.15	1676252.75	14248853.78	39°14'19.133"N	80°52'24.366"W	36.28	345.385	0.14	0.12	-1.76	
1312.00	1.820	345.650	1311.00	-36.61	35.93	-9.36	1676252.54	14248854.60	39°14'19.141"N	80°52'24.369"W	37.13	345.397	0.92	-0.92	-1.96	
1337.00	1.620	345.630	1335.99	-37.35	36.65	-9.55	1676252.36	14248855.33	39°14'19.149"N	80°52'24.371"W	37.88	345.401	0.80	-0.80	-0.08	
1362.00	1.440	345.130	1360.98	-38.01	37.30	-9.71	1676252.19	14248855.97	39°14'19.155"N	80°52'24.373"W	38.54	345.401	0.72	-0.72	-2.00	
1387.00	1.440	342.950	1385.97	-38.63	37.90	-9.89	1676252.02	14248856.58	39°14'19.161"N	80°52'24.375"W	39.17	345.380	0.22	0.00	-8.72	
1412.00	1.430	341.780	1410.96	-39.25	38.50	-10.08	1676251.83	14248857.17	39°14'19.167"N	80°52'24.378"W	39.80	345.332	0.12	-0.04	-4.68	
1437.00	1.250	337.680	1435.95	-39.83	39.05	-10.28	1676251.63	14248857.72	39°14'19.172"N	80°52'24.380"W	40.38	345.253	0.82	-0.72	-16.40	
1462.00	1.050	336.650	1460.95	-40.33	39.51	-10.47	1676251.43	14248858.18	39°14'19.177"N	80°52'24.383"W	40.87	345.155	0.80	-0.80	-4.12	
1487.00	0.970	339.620	1485.95	-40.78	39.92	-10.64	1676251.27	14248858.59	39°14'19.181"N	80°52'24.385"W	41.31	345.079	0.38	-0.32	11.88	
1512.00	0.780	339.120	1510.94	-41.16	40.28	-10.77	1676251.13	14248858.95	39°14'19.184"N	80°52'24.386"W	41.69	345.028	0.76	-0.76	-2.00	
1537.00	0.730	337.120	1535.94	-41.49	40.58	-10.89	1676251.01	14248859.26	39°14'19.187"N	80°52'24.388"W	42.02	344.974	0.23	-0.20	-8.00	

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Actual Wellpath Report

Mahogany Unit 2H AWP Proj: 17233'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Doddridge Co., WV	Well	Mahogany Unit 2H
Field	Doddridge	Wellbore	Mahogany Unit 2H AWB
Facility	James Webb Pad		

WELLPATH DATA (369 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
1562.00	0.750	336.280	1560.94	-41.81	40.88	-11.02	1676250.88	14248859.55	39°14'19.190"N	80°52'24.390"W	42.34	344.911	0.09	0.08	-3.36	
1587.00	0.660	335.430	1585.94	-42.12	41.16	-11.15	1676250.76	14248859.83	39°14'19.193"N	80°52'24.391"W	42.64	344.846	0.36	-0.36	-3.40	
1612.00	0.440	335.940	1610.94	-42.36	41.38	-11.25	1676250.66	14248860.05	39°14'19.195"N	80°52'24.392"W	42.88	344.795	0.88	-0.88	2.04	
1637.00	0.510	320.100	1635.93	-42.56	41.55	-11.36	1676250.55	14248860.22	39°14'19.197"N	80°52'24.394"W	43.08	344.713	0.59	0.28	-63.36	
1662.00	0.410	325.300	1660.93	-42.75	41.71	-11.48	1676250.43	14248860.38	39°14'19.199"N	80°52'24.395"W	43.26	344.612	0.43	-0.40	20.80	
1687.00	0.280	321.210	1685.93	-42.90	41.83	-11.57	1676250.34	14248860.50	39°14'19.200"N	80°52'24.396"W	43.40	344.541	0.53	-0.52	-16.36	
1712.00	0.340	319.410	1710.93	-43.03	41.94	-11.65	1676250.25	14248860.61	39°14'19.201"N	80°52'24.398"W	43.52	344.468	0.24	0.24	-7.20	
1737.00	0.310	314.700	1735.93	-43.17	42.04	-11.75	1676250.15	14248860.71	39°14'19.202"N	80°52'24.399"W	43.65	344.383	0.16	-0.12	-18.84	
1762.00	0.230	307.800	1760.93	-43.27	42.12	-11.84	1676250.07	14248860.79	39°14'19.203"N	80°52'24.400"W	43.75	344.300	0.34	-0.32	-27.60	
1787.00	0.200	294.050	1785.93	-43.35	42.17	-11.92	1676249.99	14248860.84	39°14'19.203"N	80°52'24.401"W	43.82	344.217	0.24	-0.12	-55.00	
1812.00	0.180	288.500	1810.93	-43.41	42.20	-12.00	1676249.91	14248860.87	39°14'19.203"N	80°52'24.402"W	43.87	344.131	0.11	-0.08	-22.20	
1837.00	0.240	289.390	1835.93	-43.47	42.23	-12.08	1676249.82	14248860.90	39°14'19.204"N	80°52'24.403"W	43.92	344.033	0.24	0.24	3.56	
1862.00	0.140	275.960	1860.93	-43.52	42.25	-12.16	1676249.74	14248860.92	39°14'19.204"N	80°52'24.404"W	43.96	343.940	0.44	-0.40	-53.72	
1887.00	0.260	284.130	1885.93	-43.57	42.26	-12.25	1676249.66	14248860.94	39°14'19.204"N	80°52'24.405"W	44.00	343.839	0.49	0.48	32.68	
1912.00	0.140	282.250	1910.93	-43.63	42.28	-12.33	1676249.57	14248860.96	39°14'19.204"N	80°52'24.406"W	44.05	343.741	0.48	-0.48	-7.52	
1937.00	0.150	269.910	1935.93	-43.66	42.29	-12.39	1676249.51	14248860.96	39°14'19.204"N	80°52'24.407"W	44.07	343.665	0.13	0.04	-49.36	
1962.00	0.230	275.620	1960.93	-43.70	42.30	-12.48	1676249.43	14248860.97	39°14'19.204"N	80°52'24.408"W	44.10	343.564	0.33	0.32	22.84	
1987.00	0.180	270.790	1985.93	-43.74	42.30	-12.57	1676249.34	14248860.97	39°14'19.204"N	80°52'24.409"W	44.13	343.455	0.21	-0.20	-19.32	
2012.00	0.230	274.720	2010.93	-43.78	42.31	-12.66	1676249.25	14248860.98	39°14'19.204"N	80°52'24.410"W	44.16	343.345	0.21	0.20	15.72	
2037.00	0.200	296.780	2035.93	-43.84	42.33	-12.74	1676249.16	14248861.00	39°14'19.205"N	80°52'24.411"W	44.21	343.244	0.35	-0.12	88.24	
2062.00	0.280	284.970	2060.93	-43.91	42.36	-12.84	1676249.06	14248861.04	39°14'19.205"N	80°52'24.413"W	44.27	343.135	0.37	0.32	-47.24	
2087.00	0.150	280.120	2085.93	-43.97	42.39	-12.93	1676248.97	14248861.06	39°14'19.205"N	80°52'24.414"W	44.32	343.031	0.52	-0.52	-19.40	
2112.00	0.240	275.190	2110.93	-44.01	42.40	-13.02	1676248.89	14248861.07	39°14'19.205"N	80°52'24.415"W	44.35	342.930	0.37	0.36	-19.72	
2137.00	0.220	293.010	2135.93	-44.07	42.42	-13.11	1676248.79	14248861.09	39°14'19.206"N	80°52'24.416"W	44.40	342.820	0.30	-0.08	71.28	
2162.00	0.170	307.700	2160.93	-44.14	42.46	-13.19	1676248.72	14248861.13	39°14'19.206"N	80°52'24.417"W	44.46	342.746	0.28	-0.20	58.76	
2187.00	0.070	315.610	2185.93	-44.19	42.50	-13.23	1676248.68	14248861.17	39°14'19.206"N	80°52'24.418"W	44.51	342.709	0.40	-0.40	31.64	
2212.00	0.100	302.830	2210.93	-44.22	42.52	-13.26	1676248.65	14248861.19	39°14'19.207"N	80°52'24.418"W	44.54	342.682	0.14	0.12	-51.12	
2237.00	0.160	294.540	2235.93	-44.26	42.54	-13.31	1676248.60	14248861.22	39°14'19.207"N	80°52'24.419"W	44.58	342.631	0.25	0.24	-33.16	
2262.00	0.040	287.510	2260.93	-44.30	42.56	-13.35	1676248.56	14248861.23	39°14'19.207"N	80°52'24.419"W	44.61	342.588	0.48	-0.48	-28.12	
2287.00	0.100	280.720	2285.93	-44.31	42.57	-13.38	1676248.53	14248861.24	39°14'19.207"N	80°52'24.419"W	44.62	342.554	0.24	0.24	-27.16	

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Actual Wellpath Report

Mahogany Unit 2H AWP Proj: 17233'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Doddridge Co., WV	Well	Mahogany Unit 2H
Field	Doddridge	Wellbore	Mahogany Unit 2H AWB
Facility	James Webb Pad		

WELLPATH DATA (369 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
2312.00	0.060	304.510	2310.93	-44.34	42.58	-13.41	1676248.50	14248861.25	39°14'19.207"N	80°52'24.420"W	44.64	342.519	0.20	-0.16	95.16	
2337.00	0.070	109.310	2335.93	-44.34	42.58	-13.41	1676248.50	14248861.25	39°14'19.207"N	80°52'24.420"W	44.64	342.525	0.52	0.04	659.20	
2362.00	0.110	277.850	2360.93	-44.34	42.58	-13.42	1676248.49	14248861.25	39°14'19.207"N	80°52'24.420"W	44.64	342.513	0.72	0.16	674.16	
2387.00	0.100	325.310	2385.93	-44.37	42.60	-13.45	1676248.45	14248861.27	39°14'19.207"N	80°52'24.420"W	44.67	342.477	0.34	-0.04	189.84	
2412.00	0.130	341.160	2410.93	-44.42	42.65	-13.47	1676248.43	14248861.32	39°14'19.208"N	80°52'24.421"W	44.72	342.467	0.17	0.12	63.40	
2437.00	0.180	267.490	2435.93	-44.47	42.67	-13.52	1676248.38	14248861.34	39°14'19.208"N	80°52'24.421"W	44.76	342.418	0.76	0.20	-294.68	
2462.00	0.150	304.810	2460.93	-44.51	42.69	-13.59	1676248.32	14248861.36	39°14'19.208"N	80°52'24.422"W	44.80	342.344	0.44	-0.12	149.28	
2487.00	0.190	308.460	2485.93	-44.57	42.73	-13.65	1676248.26	14248861.41	39°14'19.209"N	80°52'24.423"W	44.86	342.289	0.17	0.16	14.60	
2512.00	0.180	293.910	2510.93	-44.64	42.77	-13.72	1676248.19	14248861.45	39°14'19.209"N	80°52'24.424"W	44.92	342.222	0.19	-0.04	-58.20	
2536.99	0.170	278.810	2535.92	-44.69	42.80	-13.79	1676248.12	14248861.47	39°14'19.209"N	80°52'24.425"W	44.96	342.143	0.19	-0.04	-60.42	
2561.99	0.150	287.030	2560.92	-44.73	42.81	-13.86	1676248.05	14248861.48	39°14'19.209"N	80°52'24.426"W	45.00	342.066	0.12	-0.08	32.88	
2586.99	0.140	343.600	2585.92	-44.78	42.85	-13.90	1676248.01	14248861.52	39°14'19.210"N	80°52'24.426"W	45.05	342.033	0.55	-0.04	226.28	
2611.99	0.090	332.630	2610.92	-44.83	42.90	-13.91	1676247.99	14248861.57	39°14'19.210"N	80°52'24.426"W	45.10	342.030	0.22	-0.20	-43.88	
2636.99	0.090	352.120	2635.92	-44.87	42.93	-13.92	1676247.98	14248861.61	39°14'19.211"N	80°52'24.426"W	45.14	342.030	0.12	0.00	77.96	
2661.99	0.140	233.610	2660.92	-44.88	42.94	-13.95	1676247.95	14248861.61	39°14'19.211"N	80°52'24.427"W	45.15	341.998	0.80	0.20	-474.04	
2686.99	0.080	267.510	2685.92	-44.88	42.92	-13.99	1676247.91	14248861.59	39°14'19.211"N	80°52'24.427"W	45.14	341.940	0.34	-0.24	135.60	
2711.99	0.180	249.310	2710.92	-44.89	42.90	-14.05	1676247.86	14248861.57	39°14'19.210"N	80°52'24.428"W	45.14	341.869	0.43	0.40	-72.80	
2736.99	0.130	293.920	2735.92	-44.92	42.90	-14.11	1676247.79	14248861.57	39°14'19.210"N	80°52'24.429"W	45.16	341.792	0.51	-0.20	178.44	
2761.99	0.280	245.650	2760.92	-44.94	42.89	-14.19	1676247.71	14248861.56	39°14'19.210"N	80°52'24.430"W	45.17	341.689	0.87	0.60	-193.08	
2786.99	0.140	262.640	2785.92	-44.95	42.86	-14.28	1676247.63	14248861.53	39°14'19.210"N	80°52'24.431"W	45.17	341.573	0.61	-0.56	67.96	
2811.99	0.200	259.180	2810.92	-44.96	42.84	-14.35	1676247.55	14248861.52	39°14'19.210"N	80°52'24.432"W	45.18	341.481	0.24	0.24	-13.84	
2836.99	0.230	255.450	2835.92	-44.98	42.82	-14.44	1676247.46	14248861.50	39°14'19.210"N	80°52'24.433"W	45.19	341.362	0.13	0.12	-14.92	
2861.99	0.190	278.840	2860.92	-45.01	42.82	-14.53	1676247.37	14248861.49	39°14'19.210"N	80°52'24.434"W	45.22	341.252	0.37	-0.16	93.56	
2886.99	0.200	279.490	2885.92	-45.06	42.83	-14.62	1676247.29	14248861.50	39°14'19.210"N	80°52'24.435"W	45.26	341.157	0.04	0.04	2.60	
2911.99	0.170	262.300	2910.92	-45.10	42.83	-14.70	1676247.21	14248861.51	39°14'19.210"N	80°52'24.436"W	45.28	341.062	0.25	-0.12	-68.76	
2936.99	0.170	243.560	2935.92	-45.10	42.81	-14.77	1676247.14	14248861.48	39°14'19.209"N	80°52'24.437"W	45.29	340.970	0.22	0.00	-74.96	
2961.99	0.160	224.460	2960.92	-45.09	42.77	-14.82	1676247.08	14248861.44	39°14'19.209"N	80°52'24.438"W	45.27	340.884	0.22	-0.04	-76.40	
2986.99	0.190	199.400	2985.92	-45.05	42.71	-14.86	1676247.04	14248861.38	39°14'19.208"N	80°52'24.438"W	45.22	340.812	0.33	0.12	-100.24	
3011.99	0.200	207.430	3010.92	-44.99	42.63	-14.90	1676247.01	14248861.30	39°14'19.208"N	80°52'24.439"W	45.16	340.738	0.12	0.04	32.12	
3036.99	0.170	203.360	3035.92	-44.94	42.56	-14.93	1676246.98	14248861.23	39°14'19.207"N	80°52'24.439"W	45.10	340.666	0.13	-0.12	-16.28	

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Actual Wellpath Report

Mahogany Unit 2H AWP Proj: 17233'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Doddridge Co., WV	Well	Mahogany Unit 2H
Field	Doddridge	Wellbore	Mahogany Unit 2H AWB
Facility	James Webb Pad		

WELLPATH DATA (369 stations)																
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]	
3061.99	0.280	208.180	3060.92	-44.88	42.47	-14.97	1676246.93	14248861.14	39°14'19.206"N	80°52'24.440"W	45.03	340.577	0.45	0.44	19.28	
3086.99	0.260	211.010	3085.92	-44.81	42.37	-15.03	1676246.87	14248861.04	39°14'19.205"N	80°52'24.440"W	44.95	340.464	0.10	-0.08	11.32	
3111.99	0.270	214.600	3110.92	-44.74	42.27	-15.10	1676246.81	14248860.94	39°14'19.204"N	80°52'24.441"W	44.88	340.347	0.08	0.04	14.36	
3136.99	0.210	217.740	3135.92	-44.69	42.18	-15.16	1676246.75	14248860.86	39°14'19.203"N	80°52'24.442"W	44.82	340.236	0.25	-0.24	12.56	
3161.99	0.160	179.720	3160.92	-44.64	42.11	-15.18	1676246.72	14248860.79	39°14'19.203"N	80°52'24.442"W	44.77	340.172	0.52	-0.20	-152.08	
3186.99	0.220	166.190	3185.92	-44.56	42.03	-15.17	1676246.73	14248860.70	39°14'19.202"N	80°52'24.442"W	44.69	340.151	0.30	0.24	-54.12	
3211.99	0.310	181.340	3210.92	-44.45	41.92	-15.16	1676246.74	14248860.59	39°14'19.201"N	80°52'24.442"W	44.57	340.113	0.45	0.36	60.60	
3236.99	0.260	198.350	3235.92	-44.35	41.80	-15.18	1676246.72	14248860.47	39°14'19.199"N	80°52'24.442"W	44.47	340.036	0.39	-0.20	68.04	
3261.99	0.160	187.990	3260.92	-44.28	41.71	-15.21	1676246.70	14248860.38	39°14'19.199"N	80°52'24.443"W	44.39	339.969	0.43	-0.40	-41.44	
3286.99	0.190	164.920	3285.91	-44.21	41.63	-15.20	1676246.71	14248860.31	39°14'19.198"N	80°52'24.443"W	44.32	339.944	0.30	0.12	-92.28	
3311.99	0.240	161.940	3310.91	-44.11	41.54	-15.17	1676246.73	14248860.22	39°14'19.197"N	80°52'24.442"W	44.23	339.937	0.20	0.20	-11.92	
3336.99	0.220	186.390	3335.91	-44.02	41.44	-15.16	1676246.74	14248860.12	39°14'19.196"N	80°52'24.442"W	44.13	339.906	0.40	-0.08	97.80	
3361.99	0.160	190.920	3360.91	-43.95	41.36	-15.17	1676246.73	14248860.04	39°14'19.195"N	80°52'24.442"W	44.06	339.855	0.25	-0.24	18.12	
3386.99	0.270	155.470	3385.91	-43.86	41.27	-15.16	1676246.75	14248859.95	39°14'19.194"N	80°52'24.442"W	43.97	339.838	0.67	0.44	-141.80	
3411.99	0.300	186.100	3410.91	-43.75	41.16	-15.14	1676246.77	14248859.83	39°14'19.193"N	80°52'24.442"W	43.85	339.806	0.61	0.12	122.52	
3436.99	0.210	194.530	3435.91	-43.65	41.05	-15.16	1676246.75	14248859.72	39°14'19.192"N	80°52'24.442"W	43.76	339.733	0.39	-0.36	33.72	
3461.99	0.170	149.210	3460.91	-43.58	40.97	-15.15	1676246.76	14248859.64	39°14'19.191"N	80°52'24.442"W	43.68	339.708	0.60	-0.16	-181.28	
3486.99	0.180	156.150	3485.91	-43.51	40.90	-15.11	1676246.79	14248859.58	39°14'19.191"N	80°52'24.442"W	43.61	339.720	0.09	0.04	27.76	
3511.99	0.270	160.800	3510.91	-43.41	40.81	-15.08	1676246.83	14248859.48	39°14'19.190"N	80°52'24.441"W	43.51	339.722	0.37	0.36	18.60	
3536.99	0.240	158.720	3535.91	-43.30	40.71	-15.04	1676246.87	14248859.38	39°14'19.189"N	80°52'24.441"W	43.40	339.722	0.13	-0.12	-8.32	
3561.99	0.250	168.660	3560.91	-43.19	40.60	-15.01	1676246.90	14248859.28	39°14'19.188"N	80°52'24.440"W	43.29	339.712	0.17	0.04	39.76	
3586.99	0.260	178.710	3585.91	-43.09	40.49	-15.00	1676246.91	14248859.17	39°14'19.187"N	80°52'24.440"W	43.18	339.676	0.18	0.04	40.20	
3611.99	0.250	182.510	3610.91	-42.98	40.38	-15.00	1676246.91	14248859.06	39°14'19.185"N	80°52'24.440"W	43.08	339.623	0.08	-0.04	15.20	
3636.99	0.220	182.280	3635.91	-42.89	40.28	-15.00	1676246.90	14248858.95	39°14'19.184"N	80°52'24.440"W	42.98	339.570	0.12	-0.12	-0.92	
3661.99	0.180	157.510	3660.91	-42.81	40.20	-14.99	1676246.92	14248858.87	39°14'19.184"N	80°52'24.440"W	42.90	339.547	0.38	-0.16	-99.08	
3686.99	0.170	189.000	3685.91	-42.74	40.12	-14.98	1676246.92	14248858.80	39°14'19.183"N	80°52'24.440"W	42.83	339.525	0.38	-0.04	125.96	
3711.99	0.180	133.510	3710.91	-42.67	40.06	-14.96	1676246.95	14248858.73	39°14'19.182"N	80°52'24.440"W	42.76	339.523	0.65	0.04	-221.96	
3736.99	0.240	127.140	3735.91	-42.59	40.00	-14.89	1676247.02	14248858.68	39°14'19.182"N	80°52'24.439"W	42.68	339.584	0.26	0.24	-25.48	
3761.99	0.280	132.930	3760.91	-42.49	39.93	-14.80	1676247.10	14248858.60	39°14'19.181"N	80°52'24.438"W	42.58	339.659	0.19	0.16	23.16	
3786.99	0.360	126.740	3785.91	-42.36	39.84	-14.69	1676247.21	14248858.51	39°14'19.180"N	80°52'24.436"W	42.46	339.754	0.35	0.32	-24.76	

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Actual Wellpath Report

Mahogany Unit 2H AWP Proj: 17233'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Doddridge Co., WV	Well	Mahogany Unit 2H
Field	Doddridge	Wellbore	Mahogany Unit 2H AWB
Facility	James Webb Pad		

WELLPATH DATA (369 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
3811.99	0.420	133.510	3810.91	-42.21	39.73	-14.57	1676247.34	14248858.40	39°14'19.179"N	80°52'24.435"W	42.32	339.866	0.30	0.24	27.08	
3836.99	0.460	125.520	3835.91	-42.04	39.61	-14.42	1676247.49	14248858.28	39°14'19.178"N	80°52'24.433"W	42.15	339.999	0.29	0.16	-31.96	
3861.99	0.450	126.200	3860.91	-41.87	39.49	-14.26	1676247.65	14248858.17	39°14'19.177"N	80°52'24.431"W	41.99	340.151	0.05	-0.04	2.72	
3886.99	0.340	125.490	3885.91	-41.72	39.39	-14.12	1676247.79	14248858.06	39°14'19.176"N	80°52'24.429"W	41.84	340.284	0.44	-0.44	-2.84	
3911.99	0.330	126.300	3910.91	-41.59	39.30	-14.00	1676247.91	14248857.98	39°14'19.175"N	80°52'24.427"W	41.72	340.397	0.04	-0.04	3.24	
3936.99	0.350	108.500	3935.91	-41.48	39.24	-13.87	1676248.04	14248857.91	39°14'19.174"N	80°52'24.426"W	41.62	340.535	0.43	0.08	-71.20	
3961.99	0.430	106.050	3960.91	-41.36	39.19	-13.71	1676248.20	14248857.86	39°14'19.174"N	80°52'24.424"W	41.52	340.724	0.33	0.32	-9.80	
3986.99	0.450	115.910	3985.91	-41.23	39.12	-13.53	1676248.38	14248857.79	39°14'19.173"N	80°52'24.421"W	41.39	340.925	0.31	0.08	39.44	
4011.99	0.450	117.700	4010.91	-41.08	39.03	-13.35	1676248.55	14248857.70	39°14'19.172"N	80°52'24.419"W	41.25	341.115	0.06	0.00	7.16	
4036.99	0.470	124.920	4035.90	-40.91	38.93	-13.18	1676248.72	14248857.60	39°14'19.171"N	80°52'24.417"W	41.10	341.294	0.25	0.08	28.88	
4061.99	0.490	131.450	4060.90	-40.73	38.80	-13.02	1676248.89	14248857.47	39°14'19.170"N	80°52'24.415"W	40.92	341.453	0.23	0.08	26.12	
4086.99	0.570	127.510	4085.90	-40.52	38.65	-12.84	1676249.07	14248857.32	39°14'19.168"N	80°52'24.413"W	40.73	341.626	0.35	0.32	-15.76	
4111.99	0.660	128.640	4110.90	-40.28	38.48	-12.63	1676249.28	14248857.16	39°14'19.167"N	80°52'24.410"W	40.50	341.836	0.36	0.36	4.52	
4136.99	0.740	130.230	4135.90	-40.01	38.29	-12.39	1676249.51	14248856.97	39°14'19.165"N	80°52'24.407"W	40.25	342.068	0.33	0.32	6.36	
4161.99	0.820	132.360	4160.90	-39.70	38.07	-12.14	1676249.77	14248856.74	39°14'19.163"N	80°52'24.404"W	39.95	342.318	0.34	0.32	8.52	
4186.99	0.890	134.520	4185.89	-39.35	37.81	-11.86	1676250.04	14248856.48	39°14'19.160"N	80°52'24.400"W	39.63	342.578	0.31	0.28	8.64	
4211.99	0.890	129.170	4210.89	-39.00	37.55	-11.58	1676250.33	14248856.23	39°14'19.157"N	80°52'24.397"W	39.29	342.867	0.33	0.00	-21.40	
4236.99	0.920	135.550	4235.89	-38.64	37.28	-11.28	1676250.62	14248855.96	39°14'19.155"N	80°52'24.393"W	38.95	343.161	0.42	0.12	25.52	
4261.99	1.110	135.060	4260.88	-38.22	36.97	-10.97	1676250.93	14248855.64	39°14'19.152"N	80°52'24.389"W	38.56	343.468	0.76	0.76	-1.96	
4286.99	1.180	145.930	4285.88	-37.74	36.59	-10.66	1676251.25	14248855.26	39°14'19.148"N	80°52'24.385"W	38.11	343.758	0.91	0.28	43.48	
4311.99	1.200	144.680	4310.87	-37.23	36.16	-10.36	1676251.54	14248854.83	39°14'19.144"N	80°52'24.381"W	37.61	344.009	0.13	0.08	-5.00	
4336.99	1.190	143.740	4335.87	-36.72	35.74	-10.06	1676251.85	14248854.41	39°14'19.139"N	80°52'24.377"W	37.12	344.281	0.09	-0.04	-3.76	
4361.99	1.230	139.690	4360.86	-36.21	35.32	-9.73	1676252.17	14248854.00	39°14'19.135"N	80°52'24.373"W	36.64	344.598	0.38	0.16	-16.20	
4386.99	1.300	145.700	4385.86	-35.67	34.88	-9.40	1676252.51	14248853.56	39°14'19.131"N	80°52'24.369"W	36.13	344.923	0.60	0.28	24.04	
4411.99	1.380	148.970	4410.85	-35.09	34.39	-9.08	1676252.82	14248853.07	39°14'19.126"N	80°52'24.365"W	35.57	345.207	0.44	0.32	13.08	
4436.99	1.310	142.340	4435.84	-34.52	33.91	-8.75	1676253.15	14248852.58	39°14'19.121"N	80°52'24.361"W	35.02	345.526	0.68	-0.28	-26.52	
4461.99	1.350	144.750	4460.84	-33.95	33.44	-8.41	1676253.50	14248852.12	39°14'19.117"N	80°52'24.356"W	34.48	345.887	0.28	0.16	9.64	
4486.99	1.360	141.140	4485.83	-33.37	32.97	-8.05	1676253.85	14248851.64	39°14'19.112"N	80°52'24.352"W	33.94	346.276	0.34	0.04	-14.44	
4511.99	1.400	143.410	4510.82	-32.79	32.49	-7.68	1676254.22	14248851.17	39°14'19.107"N	80°52'24.347"W	33.39	346.696	0.27	0.16	9.08	
4536.99	1.550	145.740	4535.81	-32.16	31.97	-7.31	1676254.59	14248850.64	39°14'19.102"N	80°52'24.343"W	32.79	347.118	0.65	0.60	9.32	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Doddridge Co., WV	Well	Mahogany Unit 2H
Field	Doddridge	Wellbore	Mahogany Unit 2H AWB
Facility	James Webb Pad		

WELLPATH DATA (369 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
4561.99	1.530	144.380	4560.80	-31.50	31.42	-6.93	1676254.98	14248850.09	39°14'19.097"N	80°52'24.338"W	32.17	347.567	0.17	-0.08	-5.44	
4586.99	1.600	145.890	4585.80	-30.83	30.86	-6.54	1676255.37	14248849.53	39°14'19.091"N	80°52'24.333"W	31.54	348.040	0.32	0.28	6.04	
4611.99	1.640	149.240	4610.79	-30.13	30.26	-6.16	1676255.75	14248848.94	39°14'19.085"N	80°52'24.328"W	30.88	348.498	0.41	0.16	13.40	
4636.99	1.700	152.150	4635.77	-29.40	29.62	-5.80	1676256.10	14248848.30	39°14'19.079"N	80°52'24.323"W	30.19	348.920	0.42	0.24	11.64	
4661.99	1.780	152.900	4660.76	-28.64	28.95	-5.45	1676256.45	14248847.63	39°14'19.072"N	80°52'24.319"W	29.46	349.337	0.33	0.32	3.00	
4686.99	1.750	152.460	4685.75	-27.88	28.27	-5.10	1676256.80	14248846.95	39°14'19.066"N	80°52'24.314"W	28.72	349.777	0.13	-0.12	-1.76	
4711.99	1.780	156.720	4710.74	-27.11	27.57	-4.77	1676257.13	14248846.25	39°14'19.059"N	80°52'24.310"W	27.98	350.189	0.54	0.12	17.04	
4736.99	1.870	158.170	4735.73	-26.31	26.84	-4.46	1676257.44	14248845.52	39°14'19.051"N	80°52'24.306"W	27.20	350.559	0.40	0.36	5.80	
4761.99	1.820	158.940	4760.71	-25.51	26.09	-4.17	1676257.73	14248844.77	39°14'19.044"N	80°52'24.303"W	26.42	350.922	0.22	-0.20	3.08	
4786.99	1.880	158.410	4785.70	-24.70	25.34	-3.87	1676258.03	14248844.02	39°14'19.037"N	80°52'24.299"W	25.63	351.305	0.25	0.24	-2.12	
4811.99	1.850	155.220	4810.69	-23.89	24.59	-3.55	1676258.35	14248843.27	39°14'19.029"N	80°52'24.295"W	24.84	351.774	0.43	-0.12	-12.76	
4836.99	1.930	157.330	4835.67	-23.06	23.83	-3.22	1676258.68	14248842.51	39°14'19.022"N	80°52'24.291"W	24.05	352.298	0.42	0.32	8.44	
4861.99	2.000	157.570	4860.66	-22.21	23.04	-2.89	1676259.01	14248841.72	39°14'19.014"N	80°52'24.287"W	23.22	352.840	0.28	0.28	0.96	
4886.99	1.960	155.000	4885.64	-21.34	22.25	-2.55	1676259.35	14248840.93	39°14'19.006"N	80°52'24.282"W	22.40	353.469	0.39	-0.16	-10.28	
4911.99	2.010	155.510	4910.63	-20.48	21.46	-2.18	1676259.72	14248840.15	39°14'18.998"N	80°52'24.278"W	21.57	354.187	0.21	0.20	2.04	
4936.99	2.090	158.370	4935.61	-19.58	20.64	-1.84	1676260.07	14248839.32	39°14'18.990"N	80°52'24.273"W	20.72	354.919	0.52	0.32	11.44	
4961.99	2.160	157.740	4960.60	-18.66	19.78	-1.49	1676260.41	14248838.46	39°14'18.982"N	80°52'24.269"W	19.84	355.696	0.30	0.28	-2.52	
4986.99	2.080	155.050	4985.58	-17.73	18.93	-1.12	1676260.78	14248837.62	39°14'18.973"N	80°52'24.264"W	18.97	356.618	0.51	-0.32	-10.76	
5011.99	2.250	157.550	5010.56	-16.79	18.07	-0.74	1676261.16	14248836.75	39°14'18.965"N	80°52'24.259"W	18.08	357.655	0.78	0.68	10.00	
5036.99	2.250	155.670	5035.54	-15.81	17.17	-0.35	1676261.55	14248835.85	39°14'18.956"N	80°52'24.254"W	17.17	358.830	0.30	0.00	-7.52	
5061.99	2.270	156.260	5060.52	-14.82	16.27	0.05	1676261.95	14248834.95	39°14'18.947"N	80°52'24.249"W	16.27	0.180	0.12	0.08	2.36	
5086.99	2.300	155.140	5085.50	-13.82	15.36	0.46	1676262.36	14248834.04	39°14'18.938"N	80°52'24.244"W	15.37	1.720	0.22	0.12	-4.48	
5111.99	2.390	157.200	5110.48	-12.80	14.42	0.87	1676262.77	14248833.11	39°14'18.929"N	80°52'24.239"W	14.45	3.468	0.49	0.36	8.24	
5136.99	2.470	157.420	5135.46	-11.74	13.45	1.28	1676263.18	14248832.13	39°14'18.919"N	80°52'24.234"W	13.51	5.451	0.32	0.32	0.88	
5161.99	2.400	153.370	5160.44	-10.68	12.48	1.72	1676263.62	14248831.17	39°14'18.909"N	80°52'24.228"W	12.60	7.867	0.74	-0.28	-16.20	
5186.99	2.440	157.660	5185.41	-9.63	11.52	2.16	1676264.06	14248830.21	39°14'18.900"N	80°52'24.223"W	11.72	10.626	0.74	0.16	17.16	
5211.99	2.310	158.520	5210.39	-8.59	10.56	2.55	1676264.45	14248829.25	39°14'18.890"N	80°52'24.218"W	10.86	13.557	0.54	-0.52	3.44	
5236.99	2.230	156.310	5235.37	-7.60	9.65	2.93	1676264.83	14248828.33	39°14'18.881"N	80°52'24.213"W	10.08	16.887	0.47	-0.32	-8.84	
5261.99	2.140	156.270	5260.36	-6.65	8.77	3.31	1676265.21	14248827.46	39°14'18.873"N	80°52'24.208"W	9.38	20.680	0.36	-0.36	-0.16	
5286.99	2.210	163.080	5285.34	-5.70	7.88	3.64	1676265.54	14248826.57	39°14'18.864"N	80°52'24.204"W	8.68	24.779	1.07	0.28	27.24	

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Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Doddridge Co., WV	Well	Mahogany Unit 2H
Field	Doddridge	Wellbore	Mahogany Unit 2H AWB
Facility	James Webb Pad		

WELLPATH DATA (369 stations)																
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]	
5311.99	2.250	160.800	5310.32	-4.74	6.96	3.94	1676265.84	14248825.65	39°14'18.855"N	80°52'24.200"W	8.00	29.523	0.39	0.16	-9.12	
5336.99	2.260	158.720	5335.30	-3.75	6.04	4.28	1676266.18	14248824.72	39°14'18.846"N	80°52'24.196"W	7.40	35.346	0.33	0.04	-8.32	
5361.99	2.260	162.360	5360.28	-2.77	5.11	4.61	1676266.51	14248823.80	39°14'18.837"N	80°52'24.192"W	6.88	42.067	0.57	0.00	14.56	
5386.99	2.320	162.090	5385.26	-1.78	4.16	4.91	1676266.81	14248822.84	39°14'18.827"N	80°52'24.188"W	6.44	49.779	0.24	0.24	-1.08	
5411.99	2.330	163.040	5410.24	-0.77	3.19	5.22	1676267.12	14248821.88	39°14'18.818"N	80°52'24.184"W	6.12	58.573	0.16	0.04	3.80	
5436.99	2.330	160.630	5435.22	0.24	2.22	5.54	1676267.43	14248820.91	39°14'18.808"N	80°52'24.180"W	5.97	68.118	0.39	0.00	-9.64	
5461.99	2.260	161.890	5460.20	1.23	1.28	5.86	1676267.75	14248819.96	39°14'18.799"N	80°52'24.176"W	5.99	77.717	0.35	-0.28	5.04	
5486.99	2.250	164.750	5485.18	2.21	0.33	6.14	1676268.04	14248819.02	39°14'18.789"N	80°52'24.172"W	6.15	86.893	0.45	-0.04	11.44	
5511.99	2.190	164.180	5510.16	3.17	-0.60	6.40	1676268.30	14248818.09	39°14'18.780"N	80°52'24.169"W	6.43	95.355	0.26	-0.24	-2.28	
5536.99	2.110	163.680	5535.14	4.10	-1.50	6.66	1676268.56	14248817.19	39°14'18.771"N	80°52'24.166"W	6.83	102.704	0.33	-0.32	-2.00	
5561.99	2.060	164.480	5560.13	5.00	-2.38	6.91	1676268.80	14248816.32	39°14'18.763"N	80°52'24.162"W	7.30	108.978	0.23	-0.20	3.20	
5586.99	2.250	166.240	5585.11	5.92	-3.29	7.14	1676269.04	14248815.41	39°14'18.754"N	80°52'24.159"W	7.86	114.694	0.80	0.76	7.04	
5611.99	2.280	165.840	5610.09	6.89	-4.24	7.38	1676269.28	14248814.45	39°14'18.744"N	80°52'24.156"W	8.52	119.892	0.14	0.12	-1.60	
5636.99	2.200	165.590	5635.07	7.86	-5.19	7.62	1676269.52	14248813.50	39°14'18.735"N	80°52'24.153"W	9.22	124.250	0.32	-0.32	-1.00	
5661.99	2.300	165.210	5660.05	8.83	-6.14	7.87	1676269.77	14248812.55	39°14'18.725"N	80°52'24.150"W	9.98	127.958	0.40	0.40	-1.52	
5686.99	2.250	164.300	5685.03	9.81	-7.10	8.13	1676270.03	14248811.59	39°14'18.716"N	80°52'24.147"W	10.79	131.115	0.25	-0.20	-3.64	
5711.99	2.020	166.140	5710.01	10.72	-8.00	8.37	1676270.27	14248810.69	39°14'18.707"N	80°52'24.144"W	11.58	133.697	0.96	-0.92	7.36	
5736.99	2.050	167.530	5735.00	11.60	-8.86	8.57	1676270.47	14248809.83	39°14'18.698"N	80°52'24.141"W	12.33	135.953	0.23	0.12	5.56	
5761.99	2.150	171.740	5759.98	12.48	-9.76	8.74	1676270.63	14248808.93	39°14'18.690"N	80°52'24.139"W	13.10	138.176	0.74	0.40	16.84	
5786.99	1.930	172.060	5784.96	13.34	-10.64	8.86	1676270.76	14248808.05	39°14'18.681"N	80°52'24.138"W	13.85	140.220	0.88	-0.88	1.28	
5811.99	1.900	174.830	5809.95	14.14	-11.47	8.96	1676270.85	14248807.22	39°14'18.673"N	80°52'24.137"W	14.56	142.021	0.39	-0.12	11.08	
5818.99	1.850	174.040	5816.95	14.35	-11.70	8.98	1676270.88	14248806.99	39°14'18.670"N	80°52'24.136"W	14.75	142.498	0.80	-0.71	-11.29	
5907.00	1.780	178.850	5904.91	16.96	-14.48	9.15	1676271.05	14248804.21	39°14'18.643"N	80°52'24.134"W	17.13	147.700	0.19	-0.08	5.47	BHI AT Curve <8-1/2"> (5818.99')(5907'-17208')
5949.00	2.940	149.610	5946.88	18.63	-16.06	9.71	1676271.61	14248802.63	39°14'18.627"N	80°52'24.127"W	18.77	148.840	3.90	2.76	-69.62	
5996.00	8.290	131.600	5993.64	22.92	-19.36	12.86	1676274.75	14248799.34	39°14'18.595"N	80°52'24.087"W	23.24	146.401	11.85	11.38	-38.32	
6043.00	13.190	130.680	6039.80	30.87	-25.10	19.46	1676281.36	14248793.60	39°14'18.538"N	80°52'24.003"W	31.76	142.213	10.43	10.43	-1.96	
6092.00	18.030	130.420	6086.98	42.79	-33.67	29.48	1676291.37	14248785.03	39°14'18.453"N	80°52'23.876"W	44.75	138.794	9.88	9.88	-0.53	
6138.00	22.080	130.600	6130.18	57.05	-43.92	41.47	1676303.35	14248774.79	39°14'18.352"N	80°52'23.724"W	60.40	136.640	8.81	8.80	0.39	
6184.00	26.380	130.420	6172.12	74.11	-56.17	55.82	1676317.70	14248762.54	39°14'18.230"N	80°52'23.542"W	79.19	135.180	9.35	9.35	-0.39	
6232.00	30.060	130.420	6214.41	94.60	-70.89	73.10	1676334.97	14248747.83	39°14'18.084"N	80°52'23.322"W	101.83	134.120	7.67	7.67	0.00	

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Operator	Area	Field	Facility
ANTERO RESOURCES CORPORATION	Doddridge Co., WV	Doddridge	James Webb Pad
			Mahogany Unit 2H
			Mahogany Unit 2H AWP
			Slot #04

REFERENCE WELLPATH IDENTIFICATION

MD	Inclination	Azimuth	TVD	Vent Sect	North	East	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(N)	(E)	(ft)	(°)	(ft/100ft)	(°/100ft)	(°/100ft)	
6281.00	131.860	6255.92	118.24	-88.01	92.67	1676354.54	14248730.71	39°14'17.915"N	80°52'23.074"W	127.81	133.522	8.33	8.18	2.94			
6327.00	132.900	6292.98	143.23	-106.38	112.78	1676374.63	14248712.36	39°14'17.733"N	80°52'22.819"W	155.03	133.326	9.83	9.74	2.26			
6361.00†	132.997	6318.86	163.54	-121.40	128.91	1676390.76	14248697.34	39°14'17.584"N	80°52'22.614"W	177.08	133.280	11.04	11.04	0.28		Middlesex: 6361' MD / 6318.9' TVD	
6374.00	133.030	6328.36	171.71	-127.45	135.40	1676397.25	14248691.29	39°14'17.525"N	80°52'22.532"W	185.95	133.267	11.04	11.04	0.26			
6421.00	134.680	6360.95	203.11	-150.91	159.79	1676421.63	14248667.84	39°14'17.292"N	80°52'22.222"W	219.79	133.363	10.31	10.00				
6469.00	139.960	6391.37	238.31	-178.23	184.91	1676446.73	14248640.54	39°14'17.022"N	80°52'21.903"W	256.82	133.946	12.64	9.35	11.00			
6516.00	143.400	6418.54	275.49	-208.32	208.66	1676470.47	14248610.46	39°14'16.724"N	80°52'21.602"W	294.84	134.953	9.54	7.45	7.32			
6550.00†	145.454	6436.60	303.72	-231.75	225.40	1676487.21	14248587.04	39°14'16.492"N	80°52'21.390"W	323.28	135.795	10.11	8.71	6.04		Burkett 6550' MD / 6436.6' TVD	
6565.00	146.320	6444.09	316.52	-242.51	232.69	1676494.50	14248576.28	39°14'16.386"N	80°52'21.297"W	336.09	136.183	10.11	8.78	5.77			
6610.00	148.200	6464.84	356.00	-276.09	254.27	1676516.07	14248542.71	39°14'16.054"N	80°52'21.024"W	375.34	137.356	8.96	8.16	4.18			
6611.00†	148.275	6465.27	356.89	-276.86	254.75	1676516.55	14248541.94	39°14'16.046"N	80°52'21.017"W	376.23	137.382	12.97	11.05	7.52		Tully: 6611' MD / 6465.3' TVD	
6656.00	151.530	6482.85	398.08	-312.69	275.49	1676537.28	14248505.13	39°14'15.692"N	80°52'20.755"W	416.74	138.619	12.97	11.13	7.23			
6660.00†	151.733	6484.24	401.82	-315.99	277.27	1676539.06	14248502.82	39°14'15.659"N	80°52'20.587"W	420.39	138.734	13.72	12.87	5.08		Hamilton: 6660' MD / 6484.2' TVD	
6666.00†	153.025	6492.40	426.45	-337.86	288.71	1676550.50	14248480.97	39°14'15.443"N	80°52'20.577"W	444.42	139.485	13.72	12.89	4.97		Marcellus: 6686' MD / 6492.4' TVD	
6705.00	153.940	6497.45	444.75	-354.25	296.89	1676558.67	14248464.58	39°14'15.281"N	80°52'20.483"W	462.21	140.034	13.72	12.92	4.82			
6755.00	154.580	6507.37	493.72	-398.38	318.16	1676579.93	14248420.47	39°14'14.844"N	80°52'20.214"W	509.83	141.388	11.01	10.94	1.28			
6799.00	155.930	6511.99	537.46	-438.10	336.47	1676598.23	14248380.76	39°14'14.451"N	80°52'19.982"W	552.40	142.475	12.54	12.16	3.07			
6988.00	157.930	6515.26	726.33	-612.43	409.29	1676671.03	14248206.50	39°14'14.13.588"N	80°52'19.509"W	644.80	144.567	3.96	3.47	1.89			
6988.00	157.930	6515.26	726.33	-612.43	409.29	1676671.03	14248206.50	39°14'14.13.588"N	80°52'19.509"W	644.80	144.567	3.96	3.47	1.89			
7083.00	157.490	6516.18	821.27	-700.33	445.32	1676707.05	14248118.64	39°14'14.11.658"N	80°52'18.603"W	829.93	147.549	0.50	-0.20	-0.46			
7177.00	156.280	6516.76	915.25	-786.78	482.23	1676743.93	14248032.22	39°14'14.11.003"N	80°52'18.136"W	922.80	148.495	1.43	0.63	-1.29			
7272.00	156.670	6516.76	1010.25	-873.55	520.90	1676782.55	14247945.49	39°14'14.10.145"N	80°52'17.646"W	1017.07	149.192	0.65	0.13	-0.64			
7366.00	153.660	6516.73	1104.23	-958.50	561.12	1676822.80	14247860.57	39°14'14.09.305"N	80°52'17.136"W	1110.67	149.655	2.14	-0.10	-2.14			
7461.00	152.750	6516.81	1199.13	-1043.30	603.95	1676865.61	14247775.80	39°14'14.08.466"N	80°52'16.593"W	1205.50	149.934	0.96	-0.03	-0.96			
7555.00	153.100	6516.78	1293.00	-1127.00	646.73	1676908.38	14247692.14	39°14'14.07.638"N	80°52'16.051"W	1299.38	150.150	0.41	0.16	0.37			
7555.00	153.100	6516.78	1293.00	-1127.00	646.73	1676908.38	14247692.14	39°14'14.07.638"N	80°52'16.051"W	1299.38	150.150	0.41	0.16	0.37			
7649.00	153.410	6516.71	1386.91	-1210.95	689.04	1676950.66	14247608.23	39°14'14.06.808"N	80°52'15.515"W	1393.25	150.360	0.34	-0.10	0.33			
7744.00	154.620	6516.71	1481.86	-1296.34	730.66	1676992.27	14247522.87	39°14'14.05.963"N	80°52'14.988"W	1488.07	150.593	1.27	0.00	1.27			
7838.00	155.130	6516.78	1575.85	-1381.45	770.57	1677032.16	14247447.80	39°14'14.05.121"N	80°52'14.482"W	1581.82	150.847	0.55	-0.10	0.54			
7838.00	155.130	6516.78	1575.85	-1381.45	770.57	1677032.16	14247447.80	39°14'14.05.121"N	80°52'14.482"W	1581.82	150.847	0.55	-0.10	0.54			
7933.00	155.640	6516.83	1670.84	-1467.81	810.14	1677071.71	14247351.47	39°14'14.04.267"N	80°52'13.981"W	1676.54	151.104	0.55	0.13	0.54			
8028.00	157.020	6517.57	1765.83	-1554.81	848.28	1677109.84	14247264.50	39°14'14.03.407"N	80°52'13.498"W	1771.16	151.384	1.76	-1.00	1.45			

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Doddridge Co., WV	Well	Mahogany Unit 2H
Field	Doddridge	Wellbore	Mahogany Unit 2H AWB
Facility	James Webb Pad		

WELLPATH DATA (369 stations)																
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]	
8122.00	90.060	159.650	6518.28	1859.73	-1642.16	882.97	1677144.52	14247177.18	39°14'02.543"N	80°52'13.058"W	1864.50	151.734	2.99	1.04	2.80	
8216.00	90.220	158.700	6518.05	1953.57	-1730.02	916.39	1677177.93	14247089.36	39°14'01.674"N	80°52'12.635"W	1957.74	152.090	1.02	0.17	-1.01	
8311.00	90.150	155.630	6517.74	2048.53	-1817.56	953.26	1677214.77	14247001.85	39°14'00.808"N	80°52'12.168"W	2052.37	152.324	3.23	-0.07	-3.23	
8406.00	89.940	154.420	6517.67	2143.52	-1903.68	993.37	1677254.87	14246915.77	39°13'59.957"N	80°52'11.660"W	2147.27	152.444	1.29	-0.22	-1.27	
8500.00	89.720	156.010	6517.94	2237.51	-1989.02	1032.77	1677294.26	14246830.47	39°13'59.113"N	80°52'11.161"W	2241.16	152.560	1.71	-0.23	1.69	
8595.00	89.780	153.600	6518.36	2332.49	-2074.97	1073.21	1677334.68	14246744.55	39°13'58.262"N	80°52'10.648"W	2336.08	152.651	2.54	0.06	-2.54	
8689.00	89.450	152.660	6518.99	2426.38	-2158.82	1115.69	1677377.15	14246660.73	39°13'57.433"N	80°52'10.110"W	2430.08	152.670	1.06	-0.35	-1.00	
8784.00	89.850	149.370	6519.57	2521.03	-2241.91	1161.72	1677423.15	14246577.68	39°13'56.611"N	80°52'09.527"W	2525.02	152.608	3.49	0.42	-3.46	
8878.00	89.660	149.020	6519.97	2614.40	-2322.65	1209.86	1677471.27	14246496.97	39°13'55.813"N	80°52'08.916"W	2618.86	152.485	0.42	-0.20	-0.37	
8973.00	90.060	151.150	6520.21	2708.92	-2404.98	1257.23	1677518.63	14246414.67	39°13'54.998"N	80°52'08.316"W	2713.78	152.401	2.28	0.42	2.24	
9067.00	90.250	158.400	6519.95	2802.84	-2489.96	1297.27	1677558.65	14246329.72	39°13'54.158"N	80°52'07.809"W	2807.64	152.481	7.72	0.20	7.71	
9162.00	90.090	160.510	6519.67	2897.64	-2578.91	1330.60	1677591.97	14246240.81	39°13'53.278"N	80°52'07.387"W	2901.95	152.708	2.23	-0.17	2.22	
9256.00	90.180	157.450	6519.45	2991.49	-2666.65	1364.32	1677625.67	14246153.11	39°13'52.410"N	80°52'06.960"W	2995.39	152.905	3.26	0.10	-3.26	
9351.00	90.220	158.760	6519.12	3086.41	-2754.79	1399.74	1677661.08	14246065.00	39°13'51.539"N	80°52'06.511"W	3090.01	153.064	1.38	0.04	1.38	
9445.00	89.910	157.590	6519.01	3180.33	-2842.05	1434.69	1677696.01	14245977.77	39°13'50.676"N	80°52'06.069"W	3183.65	153.215	1.29	-0.33	-1.24	
9539.00	90.220	154.230	6518.90	3274.32	-2927.86	1473.05	1677734.36	14245892.01	39°13'49.827"N	80°52'05.583"W	3277.53	153.292	3.59	0.33	-3.57	
9634.00	90.280	156.730	6518.49	3369.31	-3014.28	1512.47	1677773.77	14245805.62	39°13'48.972"N	80°52'05.084"W	3372.46	153.354	2.63	0.06	2.63	
9728.00	90.310	157.760	6518.00	3463.28	-3100.96	1548.83	1677810.11	14245718.97	39°13'48.115"N	80°52'04.623"W	3466.24	153.459	1.10	0.03	1.10	
9823.00	89.750	160.240	6517.95	3558.12	-3189.64	1582.87	1677844.14	14245630.32	39°13'47.238"N	80°52'04.192"W	3560.80	153.607	2.68	-0.59	2.61	
9917.00	92.520	161.620	6516.09	3651.72	-3278.46	1613.58	1677874.83	14245541.55	39°13'46.360"N	80°52'03.804"W	3654.03	153.795	3.29	2.95	1.47	
10012.00	90.250	161.310	6513.80	3746.23	-3368.50	1643.76	1677905.01	14245451.54	39°13'45.469"N	80°52'03.422"W	3748.16	153.988	2.41	-2.39	-0.33	
10106.00	90.340	158.120	6513.31	3840.00	-3456.66	1676.35	1677937.58	14245363.42	39°13'44.598"N	80°52'03.009"W	3841.69	154.128	3.39	0.10	-3.39	
10201.00	90.180	156.420	6512.88	3934.96	-3544.27	1713.05	1677974.27	14245275.84	39°13'43.731"N	80°52'02.545"W	3936.55	154.204	1.80	-0.17	-1.79	
10295.00	90.090	154.960	6512.66	4028.96	-3629.94	1751.75	1678012.95	14245190.21	39°13'42.884"N	80°52'02.054"W	4030.52	154.239	1.56	-0.10	-1.55	
10390.00	90.120	155.750	6512.49	4123.96	-3716.28	1791.36	1678052.55	14245103.90	39°13'42.030"N	80°52'01.553"W	4125.50	154.264	0.83	0.03	0.83	
10484.00	90.800	156.440	6511.73	4217.95	-3802.21	1829.45	1678090.62	14245018.00	39°13'41.180"N	80°52'01.070"W	4219.45	154.305	1.03	0.72	0.73	
10578.00	90.150	155.660	6510.95	4311.95	-3888.12	1867.61	1678128.76	14244932.13	39°13'40.330"N	80°52'00.587"W	4313.40	154.343	1.08	-0.69	-0.83	
10673.00	90.150	154.280	6510.70	4406.93	-3974.19	1907.80	1678168.94	14244846.09	39°13'39.479"N	80°52'00.078"W	4408.39	154.357	1.45	0.00	-1.45	
10767.00	90.180	153.920	6510.43	4500.89	-4058.75	1948.86	1678209.98	14244761.57	39°13'38.643"N	80°51'59.558"W	4502.39	154.351	0.38	0.03	-0.38	
10861.00	89.820	153.900	6510.43	4594.84	-4143.17	1990.20	1678251.30	14244677.18	39°13'37.808"N	80°51'59.034"W	4596.39	154.342	0.38	-0.38	-0.02	

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[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]			[ft]	[°]	[°/100ft]	[°/100ft]	[°/100ft]	
10956.00	90.710	154.050	6509.99	4689.79	-4228.54	2031.88	1678292.97	14244591.85	39°13'36.963"N	80°51'58.506"W	4691.38	154.335	0.95	0.94	0.16	
11050.00	90.090	153.710	6509.34	4783.73	-4312.93	2073.27	1678334.33	14244507.48	39°13'36.128"N	80°51'57.982"W	4785.38	154.326	0.75	-0.66	-0.36	
11145.00	90.000	152.120	6509.26	4878.60	-4397.51	2116.52	1678377.57	14244422.94	39°13'35.292"N	80°51'57.434"W	4880.35	154.299	1.68	-0.09	-1.67	
11239.00	89.720	153.910	6509.49	4972.48	-4481.28	2159.17	1678420.20	14244339.21	39°13'34.463"N	80°51'56.893"W	4974.32	154.274	1.93	-0.30	1.90	
11333.00	89.910	158.090	6509.79	5066.46	-4567.13	2197.39	1678458.41	14244253.39	39°13'33.614"N	80°51'56.409"W	5068.26	154.306	4.45	0.20	4.45	
11428.00	89.660	158.490	6510.15	5161.37	-4655.39	2232.54	1678493.54	14244165.16	39°13'32.741"N	80°51'55.964"W	5163.03	154.380	0.50	-0.26	0.42	
11522.00	89.940	157.940	6510.48	5255.29	-4742.68	2267.42	1678528.41	14244077.91	39°13'31.878"N	80°51'55.523"W	5256.82	154.448	0.66	0.30	-0.59	
11617.00	89.880	155.570	6510.63	5350.27	-4829.96	2304.91	1678565.89	14243990.67	39°13'31.015"N	80°51'55.048"W	5351.74	154.489	2.50	-0.06	-2.49	
11712.00	89.910	153.480	6510.80	5445.24	-4915.72	2345.77	1678606.73	14243904.94	39°13'30.167"N	80°51'54.530"W	5446.73	154.490	2.20	0.03	-2.20	
11806.00	89.910	154.320	6510.95	5539.19	-5000.13	2387.12	1678648.07	14243820.56	39°13'29.332"N	80°51'54.006"W	5540.73	154.480	0.89	0.00	0.89	
11901.00	90.000	156.570	6511.03	5634.18	-5086.53	2426.60	1678687.53	14243734.19	39°13'28.477"N	80°51'53.506"W	5635.71	154.496	2.37	0.09	2.37	
11995.00	89.970	157.320	6511.05	5728.16	-5173.02	2463.41	1678724.32	14243647.74	39°13'27.622"N	80°51'53.040"W	5729.62	154.536	0.80	-0.03	0.80	
12088.00	89.850	158.020	6511.20	5821.11	-5259.05	2498.75	1678759.64	14243561.75	39°13'26.771"N	80°51'52.593"W	5822.49	154.586	0.76	-0.13	0.75	
12183.00	89.940	159.040	6511.37	5916.01	-5347.46	2533.52	1678794.40	14243473.38	39°13'25.897"N	80°51'52.153"W	5917.26	154.649	1.08	0.09	1.07	
12277.00	89.970	159.600	6511.44	6009.83	-5435.40	2566.71	1678827.58	14243385.47	39°13'25.027"N	80°51'51.733"W	6010.95	154.722	0.60	0.03	0.60	
12372.00	89.880	159.440	6511.57	6104.63	-5524.39	2599.95	1678860.81	14243296.51	39°13'24.147"N	80°51'51.312"W	6105.63	154.797	0.19	-0.09	-0.17	
12466.00	89.970	158.130	6511.69	6198.51	-5612.02	2633.97	1678894.81	14243208.92	39°13'23.280"N	80°51'50.881"W	6199.40	154.857	1.40	0.10	-1.39	
12561.00	90.090	154.370	6511.64	6293.49	-5698.96	2672.22	1678933.05	14243122.01	39°13'22.420"N	80°51'50.397"W	6294.36	154.878	3.96	0.13	-3.96	
12655.00	89.910	153.000	6511.64	6387.42	-5783.22	2713.89	1678974.70	14243037.79	39°13'21.587"N	80°51'49.869"W	6388.33	154.861	1.47	-0.19	-1.46	
12749.00	89.940	152.790	6511.76	6481.30	-5866.89	2756.72	1679017.51	14242954.15	39°13'20.759"N	80°51'49.327"W	6482.28	154.832	0.23	0.03	-0.22	
12844.00	89.780	152.590	6512.00	6576.15	-5951.30	2800.30	1679061.08	14242869.77	39°13'19.924"N	80°51'48.774"W	6577.21	154.801	0.27	-0.17	-0.21	
12938.00	90.250	152.760	6511.97	6670.01	-6034.82	2843.45	1679104.21	14242786.29	39°13'19.098"N	80°51'48.228"W	6671.15	154.771	0.53	0.50	0.18	
13033.00	90.030	152.670	6511.74	6764.87	-6119.25	2887.00	1679147.75	14242701.90	39°13'18.263"N	80°51'47.676"W	6766.09	154.742	0.25	-0.23	-0.09	
13127.00	90.180	152.720	6511.57	6858.73	-6202.77	2930.12	1679190.85	14242618.40	39°13'17.437"N	80°51'47.130"W	6860.03	154.714	0.17	0.16	0.05	
13222.00	90.180	156.440	6511.27	6953.69	-6288.56	2970.89	1679231.60	14242532.65	39°13'16.588"N	80°51'46.613"W	6955.01	154.713	3.92	0.00	3.92	
13316.00	89.940	160.430	6511.17	7047.57	-6375.96	3005.44	1679266.13	14242445.28	39°13'15.724"N	80°51'46.176"W	7048.80	154.762	4.25	-0.26	4.24	
13410.00	90.180	162.240	6511.07	7141.14	-6465.01	3035.52	1679296.20	14242356.27	39°13'14.843"N	80°51'45.796"W	7142.18	154.849	1.94	0.26	1.93	
13504.00	88.950	157.050	6511.79	7234.89	-6553.11	3068.20	1679328.87	14242268.21	39°13'13.972"N	80°51'45.382"W	7235.82	154.911	5.67	-1.31	-5.52	
13599.00	89.750	159.080	6512.86	7329.81	-6641.22	3103.69	1679364.34	14242180.13	39°13'13.101"N	80°51'44.933"W	7330.67	154.952	2.30	0.84	2.14	
13693.00	89.780	158.550	6513.25	7423.68	-6728.87	3137.66	1679398.30	14242092.52	39°13'12.234"N	80°51'44.503"W	7424.46	155.000	0.56	0.03	-0.56	

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Mahogany Unit 2H AWP Proj: 17233'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Doddridge Co., WV	Well	Mahogany Unit 2H
Field	Doddridge	Wellbore	Mahogany Unit 2H AWB
Facility	James Webb Pad		

WELLPATH DATA (369 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
13788.00	90.710	157.510	6512.84	7518.60	-6816.97	3173.20	1679433.83	14242004.45	39°13'11.363"N	80°51'44.053"W	7519.32	155.039	1.47	0.98	-1.09	
13882.00	89.970	156.470	6512.29	7612.58	-6903.48	3209.94	1679470.55	14241917.97	39°13'10.507"N	80°51'43.588"W	7613.26	155.063	1.36	-0.79	-1.11	
13976.00	89.940	154.440	6512.36	7706.57	-6988.98	3248.98	1679509.58	14241832.50	39°13'09.661"N	80°51'43.093"W	7707.26	155.068	2.16	-0.03	-2.16	
14071.00	89.940	150.910	6512.46	7801.42	-7073.37	3292.59	1679553.17	14241748.15	39°13'08.827"N	80°51'42.541"W	7802.16	155.038	3.72	0.00	-3.72	
14165.00	89.940	151.090	6512.56	7895.08	-7155.58	3338.16	1679598.72	14241665.97	39°13'08.013"N	80°51'41.964"W	7895.93	154.990	0.19	0.00	0.19	
14260.00	89.910	152.630	6512.68	7989.85	-7239.35	3382.96	1679643.51	14241582.24	39°13'07.185"N	80°51'41.396"W	7990.79	154.953	1.62	-0.03	1.62	
14354.00	89.910	154.800	6512.83	8083.78	-7323.63	3424.59	1679685.11	14241497.99	39°13'06.351"N	80°51'40.869"W	8084.76	154.939	2.31	0.00	2.31	
14448.00	89.660	155.890	6513.18	8177.78	-7409.06	3463.80	1679724.31	14241412.60	39°13'05.506"N	80°51'40.372"W	8178.75	154.944	1.19	-0.27	1.16	
14543.00	89.660	155.390	6513.75	8272.77	-7495.60	3502.98	1679763.48	14241326.09	39°13'04.650"N	80°51'39.876"W	8273.75	154.952	0.53	0.00	-0.53	
14637.00	89.690	156.120	6514.28	8366.77	-7581.30	3541.58	1679802.06	14241240.42	39°13'03.803"N	80°51'39.387"W	8367.73	154.961	0.78	0.03	0.78	
14731.00	89.720	155.350	6514.76	8460.77	-7667.00	3580.21	1679840.68	14241154.76	39°13'02.955"N	80°51'38.898"W	8461.72	154.969	0.82	0.03	-0.82	
14825.00	89.750	154.380	6515.20	8554.75	-7752.10	3620.14	1679880.59	14241069.70	39°13'02.113"N	80°51'38.393"W	8555.72	154.968	1.03	0.03	-1.03	
14920.00	89.630	155.280	6515.71	8649.74	-7838.07	3660.54	1679920.97	14240983.76	39°13'01.263"N	80°51'37.881"W	8650.72	154.966	0.96	-0.13	0.95	
15014.00	89.540	156.500	6516.39	8743.73	-7923.87	3698.93	1679959.35	14240897.99	39°13'00.414"N	80°51'37.395"W	8744.70	154.976	1.30	-0.10	1.30	
15109.00	89.750	156.570	6516.98	8838.72	-8011.01	3736.76	1679997.16	14240810.89	39°12'59.552"N	80°51'36.916"W	8839.67	154.993	0.23	0.22	0.07	
15203.00	90.060	157.390	6517.14	8932.70	-8097.52	3773.52	1680033.91	14240724.41	39°12'58.697"N	80°51'36.450"W	8933.61	155.014	0.93	0.33	0.87	
15298.00	90.460	157.580	6516.71	9027.66	-8185.28	3809.90	1680070.27	14240636.69	39°12'57.829"N	80°51'35.990"W	9028.52	155.040	0.47	0.42	0.20	
15392.00	89.690	156.540	6516.58	9121.64	-8271.85	3846.53	1680106.89	14240550.16	39°12'56.973"N	80°51'35.526"W	9122.46	155.061	1.38	-0.82	-1.11	
15486.00	89.690	156.640	6517.09	9215.63	-8358.11	3883.88	1680144.23	14240463.93	39°12'56.120"N	80°51'35.053"W	9216.43	155.076	0.11	0.00	0.11	
15581.00	90.370	155.700	6517.04	9310.63	-8445.01	3922.26	1680182.59	14240377.06	39°12'55.260"N	80°51'34.567"W	9311.41	155.088	1.22	0.72	-0.99	
15675.00	91.880	155.630	6515.20	9404.60	-8530.64	3960.99	1680221.30	14240291.47	39°12'54.413"N	80°51'34.077"W	9405.38	155.093	1.61	1.61	-0.07	
15769.00	89.660	153.530	6513.93	9498.56	-8615.52	4001.33	1680261.63	14240206.62	39°12'53.574"N	80°51'33.566"W	9499.36	155.088	3.25	-2.36	-2.23	
15863.00	89.660	153.690	6514.49	9592.49	-8699.72	4043.11	1680303.39	14240122.45	39°12'52.741"N	80°51'33.037"W	9593.33	155.074	0.17	0.00	0.17	
15958.00	89.660	153.530	6515.05	9687.42	-8784.82	4085.34	1680345.60	14240037.39	39°12'51.899"N	80°51'32.502"W	9688.29	155.059	0.17	0.00	-0.17	
16052.00	89.630	155.020	6515.64	9781.38	-8869.50	4126.13	1680386.38	14239952.74	39°12'51.061"N	80°51'31.986"W	9782.28	155.052	1.59	-0.03	1.59	
16146.00	89.630	156.140	6516.24	9875.37	-8955.09	4164.99	1680425.23	14239867.19	39°12'50.215"N	80°51'31.494"W	9876.27	155.057	1.19	0.00	1.19	
16241.00	89.570	156.010	6516.91	9970.37	-9041.92	4203.52	1680463.74	14239780.39	39°12'49.356"N	80°51'31.006"W	9971.26	155.067	0.15	-0.06	-0.14	
16335.00	91.600	155.590	6515.95	10064.36	-9127.65	4242.05	1680502.25	14239694.69	39°12'48.508"N	80°51'30.518"W	10065.24	155.073	2.21	2.16	-0.45	
16429.00	90.000	154.490	6514.64	10158.34	-9212.86	4281.71	1680541.89	14239609.52	39°12'47.665"N	80°51'30.016"W	10159.22	155.073	2.07	-1.70	-1.17	
16524.00	89.660	153.090	6514.92	10253.27	-9298.09	4323.67	1680583.83	14239524.32	39°12'46.822"N	80°51'29.485"W	10254.20	155.061	1.52	-0.36	-1.47	

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Doddrige Co., WV	Well	Mahogany Unit 2H AWP
Field	Doddrige	Wellbore	Mahogany Unit 2H AWP
Facility	James Webb Pad		

WELLPATH DATA (369 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
16618.00	89.660	156.280	6515.47	10347.24	-9383.05	4363.85	1680624.01	14239439.40	39°12'45.98"N	80°51'28.97"W	10348.18	155.058	3.39	0.00	3.39	
16713.00	89.630	159.030	6516.06	10442.18	-9470.91	4399.97	1680660.11	14239351.58	39°12'45.13"N	80°51'28.51"W	10443.07	155.081	2.89	-0.03	2.89	
16807.00	89.690	159.470	6516.62	10536.01	-9558.81	4433.27	1680693.39	14239263.71	39°12'44.24"N	80°51'28.09"W	10536.83	155.119	0.47	0.06	0.47	
16902.00	89.750	157.190	6517.09	10630.92	-9647.09	4468.35	1680728.46	14239175.47	39°12'43.37"N	80°51'27.65"W	10631.67	155.147	2.40	0.06	-2.40	
16996.00	89.690	157.550	6517.55	10724.88	-9733.85	4504.52	1680764.61	14239088.74	39°12'42.51"N	80°51'27.19"W	10725.60	155.167	0.39	-0.06	0.38	
17091.00	90.180	159.340	6517.65	10819.78	-9822.20	4539.42	1680799.50	14239000.42	39°12'41.63"N	80°51'26.75"W	10820.44	155.196	1.95	0.52	1.88	
17185.00	89.780	158.520	6517.69	10913.64	-9909.92	4573.21	1680833.28	14238912.74	39°12'40.77"N	80°51'26.32"W	10914.24	155.228	0.97	-0.43	-0.87	
17208.00	89.660	157.560	6517.80	10936.62	-9931.25	4581.81	1680841.88	14238891.42	39°12'40.56"N	80°51'26.21"W	10937.21	155.234	4.21	-0.52	-4.17	
17233.00	89.660	157.560	6517.95	10961.61	-9954.35	4591.35	1680851.41	14238868.32	39°12'40.33"N	80°51'26.09"W	10962.19	155.239	0.00	0.00	0.00	Projected MD at TD: 17233

HOLE & CASING SECTIONS - Ref Wellbore: Mahogany Unit 2H AWP																
Ref Wellpath: Mahogany Unit 2H AWP Proj: 17233																
String/Diameter	Start MD	End MD	Interval	Start TVD	End TVD	Start N/S	Start E/W	End N/S	End E/W							
	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)							
20in Conductor	25.00	65.00	40.00	25.00	65.00	0.00	0.00	0.00	-0.05	-0.03						
13.375in Casing Surface	25.00	452.00	427.00	25.00	451.99	0.00	0.00	0.00	-1.43	-1.91						
9.625in Casing Intermediate	25.00	2604.00	2579.00	25.00	2602.93	0.00	0.00	0.00	42.88	-13.91						

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Doddridge Co., WV	Well	Mahogany Unit 2H
Field	Doddridge	Wellbore	Mahogany Unit 2H AWB
Facility	James Webb Pad		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Mahogany Unit 2H POE Rev-2	6496.00	-326.69	278.29	1676540.08	14248492.13	39°14'15.553"N	80°52'20.719"W	point
Mahogany Unit 2H BHL Rev-2	6519.00	-9956.53	4599.77	1680859.83	14238866.15	39°12'40.310"N	80°51'25.990"W	point
Mahogany Unit 2H LP Rev-2	6519.00	-460.26	338.23	1676599.99	14248358.61	39°14'14.232"N	80°52'19.960"W	point

WELLPATH COMPOSITION - Ref Wellbore: Mahogany Unit 2H AWB Ref Wellpath: Mahogany Unit 2H AWP Proj: 17233'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	
25.00	5818.99	SDI Keeper v1.04	01 SDI Std. Keeper Gyro (100' - 5806.99')	Mahogany Unit 2H AWB	
5818.99	17208.00	BHI AutoTrak Curve (Short)	02 BHI AT Curve <8-1/2">(5818.99')(5907'-17208')	Mahogany Unit 2H AWB	
17208.00	17233.00	Blind Drilling (std)	Projection to bit	Mahogany Unit 2H AWB	

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Mahogany Unit 2H AWP Proj: 17233'

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Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Doddridge Co., WV	Well	Mahogany Unit 2H
Field	Doddridge	Wellbore	Mahogany Unit 2H AWB
Facility	James Webb Pad		

COMMENTS
<p>Wellpath general comments API: 47-017-06702-0000 BHI Job #: 8105986 Rig: Patterson 343 Duration: 8/10/2016-8/15/2016 SDI Keeper <8-3/4"> (100'-5806.99') BHI AT Curve <8-1/2"> (5818.99')(5907'-17208') Middlesex: 6361' MD Burkett: 6550' MD Tully: 6611' MD Hamilton: 6660' MD Marcellus POE: 6686' MD Projected MD at TD: 17233'</p>

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