

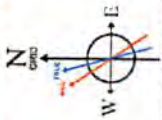
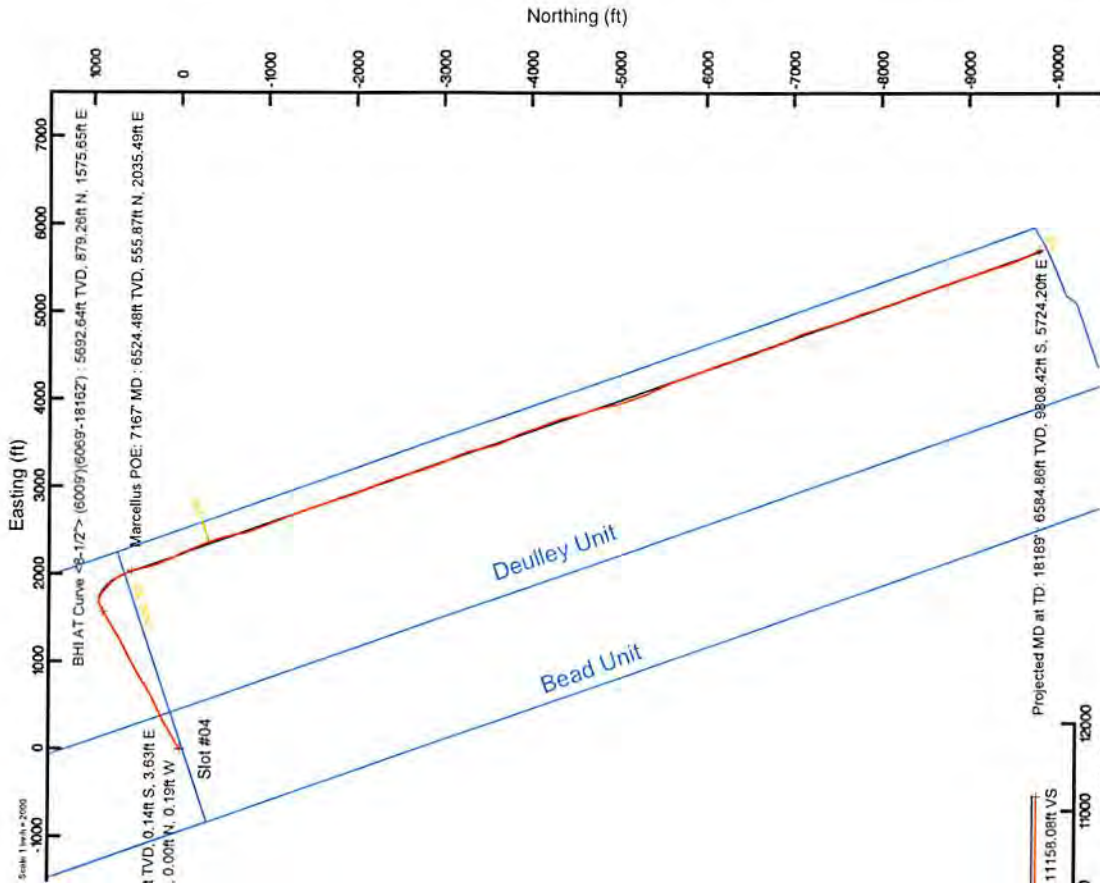


ANTERO RESOURCES CORPORATION

Location: Tyler County, WV
 Facility: Edna Monroe Pad
 Slot: Slot #04
 Well: Deulley Unit 3H
 Wellbore: Deulley_Unit 3H PWB



API: 47-095-02361-0000
 BHI Job #: 8324962
 Rig: Patterson 343
 Duration: 12/29/2016-01/03/2017



User specified Dip: 68.771 Field: 53.178 at
 Magnetic North is 7.56 degrees West of True North (at 26 Dec 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 1.87 degrees

Property	Value
Well reference wellbore is Deulley Unit 3H PWB Rev-A-D	
True vertical depths are referenced to Patterson 343 (RKB)	
Measured depths are referenced to Patterson 343 (RKB)	
Patterson 343 (RKB) to Mean Sea Level: 1095 feet	
Mean Sea Level to Mud line (At Slot Slot #04): -1044 feet	
Coordinates are in feet referenced to SBA	

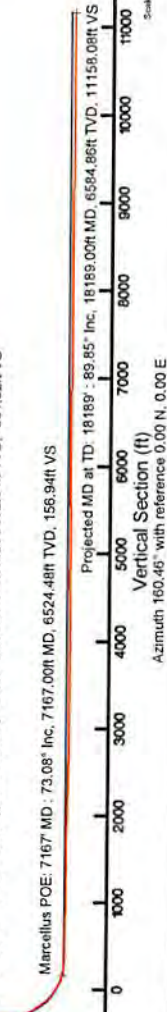
Gyrodata Cont. Gyro <17-172> : 0.25° Inc. 112.00R MD, 112.00R TVD, -0.07R VS
 Directional ONE MWD <6-3/4> : 1.21° Inc. 753.00R MD, 752.96R TVD, 1.35R VS

Location Information			
Property	Value	Property	Value
Facility Name	Edna Monroe Pad	Grid East (US ft)	1676182.158
Slot	Slot #04	Grid North (US ft)	14315655.438
Local N (ft)	10.12	Grid East (US ft)	392521.620N
Local E (ft)	-0.80	Grid North (US ft)	80°5224.070W
Local N (ft)	10.12	Local E (ft)	1639.32
Local E (ft)	-0.80	Local N (ft)	80°5224.067W

Well Profile Data			
Design Comment	MD (ft)	Inc (°)	VS (ft)
Trk On	6009.00	22.870	807.26
Trk To Bottom	6092.00	22.870	883.15
Curve KOP	6258.00	22.870	914.02
End of 80 Arc	6797.01	135.024	829.72
POE	7153.07	71.005	6520.00
Landing Pt	7311.56	90.000	427.90
BH	18181.36	80.000	-9225.83

Well Data	
Well	Wellbore
Slot #04	Deulley Unit 3H
Slot #04	Deulley Unit 3H PWB

BHI AT Curve <8-172> : 23.87° Inc. 6069.00R MD, 5892.64ft TVD, -301.62R VS
 Marcellus POE: 7167' MD : 73.08° Inc. 7167.00R MD, 6524.48ft TVD, 158.94ft VS



03/02/2018



Actual Wellpath Report

Deulley Unit 3H AWP Proj: 18189'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Tyler County, WV	Well	Deulley Unit 3H
Field	Tyler	Wellbore	Deulley Unit 3H AWB
Facility	Edna Monroe Pad		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Delaset
Scale	0.999601	Report Generated	05/Jan/2017 at 11:24
Convergence at slot	0.09° East	Database/Source file	WA_MPL_EasternUS_Defn/Deulley_Unit_3H_AWP_Proj_18189_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	10.12	-0.80	1676181.36	14315865.55	39°25'21.720"N	80°52'24.080"W
Facility Reference Pt			1676182.16	14315855.44	39°25'21.620"N	80°52'24.070"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	1069.00ft
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	160.46°

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Actual Wellpath Report

Deulley Unit 3H AWP Proj: 18189'

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REFERENCE WELLPATH IDENTIFICATION		Slot #04
Operator	ANTERO RESOURCES CORPORATION	
Area	Tyler County, WV	Deulley Unit 3H
Field	Tyler	Deulley Unit 3H AWB
Facility	Edna Monroe Pad	

WELLPATH DATA (243 stations) † = interpolated/extrapolated station																		
MD	Inclination	Azimuth	TVD	Vert.Sect	North	East	Grid East	Grid North	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments	
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[N]	[W]	[ft]	[°]	[°/100ft]	[°/100ft]	[°/100ft]	[ft/100ft]	
0.001	0.000	270.560	0.00	0.00	0.00	0.00	1676181.36	14315865.55	39°25'21.720"N	80°52'24.080"W	0.00	0.000	0.00	0.00	0.00	0.00	0.00	
25.00	0.000	270.560	25.00	0.00	0.00	0.00	1676181.36	14315865.55	39°25'21.720"N	80°52'24.080"W	0.00	0.000	0.00	0.00	0.00	0.00	0.00	
112.00	0.250	270.560	112.00	-0.07	0.00	-0.19	1676181.17	14315865.55	39°25'21.720"N	80°52'24.082"W	0.19	270.560	0.29	0.29	-102.80	Gyrodatta Cont. Gyro <17-1/2"> (100'-685')		
212.00	0.170	254.040	212.00	-0.15	-0.04	-0.55	1676180.81	14315865.51	39°25'21.720"N	80°52'24.087"W	0.55	286.176	0.10	-0.08	-16.52			
312.00	0.140	195.170	312.00	-0.06	-0.20	-0.73	1676180.64	14315865.35	39°25'21.718"N	80°52'24.089"W	0.73	254.912	0.15	-0.03	-58.87			
412.00	0.150	184.130	412.00	0.16	-0.44	-0.77	1676180.59	14315865.11	39°25'21.716"N	80°52'24.090"W	0.89	239.922	0.03	0.01	-11.04			
506.00	0.240	142.800	506.00	0.46	-0.72	-0.66	1676180.70	14315864.83	39°25'21.713"N	80°52'24.089"W	0.98	222.216	0.17	0.10	-43.97			
546.00	0.640	80.710	546.00	0.58	-0.75	-0.39	1676180.97	14315864.80	39°25'21.713"N	80°52'24.085"W	0.85	207.061	1.42	1.00	-155.23			
577.00	0.950	79.200	576.99	0.65	-0.68	0.04	1676181.40	14315864.87	39°25'21.713"N	80°52'24.080"W	0.68	176.793	1.00	1.00	-4.87			
636.00	1.140	78.640	635.98	0.81	-0.47	1.09	1676182.45	14315865.08	39°25'21.715"N	80°52'24.066"W	1.19	113.288	0.32	0.32	-0.95			
697.00	1.330	82.840	695.97	1.05	-0.26	2.39	1676183.75	14315865.29	39°25'21.717"N	80°52'24.050"W	2.41	96.278	0.34	0.31	6.89			
753.00	1.210	85.990	752.96	1.35	-0.14	3.63	1676184.98	14315865.41	39°25'21.719"N	80°52'24.034"W	3.63	92.223	0.25	-0.21	5.62	Directional ONE MWD <8-3/4"> (685')(741'-5997')		
813.00	0.780	97.670	812.95	1.70	-0.15	4.66	1676186.02	14315865.40	39°25'21.718"N	80°52'24.021"W	4.66	91.854	0.79	-0.72	19.47			
878.00	0.590	103.450	877.94	2.09	-0.29	5.43	1676186.78	14315865.26	39°25'21.717"N	80°52'24.011"W	5.43	93.036	0.31	-0.29	8.89			
941.00	0.320	117.600	940.94	2.39	-0.44	5.90	1676187.26	14315865.11	39°25'21.716"N	80°52'24.005"W	5.91	94.313	0.46	-0.43	22.46			
1003.00	0.610	92.640	1002.94	2.64	-0.54	6.38	1676187.74	14315865.01	39°25'21.715"N	80°52'23.999"W	6.40	94.839	0.56	0.47	-40.26			
1066.00	1.870	71.340	1065.92	2.78	-0.26	7.59	1676188.94	14315865.29	39°25'21.717"N	80°52'23.983"W	7.59	91.977	1.78	1.68	-33.81			
1129.00	2.730	66.010	1128.88	2.68	0.64	9.83	1676191.18	14315866.19	39°25'21.728"N	80°52'23.955"W	9.85	86.263	1.71	1.68	-8.46			
1192.00	3.650	61.490	1191.78	2.25	2.21	12.96	1676194.31	14315867.76	39°25'21.742"N	80°52'23.915"W	13.15	80.326	1.51	1.48	-7.17			
1256.00	4.350	56.250	1255.62	1.34	4.53	16.77	1676198.12	14315870.08	39°25'21.765"N	80°52'23.866"W	17.37	74.862	1.23	1.09	-8.19			
1319.00	4.970	51.110	1318.42	-0.15	7.57	20.88	1676202.23	14315873.12	39°25'21.795"N	80°52'23.814"W	22.21	70.069	1.19	0.98	-8.16			
1391.00	5.630	48.770	1390.15	-2.17	11.26	25.26	1676206.61	14315876.81	39°25'21.831"N	80°52'23.758"W	27.65	65.969	1.12	1.06	-3.77			
1444.00	6.140	49.530	1442.82	-4.51	15.48	30.14	1676211.49	14315881.03	39°25'21.873"N	80°52'23.696"W	33.89	62.810	0.82	0.81	1.21			
1506.00	7.470	50.860	1504.38	-7.05	20.18	35.79	1676217.14	14315885.72	39°25'21.919"N	80°52'23.624"W	41.09	60.584	2.16	2.15	2.15			
1570.00	8.640	53.560	1567.75	-9.84	25.66	42.89	1676224.23	14315891.20	39°25'21.973"N	80°52'23.533"W	49.98	59.104	1.92	1.83	4.22			
1632.00	10.210	52.980	1628.91	-12.85	31.74	51.02	1676232.36	14315897.27	39°25'22.033"N	80°52'23.429"W	60.09	58.115	2.54	2.53	-0.94			
1696.00	11.430	55.320	1691.77	-16.21	38.76	60.76	1676242.10	14315904.30	39°25'22.102"N	80°52'23.305"W	72.07	57.466	2.03	1.91	3.66			
1759.00	12.810	57.290	1753.36	-19.43	46.09	71.77	1676251.11	14315911.62	39°25'22.175"N	80°52'23.165"W	85.30	57.255	2.28	2.19	3.13			
1822.00	14.050	60.420	1814.64	-22.35	53.64	84.30	1676265.63	14315919.17	39°25'22.249"N	80°52'23.005"W	99.92	57.534	2.28	1.97	4.97			
1885.00	14.960	62.220	1875.63	-24.85	61.20	98.15	1676279.47	14315926.73	39°25'22.324"N	80°52'22.828"W	115.67	58.053	1.61	1.44	2.86			

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Edna Monroe Pad
Well	Deulley Unit 3H
Slot	Deulley Unit 3H AWB
Slot #04	

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
1948.00	62.030	1936.25	-27.34	69.22	113.30	1676294.62	14315934.74	39°25'22.403"N	80°52'22.635"W	132.77	58.578	2.64	2.63	-0.30		
2011.00	20.760	1995.92	-30.28	78.67	131.13	1676312.44	14315944.19	39°25'22.496"N	80°52'22.408"W	152.92	59.039	6.57	6.57	0.11		
2074.00	21.570	2054.67	-33.42	89.16	151.31	1676332.61	14315954.68	39°25'22.599"N	80°52'22.150"W	175.63	59.491	1.37	1.29	1.35		
2137.00	20.790	61.910	2113.41	-36.60	99.70	171.49	1676352.78	39°25'22.703"N	80°52'21.893"W	198.37	59.829	1.37	-1.24	-1.65		
2200.00	18.990	59.650	2172.65	-40.18	110.14	190.20	1676371.49	39°25'22.806"N	80°52'21.654"W	219.79	59.926	3.11	-2.86	-3.59		
2263.00	17.740	57.680	2232.44	-44.23	120.45	207.16	1676388.44	39°25'22.908"N	80°52'21.438"W	239.63	59.825	2.22	-1.98	-3.13		
2326.00	16.590	56.650	2292.64	-48.50	130.53	222.79	1676404.06	39°25'23.007"N	80°52'21.239"W	258.21	59.634	1.89	-1.83	-1.63		
2389.00	16.200	56.850	2353.07	-52.71	140.28	237.66	1676418.92	39°25'23.103"N	80°52'21.049"W	275.97	59.449	0.63	-0.62	-0.32		
2422.00	16.460	57.960	2413.53	-56.71	149.82	252.58	1676433.84	39°25'23.197"N	80°52'20.859"W	293.67	59.326	0.64	0.41	1.76		
2515.00	16.360	58.600	2473.97	-60.47	159.18	267.72	1676448.97	39°25'23.289"N	80°52'20.666"W	311.47	59.266	0.33	-0.16	1.02		
2544.00	15.890	58.870	2501.83	-62.10	163.36	274.60	1676455.85	39°25'23.331"N	80°52'20.578"W	319.52	59.252	1.64	0.93	1.02		
2635.00	15.500	59.790	2589.43	-66.86	175.92	295.78	1676477.02	39°25'23.450"N	80°52'20.308"W	344.14	59.258	0.51	-0.43	1.01		
2699.00	16.530	61.390	2650.95	-69.88	184.58	311.16	1676492.39	39°25'23.540"N	80°52'20.112"W	361.79	59.324	1.75	1.61	2.50		
2762.00	17.110	63.050	2711.25	-72.48	193.07	327.29	1676508.52	39°25'23.624"N	80°52'19.906"W	379.99	59.463	1.20	0.92	2.63		
2825.00	18.140	64.140	2771.30	-74.76	201.56	344.38	1676525.60	39°25'23.707"N	80°52'19.688"W	399.02	59.661	1.72	1.63	1.73		
2888.00	19.510	64.490	2830.92	-76.93	220.13	362.70	1676543.91	39°25'23.794"N	80°52'19.454"W	419.28	59.887	2.18	2.17	0.56		
2922.00	21.390	63.690	2890.89	-79.42	220.36	382.80	1676564.01	39°25'23.890"N	80°52'19.198"W	441.59	60.099	2.97	2.94	-1.25		
3015.00	23.250	63.490	2949.17	-82.28	230.78	404.23	1676585.43	39°25'23.985"N	80°52'18.925"W	465.47	60.278	2.95	-0.32	-0.32		
3078.00	24.120	63.580	3006.86	-85.34	242.05	426.89	1676608.08	39°25'24.106"N	80°52'18.636"W	490.74	60.448	1.38	0.14	-0.32		
3141.00	24.660	65.360	3064.26	-88.04	253.24	450.32	1676631.50	39°25'24.217"N	80°52'18.337"W	516.64	60.648	1.36	0.70	2.83		
3204.00	25.610	65.630	3121.34	-90.35	264.30	474.57	1676655.74	39°25'24.326"N	80°52'18.028"W	543.21	60.886	1.52	1.51	0.43		
3267.00	26.200	65.640	3178.03	-92.66	275.63	499.60	1676680.76	39°25'24.437"N	80°52'17.709"W	570.59	61.114	1.10	0.02	0.02		
3331.00	25.400	65.230	3235.65	-95.10	287.21	524.94	1676706.09	39°25'24.561"N	80°52'17.386"W	598.37	61.315	1.28	-0.64	-0.64		
3394.00	25.350	64.480	3292.57	-97.73	298.68	549.37	1676730.51	39°25'24.664"N	80°52'17.074"W	625.32	61.468	0.52	-0.08	-0.19		
3457.00	25.700	63.870	3349.43	-100.71	310.51	573.81	1676754.94	39°25'24.781"N	80°52'16.762"W	652.44	61.581	0.69	0.56	-0.97		
3520.00	26.530	62.570	3405.99	-104.21	323.01	598.56	1676779.68	39°25'24.936"N	80°52'16.428"W	708.50	61.666	1.19	0.68	-2.17		
3583.00	26.960	61.200	3462.25	-108.43	336.37	623.57	1676804.68	39°25'25.043"N	80°52'16.447"W	680.15	61.647	1.60	1.32	-2.06		
3647.00	27.430	60.480	3519.18	-113.32	350.52	649.11	1676830.21	39°25'25.176"N	80°52'15.802"W	737.75	61.624	0.90	0.73	-1.13		
3710.00	25.950	59.210	3575.47	-118.53	364.83	673.58	1676854.67	39°25'25.316"N	80°52'15.490"W	766.03	61.569	2.52	-2.35	-2.02		
3773.00	24.060	58.040	3632.56	-123.98	378.68	696.32	1676877.40	39°25'25.453"N	80°52'15.200"W	792.63	61.461	3.10	-3.00	-1.86		



Actual Wellpath Report

Deuley Unit 3H AWP Proj: 18189

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Edna Monroe Pad
Well	Deuley Unit 3H
Wellbore	Deuley Unit 3H AWB
Slot	Slot #04

WELLPATH DATA (243 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(°)	(ft/100ft)	(ft/100ft)	(ft/100ft)	
3835.00	12.14	67.500	3888.93	-129.63	392.43	718.16	1676899.23	14316257.82	39°25'25.588"N	80°52'14.922"W	818.38	61.346	1.77	-0.71	
3899.00	25.860	56.970	3746.70	-135.91	407.32	741.34	1676922.40	14316272.71	39°25'25.735"N	80°52'14.626"W	845.87	61.214	1.20	-0.98	
3962.00	26.400	57.070	3803.26	-142.36	422.42	764.81	1676945.67	14316287.81	39°25'25.884"N	80°52'14.329"W	873.54	61.081	0.86	-0.16	
4025.00	26.770	57.620	3869.60	-148.76	437.64	788.35	1676969.40	14316303.01	39°25'26.034"N	80°52'14.026"W	901.88	60.964	0.59	0.87	
4088.00	26.560	58.210	3915.90	-154.90	452.65	812.31	1676993.34	14316318.02	39°25'26.182"N	80°52'13.721"W	929.91	60.871	-0.33	0.94	
4151.00	26.240	60.230	3972.33	-160.36	466.99	836.37	1677017.39	14316332.35	39°25'26.324"N	80°52'13.414"W	957.91	60.823	-0.51	3.21	
4214.00	26.730	61.340	4028.72	-165.08	480.70	860.89	1677041.90	14316346.06	39°25'26.459"N	80°52'13.101"W	986.00	60.822	0.78	1.76	
4277.00	26.800	61.920	4084.97	-169.43	494.18	885.85	1677066.86	14316359.53	39°25'26.592"N	80°52'12.783"W	1014.37	60.845	0.11	0.92	
4340.00	26.610	60.400	4141.25	-174.01	507.84	910.65	1677091.65	14316373.18	39°25'26.726"N	80°52'12.467"W	1042.68	60.853	-0.30	-2.41	
4403.00	26.440	59.450	4197.62	-179.15	521.93	935.00	1677115.98	14316387.28	39°25'26.865"N	80°52'12.156"W	1070.81	60.829	0.73	-1.51	
4466.00	26.090	60.620	4254.11	-184.20	535.86	959.15	1677140.12	14316401.20	39°25'27.003"N	80°52'11.848"W	1098.69	60.809	0.99	-0.56	
4529.00	26.220	61.150	4310.66	-188.82	549.37	983.41	1677164.38	14316414.70	39°25'27.136"N	80°52'11.539"W	1126.46	60.811	0.42	0.84	
4592.00	26.440	61.510	4367.12	-193.25	562.78	1007.93	1677188.88	14316428.10	39°25'27.268"N	80°52'11.226"W	1154.40	60.823	0.35	0.57	
4655.00	26.540	60.600	4423.51	-197.64	576.38	1032.52	1677213.45	14316441.70	39°25'27.402"N	80°52'10.912"W	1182.50	60.829	0.66	-1.44	
4719.00	26.970	61.360	4480.66	-202.59	590.35	1057.71	1677238.65	14316455.67	39°25'27.540"N	80°52'10.591"W	1211.31	60.832	0.86	1.19	
4782.00	26.860	62.310	4536.83	-206.86	603.81	1082.85	1677263.78	14316469.12	39°25'27.673"N	80°52'10.270"W	1239.82	60.855	-0.17	1.51	
4845.00	27.010	64.460	4593.00	-210.38	616.59	1108.36	1677289.28	14316481.90	39°25'27.798"N	80°52'09.945"W	1268.33	60.912	1.66	3.41	
4908.00	27.610	65.390	4648.98	-213.16	628.84	1134.54	1677315.45	14316494.14	39°25'27.919"N	80°52'09.611"W	1297.16	61.002	1.17	1.48	
4971.00	27.480	64.980	4704.84	-215.84	641.07	1160.99	1677341.88	14316506.36	39°25'28.040"N	80°52'09.274"W	1326.22	61.094	0.36	-0.65	
5033.00	28.150	63.440	4760.17	-218.88	653.23	1186.17	1677367.08	14316518.52	39°25'28.159"N	80°52'08.953"W	1354.15	61.158	2.42	-2.48	
5097.00	28.670	62.160	4817.98	-222.53	665.77	1210.60	1677391.47	14316531.06	39°25'28.283"N	80°52'08.641"W	1381.59	61.191	2.47	-2.00	
5160.00	28.210	61.330	4875.10	-226.55	678.35	1234.00	1677414.86	14316543.63	39°25'28.407"N	80°52'08.343"W	1408.16	61.202	1.02	-0.86	
5223.00	28.980	59.790	4931.92	-231.24	691.73	1257.69	1677438.55	14316557.00	39°25'28.539"N	80°52'08.041"W	1435.37	61.189	1.62	-2.44	
5286.00	29.790	58.990	4988.36	-236.59	705.97	1281.80	1677462.65	14316571.23	39°25'28.679"N	80°52'07.733"W	1463.35	61.156	1.38	-1.11	
5349.00	27.650	57.980	5044.38	-242.55	721.01	1306.38	1677487.21	14316586.27	39°25'28.828"N	80°52'07.420"W	1492.14	61.105	1.59	-1.76	
5412.00	28.260	59.250	5100.03	-248.61	736.39	1331.59	1677512.42	14316601.64	39°25'29.126"N	80°52'07.107"W	1521.64	61.057	1.35	2.02	
5475.00	28.080	60.740	5155.57	-254.01	751.26	1357.34	1677538.16	14316616.51	39°25'29.271"N	80°52'06.794"W	1551.38	61.036	-0.29	2.37	
5538.00	26.890	58.440	5211.46	-259.48	765.97	1382.42	1677563.22	14316631.21	39°25'29.419"N	80°52'06.450"W	1580.44	61.010	-1.89	-3.65	
5600.00	25.910	55.610	5266.99	-265.87	780.96	1405.55	1677588.34	14316646.19	39°25'29.568"N	80°52'06.155"W	1607.83	60.942	2.57	-4.56	
5663.00	26.480	58.130	5323.53	-272.40	796.15	1428.83	1677609.82	14316661.38	39°25'29.717"N	80°52'05.858"W	1635.67	60.873	1.98	4.00	

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Actual Wellpath Report

Deulley Unit 3H AWP Proj: 18189'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #04
Area	Tyler County, WV	Well	Deulley Unit 3H
Field	Tyler	Wellbore	Deulley Unit 3H AWB
Facility	Edna Monroe Pad		

WELLPATH DATA (243 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)	
5726.00	26.490	61.550	5379.92	-277.58	810.26	1453.12	1677633.89	14316675.48	39°25'29.708"N	80°52'05.548"W	1663.75	60.856	2.42	0.02	5.43	
5789.00	25.990	63.310	5436.43	-281.47	823.15	1477.80	1677658.57	14316688.37	39°25'29.835"N	80°52'05.234"W	1691.59	60.882	1.47	-0.79	2.79	
5852.00	24.930	60.580	5493.31	-285.47	835.87	1501.70	1677682.46	14316701.09	39°25'29.960"N	80°52'04.929"W	1718.66	60.899	2.51	-1.68	-4.33	
5915.00	23.130	57.790	5550.85	-290.46	848.99	1523.74	1677704.49	14316714.20	39°25'30.089"N	80°52'04.648"W	1744.30	60.874	3.38	-2.86	-4.43	
5978.00	22.390	60.900	5608.94	-295.17	861.42	1544.69	1677725.44	14316726.63	39°25'30.212"N	80°52'04.380"W	1768.65	60.853	2.24	-1.17	4.94	
6009.00	22.870	60.500	5637.56	-297.19	867.26	1555.10	1677735.83	14316732.47	39°25'30.270"N	80°52'04.248"W	1780.58	60.852	1.63	1.55	-1.29	
6069.00	23.870	59.010	5692.64	-301.62	879.26	1575.65	1677756.38	14316744.45	39°25'30.388"N	80°52'03.988"W	1804.37	60.837	1.94	1.67	-2.48	BHI AT Curve <8-1/2"> (6009')(6069'-18162')
6116.00	23.230	58.480	5735.72	-305.43	889.00	1591.71	1677772.43	14316754.19	39°25'30.484"N	80°52'03.781"W	1823.14	60.816	1.43	-1.36	-1.13	
6210.00	23.130	62.350	5822.14	-311.88	907.26	1623.86	1677804.57	14316772.44	39°25'30.664"N	80°52'03.371"W	1860.12	60.808	1.62	-0.11	4.12	
6257.00	22.860	67.450	5865.41	-313.66	915.04	1640.47	1677821.18	14316780.23	39°25'30.741"N	80°52'03.159"W	1878.42	60.848	4.28	-0.57	10.85	
6305.00	22.190	77.480	5909.76	-313.05	920.59	1657.94	1677838.64	14316785.77	39°25'30.795"N	80°52'02.936"W	1896.38	60.958	8.12	-1.40	20.90	
6352.00	22.440	84.330	5953.25	-309.81	923.40	1675.53	1677856.22	14316788.58	39°25'30.823"N	80°52'02.712"W	1913.13	61.141	5.56	0.53	14.57	
6399.00	21.990	89.180	5996.76	-304.83	924.41	1693.26	1677873.94	14316789.59	39°25'30.832"N	80°52'02.486"W	1929.16	61.368	4.02	-0.96	10.32	
6446.00	22.740	100.060	6040.25	-297.52	922.95	1711.01	1677891.69	14316788.13	39°25'30.818"N	80°52'02.260"W	1944.07	61.657	8.94	1.60	23.15	
6493.00	25.040	111.530	6083.24	-286.49	917.71	1729.22	1677909.89	14316782.89	39°25'30.766"N	80°52'02.028"W	1957.65	62.045	11.01	4.89	24.40	
6543.00	28.660	119.260	6127.86	-270.51	907.96	1749.54	1677930.20	14316773.14	39°25'30.669"N	80°52'01.769"W	1971.11	62.572	10.05	7.24	15.46	
6588.00	31.510	123.890	6166.80	-252.94	896.12	1768.72	1677949.37	14316761.31	39°25'30.552"N	80°52'01.525"W	1982.78	63.131	8.16	6.33	10.29	
6636.00	35.350	128.580	6206.85	-231.06	880.46	1790.00	1677970.64	14316745.66	39°25'30.397"N	80°52'01.254"W	1994.82	63.808	9.64	8.00	9.77	
6682.00	39.360	131.890	6243.42	-206.94	862.41	1811.27	1677991.91	14316727.62	39°25'30.218"N	80°52'00.983"W	2006.10	64.539	9.75	8.72	7.20	
6730.00	41.860	131.000	6279.85	-179.62	841.74	1834.69	1678015.32	14316706.95	39°25'30.013"N	80°52'00.685"W	2018.57	65.355	5.35	5.21	-1.85	
6776.00	43.300	129.790	6313.72	-152.69	821.57	1858.40	1678039.01	14316686.79	39°25'29.814"N	80°52'00.384"W	2031.90	66.150	3.60	3.13	-2.63	
6823.00	45.420	130.990	6347.32	-124.25	800.28	1883.42	1678064.03	14316665.51	39°25'29.603"N	80°52'00.065"W	2046.39	66.979	4.85	4.51	2.55	
6832.00†	46.139	131.894	6353.60	-118.61	796.01	1888.25	1678068.86	14316661.24	39°25'29.560"N	80°52'00.004"W	2049.18	67.142	10.75	7.99	10.04	Middlesex: 6832' MD
6871.00	49.330	135.570	6379.83	-92.83	776.05	1909.08	1678089.68	14316641.29	39°25'29.363"N	80°51'59.739"W	2060.79	67.878	10.75	8.18	9.43	
6918.00	52.590	140.740	6409.45	-59.07	748.85	1933.39	1678113.98	14316614.10	39°25'29.094"N	80°51'59.429"W	2073.35	68.827	11.00	6.94	11.00	
6965.00	56.020	146.530	6436.88	-22.55	718.11	1955.97	1678136.55	14316583.38	39°25'28.790"N	80°51'59.142"W	2083.63	69.840	12.38	7.30	12.32	
7004.00†	58.785	149.494	6457.89	9.52	690.25	1973.36	1678153.93	14316555.52	39°25'28.514"N	80°51'58.921"W	2090.59	70.721	9.55	7.09	7.60	Burket: 7004' MD
7012.00	59.360	150.080	6462.00	16.27	684.32	1976.81	1678157.38	14316549.59	39°25'28.455"N	80°51'58.877"W	2091.91	70.906	9.55	7.19	7.33	
7059.00	63.390	152.710	6484.52	57.00	648.10	1996.54	1678177.10	14316513.39	39°25'28.097"N	80°51'58.627"W	2099.10	72.016	9.88	8.57	5.60	
7073.00†	64.708	153.889	6490.64	69.49	636.85	2002.20	1678182.75	14316502.15	39°25'27.986"N	80°51'58.555"W	2101.04	72.355	12.08	9.41	8.42	Fully: 7073' MD

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Edna Monroe Pad

Actual Wellpath Report

Deuley Unit 3H AWP Proj: 18189'



MD	Inclination	Azimuth	TVD	Wellpath Data (243 stations) † = Interpolated/extrapolated station			Grid East	Grid North	EUS (ft)	Longitude	Latitude	Closure Dist	DLS	DLS	Build Rate	Turn Rate	Comments
				North	East	North											
7106.00	67.850	156.570	6503.92	99.57	609.43	2014.84	1678195.40	143164474.73	39°25'27.715"N	80°51'58.394"W	2104.99	73.171	12.08	9.52	8.12		
7159.00	71.560	160.170	6520.22	143.60	568.46	2031.07	1678211.62	143164433.78	39°25'27.308"N	80°51'58.188"W	2109.12	74.364	10.67	7.66	7.00	Marcellus POE 7167' MD	
7200.00	76.690	163.400	6533.08	188.78	525.53	2045.18	1678225.72	14316390.87	39°25'26.885"N	80°51'58.009"W	2111.62	75.589	12.76	10.93	6.82		
7247.00	81.630	166.270	6541.92	234.78	480.99	2057.24	1678237.78	14316346.35	39°25'26.445"N	80°51'57.856"W	2112.72	76.840	12.10	10.51	6.11		
7294.00	85.810	167.420	6547.06	281.20	435.51	2067.87	1678248.40	14316300.89	39°25'25.995"N	80°51'57.722"W	2113.23	78.107	9.22	8.89	2.45		
7342.00	89.910	166.880	6548.85	328.83	388.76	2078.54	1678259.06	14316254.15	39°25'25.533"N	80°51'57.587"W	2114.58	79.406	8.62	8.54	-1.12		
7436.00	89.600	167.630	6549.25	422.54	298.09	2103.25	1678283.76	14316163.52	39°25'24.636"N	80°51'57.273"W	2124.27	81.933	4.53	-0.33	-4.52		
7530.00	90.430	157.630	6549.23	516.51	209.71	2135.19	1678315.69	14316075.18	39°25'23.762"N	80°51'56.868"W	2145.46	84.391	5.39	0.88	-5.32		
7624.00	88.380	154.700	6549.38	610.24	123.74	2173.17	1678363.66	14315989.24	39°25'22.912"N	80°51'56.386"W	2176.69	86.741	3.31	-1.12	-3.12		
7718.00	88.800	153.230	6550.88	703.62	39.29	2214.42	1678394.89	14315904.82	39°25'22.077"N	80°51'55.862"W	2214.77	88.984	1.68	-0.62	-1.56		
7907.00	89.020	157.080	6554.51	892.00	-133.47	2290.88	1678471.32	14315732.14	39°25'20.368"N	80°51'54.891"W	2254.78	91.192	4.08	0.09	4.08		
8001.00	88.950	155.920	6556.17	985.76	-219.66	2328.35	1678508.78	14315645.98	39°25'19.516"N	80°51'54.416"W	2338.69	95.389	0.03	-0.14	-0.03		
8189.00	89.320	161.250	6558.44	1173.61	-395.06	2364.09	1678544.51	14315559.10	39°25'18.656"N	80°51'53.961"W	2383.89	97.389	3.71	0.56	3.67		
8283.00	89.420	164.170	6559.48	1267.52	-484.80	2423.70	1678604.09	14315380.94	39°25'16.894"N	80°51'53.205"W	2471.71	101.311	3.11	2.00	3.11		
8372.00	89.800	167.060	6560.28	1361.13	-575.84	2447.05	1678627.43	14315289.94	39°25'15.994"N	80°51'52.909"W	2513.89	103.242	3.08	3.07	3.07		
8472.00	90.280	170.470	6560.38	1455.12	-669.01	2465.55	1678645.92	14315196.81	39°25'15.072"N	80°51'52.675"W	2554.70	105.181	3.66	0.72	3.59		
8566.00	90.030	165.600	6560.13	1548.27	-760.94	2485.03	1678665.40	14315104.92	39°25'14.164"N	80°51'52.429"W	2598.93	107.025	5.19	-5.18	-6.75		
8661.00	90.000	159.190	6560.10	1643.17	-851.44	2513.75	1678694.10	14315014.45	39°25'13.269"N	80°51'52.064"W	2654.03	108.712	6.75	-0.03	-6.75		
8755.00	89.940	158.020	6560.15	1737.11	-938.96	2548.04	1678728.38	14314926.97	39°25'12.403"N	80°51'51.629"W	2715.54	110.229	1.25	-0.06	-1.24		
8849.00	90.000	158.810	6560.20	1831.05	-1026.37	2582.62	1678762.95	14314839.59	39°25'11.539"N	80°51'51.190"W	2779.09	111.674	0.84	0.06	0.84		
8944.00	88.890	158.120	6561.12	1925.99	-1114.73	2617.49	1678797.80	14314751.27	39°25'10.665"N	80°51'50.748"W	2844.98	113.068	1.38	-0.73	-0.73		
9038.00	88.920	158.290	6562.92	2019.90	-1202.00	2652.39	1678832.68	14314664.04	39°25'09.802"N	80°51'50.305"W	2912.03	114.379	0.18	0.03	0.18		
9133.00	88.860	158.710	6564.76	2114.83	-1290.37	2687.20	1678867.48	14314575.70	39°25'08.928"N	80°51'49.863"W	2980.95	115.650	0.45	-0.06	0.44		
9227.00	89.050	160.250	6566.47	2208.79	-1378.39	2720.14	1678900.41	14314487.72	39°25'08.058"N	80°51'49.445"W	3049.44	116.873	1.65	0.20	1.64		
9321.00	88.920	159.580	6568.14	2302.77	-1466.66	2752.42	1678932.67	14314399.48	39°25'07.185"N	80°51'49.035"W	3118.79	118.051	0.73	-0.14	-0.71		
9415.00	88.800	160.560	6570.01	2396.75	-1555.01	2784.45	1678964.70	14314311.17	39°25'06.311"N	80°51'48.629"W	3189.23	119.182	1.05	-0.13	1.04		
9510.00	88.980	161.870	6571.85	2491.72	-1644.93	2815.04	1678995.27	14314221.28	39°25'05.422"N	80°51'48.241"W	3260.40	120.299	1.39	0.19	1.38		

**REFERENCE WELLPATH IDENTIFICATION**

Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Edna Monroe Pad
Well	Deuley Unit 3H
Well	Deuley Unit 3H AWB
Slot	Deuley Unit 3H AWB
Slot #04	

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]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft/100ft]	[ft/100ft]	
9604.00	88.920	162.780	5573.57	-1734.47	2843.57	1679023.79	14314131.77	39°25'04.536"N	80°51'47.879"W	3330.81	121.382	0.97	-0.06	0.97	-0.97	
9598.00	89.320	161.570	5575.01	-1823.95	2872.34	1679052.55	14314042.33	39°25'03.652"N	80°51'47.514"W	3402.52	122.416	1.36	0.43	-1.28	-1.28	
9793.00	89.720	160.780	5575.81	-2774.59	1913.86	1679083.19	14313952.45	39°25'02.762"N	80°51'47.125"W	3477.10	123.396	0.93	0.42	-0.83	-1.17	
9887.00	89.480	159.680	5576.47	-2868.59	2002.32	1679147.87	14313864.03	39°25'01.888"N	80°51'46.722"W	3552.78	124.305	1.20	-0.26	-1.17	-1.17	
9981.00	90.050	159.380	5576.84	-2962.57	2090.38	1679147.83	1431376.00	39°25'01.017"N	80°51'46.305"W	3629.98	125.160	0.69	0.62	-0.32	-0.32	
10076.00	90.150	158.310	5576.67	-2178.98	3057.53	1679182.10	14313687.44	39°25'00.141"N	80°51'45.870"W	3709.40	125.974	1.13	-1.13	-1.13	-1.13	
10170.00	90.060	158.830	5576.50	-2266.48	3036.29	1679216.43	14313599.98	39°24'59.275"N	80°51'45.434"W	3788.93	126.740	0.56	0.09	0.55	0.55	
10264.00	90.000	159.530	5576.45	-2354.34	3069.70	1679249.83	14313512.15	39°24'58.406"N	80°51'45.010"W	3868.59	127.487	0.75	-0.06	0.74	0.74	
10359.00	90.060	161.450	5576.40	-2443.88	3101.43	1679281.54	14313422.65	39°24'57.521"N	80°51'44.607"W	3948.60	128.238	2.02	0.08	2.02	2.02	
10463.00	90.090	163.420	5576.28	-2533.50	3129.79	1679309.90	14313333.07	39°24'56.636"N	80°51'44.247"W	4026.69	128.989	2.10	0.03	2.10	2.10	
10547.00	90.120	163.040	5576.10	-2623.50	3156.91	1679337.01	14313243.10	39°24'55.745"N	80°51'43.804"W	4104.74	129.728	0.41	0.03	0.40	0.40	
10642.00	90.050	162.170	5575.95	-2714.15	3185.32	1679366.40	14313152.49	39°24'54.849"N	80°51'43.544"W	4184.84	130.434	0.92	-0.06	0.92	-0.06	
10736.00	90.090	161.350	5575.83	-2803.43	3214.74	1679394.81	14313063.25	39°24'53.968"N	80°51'43.170"W	4265.41	131.090	0.87	0.03	0.87	-0.87	
10830.00	90.150	159.900	5575.63	-2892.10	3245.92	1679425.98	14312974.61	39°24'53.089"N	80°51'42.775"W	4347.44	131.701	1.54	0.06	-1.54	-1.54	
10924.00	90.150	157.670	5575.39	-2979.73	3279.93	1679458.98	14312887.02	39°24'52.222"N	80°51'42.343"W	4431.34	132.254	2.37	0.00	-2.37	-2.37	
11019.00	89.880	156.030	5575.36	-3067.07	3317.28	1679497.31	14312799.71	39°24'51.368"N	80°51'41.869"W	4517.89	132.756	1.75	-0.28	-1.73	-1.73	
11113.00	89.750	155.570	5575.67	-3152.81	3355.81	1679535.83	14312714.00	39°24'50.510"N	80°51'41.380"W	4604.53	133.214	0.51	-0.14	-0.49	-0.49	
11207.00	89.910	160.150	5575.95	-3239.86	3391.23	1679571.23	14312626.99	39°24'49.650"N	80°51'40.930"W	4690.11	133.692	4.88	0.17	4.87	4.87	
11302.00	89.820	165.250	5576.17	-3330.53	3419.47	1679599.46	14312536.36	39°24'48.753"N	80°51'40.288"W	4773.39	134.245	5.37	-0.09	5.37	5.37	
11396.00	89.910	167.140	5576.39	-3421.81	3441.90	1679621.88	14312445.11	39°24'47.861"N	80°51'40.014"W	4853.40	134.832	2.01	0.10	2.01	2.01	
11491.00	90.830	166.510	5575.78	-3514.31	3463.55	1679643.52	14312352.65	39°24'46.936"N	80°51'39.205"W	4934.22	135.417	1.17	0.97	-0.66	-0.66	
11585.00	91.420	160.200	5573.93	-3604.30	3490.46	1679670.42	14312262.69	39°24'46.046"N	80°51'39.673"W	5017.40	135.919	6.74	0.63	-6.71	-6.71	
11679.00	89.820	153.620	5572.91	-3690.72	3527.30	1679707.25	14312176.31	39°24'45.191"N	80°51'39.205"W	5105.22	136.297	7.20	-1.70	-7.00	-7.00	
11773.00	88.820	153.540	5573.21	-3774.90	3569.12	1679749.06	14312092.16	39°24'44.359"N	80°51'38.674"W	5195.05	136.605	0.09	0.00	-0.09	-0.09	
11868.00	88.690	154.730	5574.28	-3860.37	3610.56	1679790.48	14312006.72	39°24'43.513"N	80°51'38.148"W	5285.70	136.915	1.59	-0.98	-1.25	-1.25	
11962.00	89.940	160.870	5575.24	-3947.36	3646.06	1679825.96	14311919.77	39°24'42.653"N	80°51'37.697"W	5373.58	137.272	6.83	1.12	6.53	6.53	
12056.00	90.150	162.840	5575.16	-4036.68	3675.33	1679855.22	14311830.49	39°24'41.770"N	80°51'37.326"W	5459.20	137.683	2.11	0.22	2.10	2.10	
12150.00	90.710	159.100	5574.46	-4125.52	3705.98	1679885.85	14311741.68	39°24'40.891"N	80°51'36.937"W	5545.65	138.066	4.02	0.60	-3.98	-3.98	
12245.00	89.940	154.460	5573.92	-4212.80	3743.42	1679923.28	14311654.43	39°24'40.028"N	80°51'36.462"W	5635.68	138.376	4.95	-0.81	-4.88	-4.88	
12339.00	89.750	160.260	5574.17	-4299.52	3779.59	1679959.44	14311567.75	39°24'39.171"N	80°51'36.003"W	5724.61	138.682	6.17	-0.20	6.17	6.17	





Actual Wellpath Report

Deulley Unit 3H AWP Proj: 18189'
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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Slot	Slot #04
Area	Tyler County, WV		Well	Deulley Unit 3H
Field	Tyler		Wellbore	Deulley Unit 3H AWB
Facility	Edna Monroe Pad			

WELLPATH DATA (243 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
18092.00	89.910	155.880	6584.64	11061.56	-9720.66	5682.89	1681861.97	14306148.78	39°23'45.561"N	80°51'11.866"W	11259.95	149.689	0.94	-0.03	-0.94	
18162.00	89.850	154.180	6584.79	11131.24	-9784.12	5712.44	1681891.51	14306085.35	39°23'44.933"N	80°51'11.491"W	11329.64	149.722	2.43	-0.09	-2.43	
18189.00	89.850	154.180	6584.86	11158.08	-9808.42	5724.20	1681903.26	14306061.06	39°23'44.693"N	80°51'11.342"W	11356.56	149.732	0.00	0.00	0.00	Projected MD at TD: 18189'

HOLE & CASING SECTIONS - Ref Wellbore: Deulley Unit 3H AWB Ref Wellpath: Deulley Unit 3H AWP Proj: 18189'									
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	25.00	100.00	75.00	25.00	100.00	0.00	0.00	0.00	-0.14
17.5in Open Hole	100.00	550.00	450.00	100.00	550.00	0.00	-0.14	-0.75	-0.34
13.375in Casing Surface	25.00	550.00	525.00	25.00	550.00	0.00	0.00	-0.75	-0.34
12.25in Open Hole	550.00	2615.00	2065.00	550.00	2570.16	-0.75	-0.34	173.21	291.15
9.625in Casing Intermediate	25.00	2615.00	2590.00	25.00	2570.16	0.00	0.00	173.21	291.15

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Deulley Unit 3H POE Rev-1	6520.00	574.36	2024.14	1678204.69	14316439.68	39°25'27.368"N	80°51'58.276"W	point
Deulley Unit 3H BHL Rev-2	6546.00	-9825.63	5714.74	1681893.81	14306043.85	39°23'44.523"N	80°51'11.463"W	point
Deulley Unit 3H LP Rev-1	6546.00	427.90	2076.12	1678256.65	14316293.27	39°25'25.919"N	80°51'57.617"W	point
Deulley Unit 3H 20' L/R Hard Line	6600.00	-4698.87	3895.43	1680075.23	14311168.56	39°24'35.222"N	80°51'34.535"W	rectangle