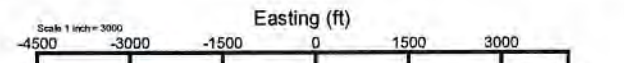


ANTERO RESOURCES CORPORATION

Location: Tyler County, WV
 Field: Tyler
 Facility: Blizzard Pad

Slot: Slot #12
 Well: Kerns Unit 2H
 Wellbore: Kerns Unit 2H PWB



Projected MD at TD: 23319' : 6437.77ft TVD, 16283.98ft N, 2786.45ft W

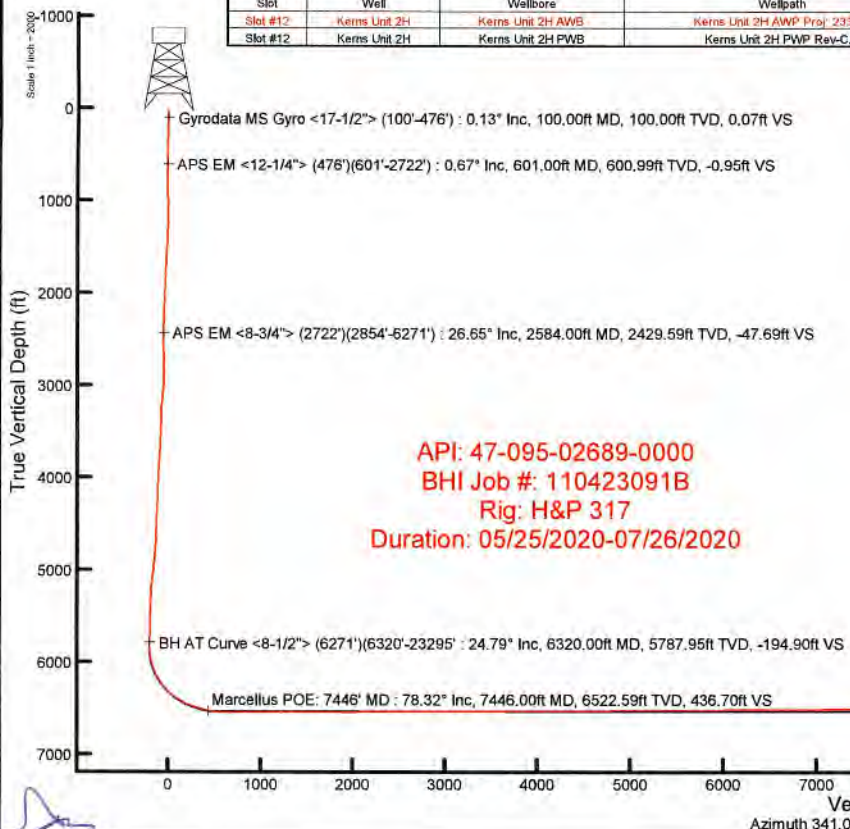


File reference wellbore is Kerns Unit 2H PWP Rev-C.0	Grid System: NAD83 / UTM Zone 17 North, US Feet
True vertical depths are referenced to H&P 317 (RKB)	North Reference: Grid north
Referenced wellbore measured depths are referenced to H&P 317 (RKB)	Scale: True distance
H&P 317 (RKB) to Mean Sea Level: -1003.5 feet	Coordinates are in feet referenced to GRS
Mean Sea Level to Omsud level (At Slot: Slot #12): -1004 feet	Depths are in feet
Other wellbore MDs are referenced to each path's default MD datum	Created by: Deleted on 2024-07-31, Orlanave WA, MPL, EasternUS_Path

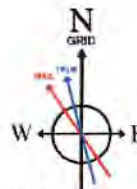
Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Blizzard Pad	1682398.190	14343430.420	39°29'54.1703"N	80°51'4.2494"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Longitude
Slot #12	237.27	206.51	1682604.820	14343667.600	39°29'56.5120"N
H&P 317 (RKB) to Ground level (At Slot: Slot #12)					25.5ft
Mean Sea Level to Ground level (At Slot: Slot #12)					-1004ft
H&P 317 (RKB) to Mean Sea Level					1029.5ft

Well Profile Data							
Design Comment	MD (ft)	Inc (")	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	VS (ft)
Tie On	6271.00	25.240	75.870	5743.54	589.08	2251.84	0.29
Proj. to Bottom	6342.00	25.240	75.870	5807.77	575.47	2281.00	0.00
Curve KOP	6375.00	25.240	75.870	5837.62	578.91	2294.85	0.00
End of 3D Arc	7326.22	73.874	343.884	6502.24	1154.09	2377.12	8.00
POE	7361.86	74.552	341.063	6512.00	1188.76	2366.80	8.00
Landing Pt.	7533.51	90.000	341.063	6535.00	1347.16	2311.77	9.00
BHL	23288.31	90.000	341.063	6535.00	16249.28	-2801.04	0.00

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #12	Kerns Unit 2H	Kerns Unit 2H AWB	Kerns Unit 2H AWP Proj: 23319'
Slot #12	Kerns Unit 2H	Kerns Unit 2H PWB	Kerns Unit 2H PWP Rev-C.0



API: 47-095-02689-0000
 BHI Job #: 110423091B
 Rig: H&P 317
 Duration: 05/25/2020-07/26/2020

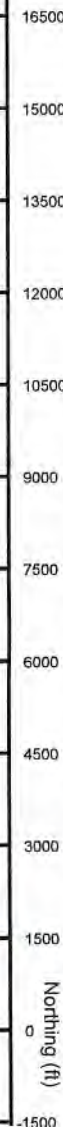


User specified (HDGM) Dip: 66.48° Field: 51785 nT
 Magnetic North is 7.56 degrees West of True North (at 7/20/2020)
 Grid North is 0.10 degrees East of True North
 To correct azimuth from True to Grid subtract 0.10 degrees
 To correct azimuth from Magnetic to Grid subtract 7.66 degrees

Marcellus POE: 7446' MD : 6522.59ft TVD, 1274.11ft N, 2367.47ft E
 BH AT Curve <8-1/2"> (6271')(6320'-23295' : 5787.95ft TVD, 573.48ft N, 2271.65ft E
 APS EM <8-3/4"> (2722')(2854'-5271') : 2429.59ft TVD, 185.77ft N, 588.29ft E
 APS EM <12-1/4"> (476')(601'-2722') : 600.99ft TVD, 1.46ft S, 1.32ft W
 Gyrodala MS Gyro <17-1/2"> (100'-476') : 100.00ft TVD, 0.05ft N, 0.07ft W
 Slot #12

Projected MD at TD: 23319' : 90.25° Inc, 23319.00ft MD, 6437.77ft TVD, 16306.77ft VS

Vertical Section (ft)
 Azimuth 341.06° with reference 0.00 N, 0.00 E



Scale 1 inch = 200'



Actual Wellpath Report

Kerns Unit 2H AWP Proj: 23319'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Kerns Unit 2H
Field	Tyler	API	47-095-02689-0000
Facility	Blizzard Pad	Wellbore	Kerns Unit 2H AWB
Slot	Slot #12		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Delaset
Scale	0.999602	Report Generated	7/31/2020 at 6:01:06 PM
Convergence at slot	0.10° East	Database	WA_MPL_EasternUS_Defn

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	237.27	206.51	1682604.62	14343667.60	39°29'56.5120"N	80°51'1.6101"W
Facility Reference Pt			1682398.19	14343430.42	39°29'54.1703"N	80°51'4.2494"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.3013"W

WELLPATH DATUM			
Calculation method	Minimum curvature	H&P 317 (RKB) to Facility Vertical Datum	1029.50ft
Horizontal Reference Pt	Slot	H&P 317 (RKB) to Mean Sea Level	1029.50ft
Vertical Reference Pt	H&P 317 (RKB)	H&P 317 (RKB) to Ground Level at Slot (Slot #12)	25.50ft
MD Reference Pt	H&P 317 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	341.06°



Actual Wellpath Report

Kerns Unit 2H AWP Proj: 23319'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Kerns Unit 2H
Field	Tyler	API	47-095-02689-0000
Facility	Blizzard Pad	Wellbore	Kerns Unit 2H AWB
Slot	Slot #12		

WELLPATH DATA (255 stations) † = interpolated, ‡ = extrapolated station																	
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS ["/100ft]	Build Rate ["/100ft]	Turn Rate ["/100ft]	Comments	
0.00	0.00	303.580	0.00	0.00	0.00	0.00	1682604.62	14343667.60	39°29'56.5120"N	80°51'1.6101"W	0.00	0.000	0.00	0.00	0.00		
25.50	0.000	303.580	25.50	0.00	0.00	0.00	1682604.62	14343667.60	39°29'56.5120"N	80°51'1.6101"W	0.00	0.000	0.00	0.00	0.00		
100.00	0.130	303.580	100.00	0.07	0.05	-0.07	1682604.55	14343667.65	39°29'56.5124"N	80°51'1.6110"W	0.08	303.580	0.17	0.17	0.00		Gyrodata MS Gyro <17-1/2"> (100'-476')
200.00	0.170	243.910	200.00	0.14	0.04	-0.30	1682604.32	14343667.64	39°29'56.5124"N	80°51'1.6139"W	0.30	278.442	0.15	0.04	0.04		-59.67
300.00	0.250	235.060	300.00	0.06	-0.15	-0.61	1682604.01	14343667.45	39°29'56.5105"N	80°51'1.6178"W	0.63	256.550	0.09	0.08	0.08		-8.85
400.00	0.380	233.380	400.00	-0.10	-0.47	-1.06	1682603.57	14343667.13	39°29'56.5074"N	80°51'1.6235"W	1.15	246.051	0.13	0.13	0.13		-1.68
476.00	0.570	230.100	475.99	-0.31	-0.86	-1.55	1682603.07	14343666.74	39°29'56.5035"N	80°51'1.6298"W	1.77	240.895	0.25	0.25	0.25		-4.32
601.00	0.670	105.480	600.99	-0.95	-1.46	-1.32	1682603.30	14343666.15	39°29'56.4976"N	80°51'1.6269"W	1.96	222.210	0.88	0.88	0.06		-99.70
692.00	3.120	73.140	691.94	-1.34	-0.88	1.56	1682606.18	14343666.72	39°29'56.5033"N	80°51'1.5901"W	1.79	119.354	2.83	2.69	2.69		-35.54
783.00	5.750	68.130	782.66	-1.20	1.54	8.16	1682612.78	14343669.14	39°29'56.5270"N	80°51'1.5059"W	8.31	79.334	2.92	2.89	2.89		-5.51
874.00	9.700	68.170	872.81	-0.58	6.09	19.52	1682624.13	14343673.69	39°29'56.5718"N	80°51'1.3610"W	20.44	72.674	4.34	4.34	0.04		
967.00	13.190	68.750	963.95	0.25	12.85	36.68	1682641.29	14343680.44	39°29'56.6384"N	80°51'1.1418"W	38.87	70.696	3.75	3.75	0.62		
1059.00	16.130	69.700	1052.94	0.97	21.09	58.46	1682663.05	14343688.68	39°29'56.7194"N	80°51'0.8639"W	62.14	70.162	3.21	3.20	1.03		
1153.00	18.790	71.240	1142.61	1.24	30.49	85.04	1682689.63	14343698.08	39°29'56.8119"N	80°51'0.5246"W	90.34	70.276	2.87	2.83	1.64		
1248.00	20.600	71.560	1232.04	1.04	40.70	115.39	1682719.96	14343708.28	39°29'56.9123"N	80°51'0.1373"W	122.35	70.572	1.91	1.91	0.34		
1343.00	22.810	74.060	1320.31	-0.07	51.04	148.95	1682753.51	14343718.62	39°29'57.0140"N	80°50'59.7089"W	157.46	71.085	2.52	2.33	2.63		
1437.00	25.380	77.130	1406.11	-3.15	60.54	186.12	1682790.66	14343728.11	39°29'57.1072"N	80°50'59.2345"W	195.72	71.983	3.04	2.73	3.27		
1532.00	26.670	77.800	1491.48	-7.81	69.58	226.81	1682831.34	14343737.15	39°29'57.1959"N	80°50'58.7153"W	237.24	72.946	1.39	1.36	0.71		
1627.00	27.100	77.750	1576.21	-12.83	78.67	268.79	1682873.31	14343746.24	39°29'57.2851"N	80°50'58.1795"W	280.07	73.686	0.45	0.45	-0.05		
1722.00	28.120	76.670	1660.39	-17.54	88.43	311.72	1682916.22	14343755.99	39°29'57.3808"N	80°50'57.6316"W	324.02	74.163	1.20	1.07	-1.14		
1817.00	26.980	76.920	1744.62	-21.93	98.47	354.50	1682958.98	14343766.03	39°29'57.4793"N	80°50'57.0857"W	367.92	74.477	1.21	-1.20	0.26		
1911.00	27.120	77.270	1828.33	-26.42	108.01	396.17	1683000.63	14343775.57	39°29'57.5730"N	80°50'56.5540"W	410.63	74.749	0.23	0.15	0.37		
2006.00	26.220	76.000	1913.23	-30.57	117.86	437.65	1683042.10	14343785.41	39°29'57.6696"N	80°50'56.0246"W	453.25	74.928	1.12	-0.95	-1.34		
2101.00	26.530	75.580	1998.34	-34.05	128.22	478.57	1683082.99	14343795.77	39°29'57.7713"N	80°50'55.5025"W	495.45	75.001	0.38	0.33	-0.44		
2196.00	26.700	75.570	2083.27	-37.40	138.82	519.78	1683124.20	14343806.37	39°29'57.8754"N	80°50'54.9764"W	538.00	75.046	0.18	0.18	-0.01		
2291.00	26.870	75.330	2168.08	-40.68	149.58	561.22	1683165.62	14343817.12	39°29'57.9810"N	80°50'54.4476"W	580.81	75.076	0.21	0.18	-0.25		
2386.00	26.900	74.780	2252.81	-43.67	160.66	602.73	1683207.11	14343828.19	39°29'58.0899"N	80°50'53.9179"W	623.77	75.075	0.26	0.03	-0.58		
2480.00	26.730	73.750	2336.70	-46.04	172.16	643.54	1683247.90	14343839.69	39°29'58.2028"N	80°50'53.3970"W	666.17	75.023	0.53	-0.18	-1.10		
2575.00	26.730	72.530	2421.55	-47.59	184.55	684.43	1683288.78	14343852.07	39°29'58.3246"N	80°50'52.8751"W	708.88	74.910	0.58	0.00	-1.28		
2584.00	26.649	72.406	2429.59	-47.69	185.77	688.29	1683292.63	14343853.29	39°29'58.3366"N	80°50'52.8259"W	712.92	74.896	1.09	-0.90	-1.38		APS EM <8-3/4"> (2722')(2854'-6271')



Actual Wellpath Report

Kerns Unit 2H AWP Proj: 23319'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Kerns Unit 2H
Field	Tyler	API	47-095-02689-0000
Facility	Blizzard Pad	Wellbore	Kerns Unit 2H AWB
Slot	Slot #12		

WELLPATH DATA (255 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
2670.00	25.880	71.180	2506.71	-48.19	197.65	724.44	1683328.77	14343865.17	39°29'58.4534"N	80°50'52.3645"W	750.92	74.739	1.09	-0.89	-1.43	
2722.00	25.480	69.980	2553.58	-48.00	205.14	745.69	1683350.01	14343872.66	39°29'58.5271"N	80°50'52.0932"W	773.39	74.618	1.26	-0.77	-2.31	
2854.00	24.580	66.890	2673.18	-45.47	225.64	797.62	1683401.92	14343893.15	39°29'58.7288"N	80°50'51.4303"W	828.92	74.204	1.20	-0.68	-2.34	
2949.00	25.470	67.440	2759.27	-42.74	241.23	834.66	1683438.94	14343908.73	39°29'58.8823"N	80°50'50.9575"W	868.82	73.880	0.97	0.94	0.58	
3044.00	27.020	69.780	2844.47	-40.97	256.53	873.77	1683478.04	14343924.02	39°29'59.0328"N	80°50'50.4582"W	910.65	73.639	1.96	1.63	2.46	
3139.00	27.530	74.740	2928.92	-41.90	269.77	915.21	1683519.46	14343937.26	39°29'59.1630"N	80°50'49.9293"W	954.14	73.577	2.45	0.54	5.22	
3233.00	28.750	78.900	3011.82	-46.38	279.84	958.36	1683562.59	14343947.33	39°29'59.2618"N	80°50'49.3787"W	998.38	73.722	2.46	1.30	4.43	
3331.00	29.520	82.450	3097.42	-54.36	287.55	1005.42	1683609.64	14343955.03	39°29'59.3372"N	80°50'48.7781"W	1045.73	74.040	1.93	0.79	3.62	
3426.00	28.690	80.320	3180.43	-62.65	294.46	1051.11	1683655.31	14343961.94	39°29'59.4047"N	80°50'48.1952"W	1091.57	74.350	1.40	-0.87	-2.24	
3521.00	26.810	76.960	3264.50	-68.52	303.13	1094.46	1683698.65	14343970.61	39°29'59.4897"N	80°50'47.6419"W	1135.66	74.519	2.57	-1.98	-3.54	
3616.00	24.970	72.410	3349.97	-71.20	314.02	1134.46	1683738.62	14343981.50	39°29'59.5967"N	80°50'47.1315"W	1177.12	74.528	2.85	-1.94	-4.79	
3711.00	22.800	77.080	3436.84	-73.60	324.20	1171.52	1683775.67	14343991.67	39°29'59.6967"N	80°50'46.6585"W	1215.55	74.531	3.03	-2.28	4.92	
3806.00	23.010	77.490	3524.35	-77.61	332.34	1207.59	1683811.72	14343999.80	39°29'59.7765"N	80°50'46.1982"W	1252.48	74.613	0.28	0.22	0.43	
3900.00	23.250	77.130	3610.79	-81.63	340.45	1243.61	1683847.73	14344007.91	39°29'59.8560"N	80°50'45.7385"W	1289.37	74.690	0.30	0.26	-0.38	
3995.00	24.180	76.820	3697.77	-85.57	349.06	1280.83	1683884.94	14344016.52	39°29'59.9405"N	80°50'45.2634"W	1327.55	74.756	0.99	0.98	-0.33	
4090.00	25.340	78.950	3784.04	-90.31	357.40	1319.73	1683923.82	14344024.85	39°30'0.0222"N	80°50'44.7670"W	1367.27	74.847	1.54	1.22	2.24	
4185.00	27.550	77.710	3869.09	-95.65	365.97	1361.16	1683965.23	14344033.42	39°30'0.1063"N	80°50'44.2384"W	1409.50	74.951	2.40	2.33	-1.31	
4280.00	28.490	76.700	3952.96	-100.42	375.86	1404.67	1684008.73	14344043.31	39°30'0.2033"N	80°50'43.6830"W	1454.09	75.020	1.11	0.99	-1.06	
4375.00	27.720	76.210	4036.75	-104.63	386.34	1448.18	1684052.22	14344053.78	39°30'0.3061"N	80°50'43.1278"W	1498.83	75.063	0.85	-0.81	-0.52	
4469.00	27.490	74.470	4120.05	-107.88	397.36	1490.32	1684094.34	14344064.80	39°30'0.4143"N	80°50'42.5900"W	1542.38	75.071	0.89	-0.24	-1.85	
4564.00	26.520	75.020	4204.70	-110.65	408.71	1531.93	1684135.94	14344076.15	39°30'0.5258"N	80°50'42.0589"W	1585.52	75.062	1.05	-1.02	0.58	
4659.00	25.440	76.530	4290.10	-114.06	418.95	1572.27	1684176.26	14344086.38	39°30'0.6263"N	80°50'41.5442"W	1627.13	75.080	1.33	-1.14	1.59	
4754.00	24.810	77.980	4376.11	-118.40	427.85	1611.60	1684215.58	14344095.28	39°30'0.7136"N	80°50'41.0421"W	1667.43	75.132	0.93	-0.66	1.53	
4849.00	25.600	77.100	4462.06	-122.97	436.58	1651.11	1684255.07	14344104.01	39°30'0.7993"N	80°50'40.5380"W	1707.85	75.189	0.92	0.83	-0.93	
4944.00	25.700	74.180	4547.70	-126.25	446.78	1690.93	1684294.88	14344114.20	39°30'0.8994"N	80°50'40.0298"W	1748.96	75.199	1.33	0.11	-3.07	
5039.00	25.930	73.590	4633.22	-128.28	458.26	1730.67	1684334.60	14344125.68	39°30'1.0122"N	80°50'39.5225"W	1790.32	75.169	0.36	0.24	-0.62	
5133.00	25.710	77.880	4717.85	-131.61	468.35	1770.33	1684374.24	14344135.77	39°30'1.1112"N	80°50'39.0164"W	1831.23	75.181	2.00	-0.23	4.56	
5228.00	25.190	80.100	4803.63	-137.24	476.16	1810.39	1684414.29	14344143.56	39°30'1.1876"N	80°50'38.5052"W	1871.96	75.264	1.14	-0.55	2.34	
5323.00	25.230	80.360	4889.58	-143.69	483.02	1850.27	1684454.15	14344150.43	39°30'1.2548"N	80°50'37.9963"W	1912.28	75.369	0.12	0.04	0.27	
5418.00	24.990	83.480	4975.61	-151.27	488.69	1890.17	1684494.03	14344156.10	39°30'1.3102"N	80°50'37.4872"W	1952.32	75.504	1.42	-0.25	3.28	



Actual Wellpath Report

Kerns Unit 2H AWP Proj: 23319'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Kerns Unit 2H
Field	Tyler	API	47-095-02689-0000
Facility	Blizzard Pad	Wellbore	Kerns Unit 2H AWB
Slot	Slot #12		

WELLPATH DATA (255 stations) † = interpolated, ‡ = extrapolated station																
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS ["/100ft]	Build Rate ["/100ft]	Turn Rate ["/100ft]	Comments
5513.00	27.120	85.120	5060.95	-160.85	492.81	1931.69	1684535.53	14344160.22	39°30'1.3502"N	80°50'36.9575"W	1993.56	75.688	2.37	2.24	1.73	
5608.00	27.700	81.470	5145.29	-170.10	497.93	1975.10	1684578.93	14344165.33	39°30'1.4000"N	80°50'36.4036"W	2036.90	75.850	1.87	0.61	-3.84	
5703.00	25.930	76.230	5230.08	-175.96	506.15	2017.12	1684620.93	14344173.55	39°30'1.4805"N	80°50'35.8674"W	2079.65	75.914	3.11	-1.86	-5.52	
5797.00	26.770	78.640	5314.32	-180.61	515.21	2057.84	1684661.63	14344182.61	39°30'1.5694"N	80°50'35.3477"W	2121.35	75.944	1.45	0.89	2.56	
5892.00	25.900	74.690	5399.46	-184.75	524.91	2098.83	1684702.61	14344192.30	39°30'1.6645"N	80°50'34.8246"W	2163.47	75.959	2.06	-0.92	-4.16	
5987.00	24.520	71.650	5485.42	-186.26	536.59	2137.55	1684741.32	14344203.98	39°30'1.7793"N	80°50'34.3303"W	2203.87	75.908	1.99	-1.45	-3.20	
6082.00	23.890	73.360	5572.06	-187.24	548.31	2174.70	1684778.45	14344215.69	39°30'1.8945"N	80°50'33.8562"W	2242.75	75.849	0.99	-0.66	1.80	
6176.00	25.160	76.500	5657.59	-189.90	558.42	2212.37	1684816.10	14344225.80	39°30'1.9938"N	80°50'33.3755"W	2281.75	75.834	1.94	1.35	3.34	
6271.00	25.240	75.870	5743.54	-193.51	568.08	2251.64	1684855.36	14344235.45	39°30'2.0886"N	80°50'32.8742"W	2322.20	75.840	0.29	0.08	-0.66	
6320.00	24.790	73.920	5787.95	-194.90	573.48	2271.65	1684875.36	14344240.85	39°30'2.1416"N	80°50'32.6189"W	2342.92	75.832	1.92	-0.92	-3.98	BH AT Curve <8-1/2"> (6271')(6320'-23295'
6379.00	24.500	68.940	5841.58	-195.06	581.30	2294.95	1684898.65	14344248.67	39°30'2.2185"N	80°50'32.3214"W	2367.43	75.786	3.55	-0.49	-8.44	
6474.00	24.650	53.930	5928.06	-188.49	600.06	2329.38	1684933.07	14344267.42	39°30'2.4033"N	80°50'31.8818"W	2405.43	75.554	6.56	0.16	-15.80	
6569.00	26.960	41.610	6013.64	-172.05	627.85	2359.72	1684963.40	14344295.20	39°30'2.6774"N	80°50'31.4941"W	2441.82	75.101	6.13	2.43	-12.97	
6664.00	30.760	30.190	6096.89	-145.54	664.99	2386.27	1684989.93	14344332.33	39°30'3.0441"N	80°50'31.1546"W	2477.19	74.428	7.03	4.00	-12.02	
6759.00	35.530	13.820	6176.57	-106.33	712.92	2405.13	1685008.78	14344380.23	39°30'3.5174"N	80°50'30.9130"W	2508.56	73.489	10.64	5.02	-17.23	
6853.00	40.690	6.250	6250.55	-55.57	769.97	2415.00	1685018.65	14344437.26	39°30'4.0811"N	80°50'30.7858"W	2534.77	72.316	7.40	5.49	-8.05	
6948.00	47.970	4.580	6318.46	4.89	836.02	2421.20	1685024.85	14344503.28	39°30'4.7338"N	80°50'30.7052"W	2561.47	70.951	7.76	7.66	-1.76	
6998.00†	52.348	3.981	6350.49	40.16	874.29	2424.05	1685027.70	14344541.54	39°30'5.1120"N	80°50'30.6679"W	2576.90	70.167	8.80	8.76	-1.20	Middlesex: 6998' MD
7043.00	56.290	3.500	6376.73	73.88	910.76	2426.43	1685030.08	14344578.00	39°30'5.4724"N	80°50'30.6367"W	2591.73	69.426	8.80	8.76	-1.07	
7138.00	63.190	0.000	6424.59	150.61	992.71	2428.85	1685032.50	14344659.91	39°30'6.2823"N	80°50'30.6041"W	2623.89	67.789	7.93	7.26	-3.68	
7185.00	66.480	359.290	6444.57	190.93	1035.24	2428.58	1685032.23	14344702.43	39°30'6.7026"N	80°50'30.6065"W	2640.03	66.913	7.13	7.00	-1.51	Burkett: 7185' MD
7233.00	68.720	355.120	6462.87	233.55	1079.55	2426.41	1685030.06	14344746.72	39°30'7.1406"N	80°50'30.6333"W	2655.73	66.015	9.29	4.67	-8.69	
7251.00†	69.607	352.615	6469.27	249.95	1096.28	2424.61	1685028.26	14344763.44	39°30'7.3059"N	80°50'30.6559"W	2660.93	65.670	13.91	4.93	-13.92	Tully: 7251' MD
7280.00	71.110	348.640	6479.02	276.88	1123.22	2420.16	1685023.81	14344790.37	39°30'7.5723"N	80°50'30.7120"W	2668.10	65.104	13.91	5.18	-13.71	
7328.00	73.590	341.900	6493.59	322.46	1167.42	2408.52	1685012.18	14344834.55	39°30'8.0093"N	80°50'30.8595"W	2676.53	64.140	14.34	5.17	-14.04	
7375.00	75.310	339.030	6506.19	367.73	1210.08	2393.38	1684997.04	14344877.20	39°30'8.4312"N	80°50'31.0518"W	2681.89	63.179	6.93	3.66	-6.11	
7423.00	77.000	337.370	6517.68	414.27	1253.35	2376.07	1684979.74	14344920.45	39°30'8.8592"N	80°50'31.2716"W	2686.37	62.189	4.87	3.52	-3.46	
7446.00†	78.324	337.640	6522.59	436.70	1274.11	2367.47	1684971.14	14344941.20	39°30'9.0645"N	80°50'31.3808"W	2688.54	61.712	5.87	5.76	1.17	Marcellus POE: 7446' MD
7518.00	82.470	338.470	6534.60	507.58	1339.94	2340.95	1684944.63	14345007.01	39°30'9.7156"N	80°50'31.7177"W	2697.31	60.213	5.87	5.76	1.15	
7613.00	88.340	338.640	6542.21	602.14	1428.04	2306.34	1684910.04	14345095.07	39°30'10.5869"N	80°50'32.1572"W	2712.66	58.235	6.18	6.18	0.18	



Actual Wellpath Report

Kerns Unit 2H AWP Proj: 23319'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Kerns Unit 2H
Field	Tyler	API	47-095-02689-0000
Facility	Blizzard Pad	Wellbore	Kerns Unit 2H AWB
Slot	Slot #12		

WELLPATH DATA (255 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
7707.00	90.400	338.690	6543.24	696.05	1515.59	2272.15	1684875.86	14345182.58	39°30'11.4528"N	80°50'32.5915"W	2731.24	56.296	2.19	2.19	0.05	
7802.00	90.030	338.580	6542.88	790.96	1604.06	2237.54	1684841.26	14345271.02	39°30'12.3278"N	80°50'33.0310"W	2753.11	54.364	0.41	-0.39	-0.12	
7897.00	90.490	340.600	6542.45	885.92	1693.09	2204.41	1684808.15	14345360.01	39°30'13.2083"N	80°50'33.4516"W	2779.57	52.474	2.18	0.48	2.13	
7992.00	89.880	340.350	6542.15	980.92	1782.63	2172.66	1684776.41	14345449.51	39°30'14.0937"N	80°50'33.8547"W	2810.38	50.632	0.69	-0.64	-0.26	
8087.00	90.430	340.890	6541.89	1075.91	1872.24	2141.14	1684744.90	14345539.10	39°30'14.9800"N	80°50'34.2549"W	2844.25	48.833	0.81	0.58	0.57	
8182.00	90.430	340.640	6541.18	1170.91	1961.94	2109.84	1684713.62	14345628.75	39°30'15.8670"N	80°50'34.6521"W	2881.08	47.080	0.26	0.00	-0.26	
8277.00	90.120	340.360	6540.72	1265.90	2051.49	2078.13	1684681.92	14345718.27	39°30'16.7526"N	80°50'35.0547"W	2920.14	45.370	0.44	-0.33	-0.29	
8371.00	90.590	340.610	6540.14	1359.90	2140.09	2046.73	1684650.53	14345806.83	39°30'17.6288"N	80°50'35.4533"W	2961.26	43.723	0.57	0.50	0.27	
8466.00	89.720	340.260	6539.88	1454.89	2229.60	2014.92	1684618.73	14345896.31	39°30'18.5140"N	80°50'35.8572"W	3005.16	42.105	0.99	-0.92	-0.37	
8561.00	90.220	340.650	6539.93	1549.88	2319.12	1983.14	1684586.96	14345985.80	39°30'19.3994"N	80°50'36.2607"W	3051.42	40.534	0.67	0.53	0.41	
8656.00	90.340	340.500	6539.47	1644.88	2408.72	1951.54	1684555.38	14346075.35	39°30'20.2854"N	80°50'36.6617"W	3100.07	39.014	0.20	0.13	-0.16	
8751.00	90.280	339.720	6538.95	1739.86	2498.05	1919.22	1684523.07	14346164.65	39°30'21.1688"N	80°50'37.0721"W	3150.18	37.535	0.82	-0.06	-0.82	
8846.00	90.830	340.360	6538.03	1834.84	2587.34	1886.79	1684490.66	14346253.90	39°30'22.0518"N	80°50'37.4838"W	3202.23	36.101	0.89	0.58	0.67	
8940.00	89.720	340.440	6537.58	1928.83	2675.89	1855.26	1684459.14	14346342.42	39°30'22.9276"N	80°50'37.8841"W	3256.13	34.735	1.18	-1.18	0.09	
9035.00	90.740	340.660	6537.20	2023.83	2765.46	1823.63	1684427.52	14346431.96	39°30'23.8134"N	80°50'38.2857"W	3312.61	33.402	1.10	1.07	0.23	
9130.00	90.250	340.830	6536.38	2118.82	2855.15	1792.30	1684396.21	14346521.60	39°30'24.7003"N	80°50'38.6834"W	3371.08	32.118	0.56	-0.52	0.18	
9225.00	90.150	340.460	6536.05	2213.82	2944.78	1760.82	1684364.73	14346611.20	39°30'25.5867"N	80°50'39.0831"W	3431.06	30.877	0.40	-0.11	-0.39	
9320.00	90.490	340.860	6535.52	2308.82	3034.41	1729.36	1684333.28	14346700.80	39°30'26.4731"N	80°50'39.4825"W	3492.61	29.679	0.55	0.36	0.42	
9415.00	90.400	340.360	6534.78	2403.81	3124.02	1697.82	1684301.76	14346790.37	39°30'27.3593"N	80°50'39.8829"W	3555.57	28.523	0.53	-0.09	-0.53	
9509.00	90.180	340.780	6534.30	2497.80	3212.67	1666.55	1684270.50	14346878.98	39°30'28.2360"N	80°50'40.2799"W	3619.20	27.418	0.50	-0.23	0.45	
9604.00	90.280	340.210	6533.92	2592.80	3302.21	1634.83	1684238.80	14346968.49	39°30'29.1215"N	80°50'40.6826"W	3684.74	26.339	0.61	0.11	-0.60	
9699.00	90.060	340.650	6533.64	2687.79	3391.73	1603.01	1684206.99	14347057.97	39°30'30.0067"N	80°50'41.0866"W	3751.46	25.297	0.52	-0.23	0.46	
9794.00	90.120	339.760	6533.49	2782.78	3481.11	1570.84	1684174.83	14347147.32	39°30'30.8907"N	80°50'41.4951"W	3819.12	24.287	0.94	0.06	-0.94	
9889.00	90.370	340.390	6533.08	2877.77	3570.42	1538.46	1684142.47	14347236.59	39°30'31.7740"N	80°50'41.9062"W	3887.77	23.311	0.71	0.26	0.66	
9984.00	89.480	339.910	6533.21	2972.75	3659.78	1506.20	1684110.22	14347325.91	39°30'32.6576"N	80°50'42.3158"W	3957.60	22.370	1.06	-0.94	-0.51	
10079.00	90.180	341.320	6533.49	3067.75	3749.39	1474.67	1684078.70	14347415.49	39°30'33.5438"N	80°50'42.7161"W	4028.97	21.470	1.66	0.74	1.48	
10174.00	89.690	340.600	6533.60	3162.74	3839.19	1443.68	1684047.73	14347505.25	39°30'34.4319"N	80°50'43.1095"W	4101.66	20.608	0.92	-0.52	-0.76	
10268.00	89.820	340.700	6534.00	3256.74	3927.88	1412.54	1684016.59	14347593.91	39°30'35.3090"N	80°50'43.5050"W	4174.15	19.780	0.17	0.14	0.11	
10363.00	90.370	341.500	6533.84	3351.74	4017.76	1381.77	1683985.83	14347683.75	39°30'36.1978"N	80°50'43.8956"W	4248.72	18.979	1.02	0.58	0.84	
10458.00	91.350	340.800	6532.42	3446.73	4107.65	1351.08	1683955.16	14347773.61	39°30'37.0867"N	80°50'44.2852"W	4324.14	18.207	1.27	1.03	-0.74	



Actual Wellpath Report

Kerns Unit 2H AWP Proj: 23319'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Kerns Unit 2H
Field	Tyler	API	47-095-02689-0000
Facility	Blizzard Pad	Wellbore	Kerns Unit 2H AWB
Slot	Slot #12		

WELLPATH DATA (255 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
10553.00	90.250	340.540	6531.09	3541.71	4197.28	1319.63	1683923.73	14347863.21	39°30'37.9732"N	80°50'44.6844"W	4399.84	17.453	1.19	-1.16	-0.27	
10648.00	90.800	340.590	6530.22	3636.71	4286.87	1288.03	1683892.13	14347952.75	39°30'38.8591"N	80°50'45.0857"W	4476.19	16.723	0.58	0.58	0.05	
10742.00	90.060	340.500	6529.52	3730.70	4375.50	1256.72	1683860.84	14348041.35	39°30'39.7355"N	80°50'45.4832"W	4552.40	16.025	0.79	-0.79	-0.10	
10837.00	90.060	340.680	6529.42	3825.70	4465.10	1225.15	1683829.28	14348130.91	39°30'40.6216"N	80°50'45.8841"W	4630.13	15.343	0.19	0.00	0.19	
10932.00	90.370	341.120	6529.06	3920.70	4554.87	1194.06	1683798.20	14348220.64	39°30'41.5094"N	80°50'46.2787"W	4708.78	14.690	0.57	0.33	0.46	
11027.00	90.400	340.840	6528.42	4015.69	4644.68	1163.10	1683767.26	14348310.42	39°30'42.3975"N	80°50'46.6718"W	4788.09	14.059	0.30	0.03	-0.29	
11122.00	90.650	340.890	6527.55	4110.69	4734.42	1131.96	1683736.13	14348400.13	39°30'43.2851"N	80°50'47.0671"W	4867.87	13.447	0.27	0.26	0.05	
11217.00	90.220	341.090	6526.83	4205.69	4824.24	1101.02	1683705.20	14348489.91	39°30'44.1733"N	80°50'47.4600"W	4948.29	12.856	0.50	-0.45	0.21	
11311.00	90.310	340.910	6526.39	4299.68	4913.12	1070.42	1683674.61	14348578.75	39°30'45.0522"N	80°50'47.8485"W	5028.37	12.291	0.21	0.10	-0.19	
11406.00	90.680	341.190	6525.57	4394.68	5002.97	1039.57	1683643.77	14348668.57	39°30'45.9407"N	80°50'48.2402"W	5109.83	11.738	0.49	0.39	0.29	
11501.00	90.030	339.840	6524.99	4489.67	5092.52	1007.88	1683612.10	14348758.08	39°30'46.8263"N	80°50'48.6425"W	5191.30	11.195	1.58	-0.68	-1.42	
11596.00	90.220	340.970	6524.78	4584.66	5182.02	976.02	1683580.25	14348847.55	39°30'47.7114"N	80°50'49.0471"W	5273.13	10.667	1.21	0.20	1.19	
11691.00	90.030	340.870	6524.57	4679.66	5271.80	944.97	1683549.21	14348937.29	39°30'48.5992"N	80°50'49.4414"W	5355.82	10.162	0.23	-0.20	-0.11	
11786.00	91.050	340.340	6523.68	4774.65	5361.40	913.42	1683517.68	14349026.86	39°30'49.4854"N	80°50'49.8419"W	5438.65	9.669	1.21	1.07	-0.56	
11880.00	90.480	340.730	6522.44	4868.64	5450.02	882.10	1683486.37	14349115.44	39°30'50.3617"N	80°50'50.2396"W	5520.94	9.194	0.75	-0.63	0.41	
11975.00	90.920	341.040	6521.29	4963.63	5539.78	850.99	1683455.27	14349205.16	39°30'51.2493"N	80°50'50.6346"W	5604.76	8.733	0.58	0.48	0.33	
12070.00	90.120	340.890	6520.43	5058.63	5629.58	820.01	1683424.30	14349294.93	39°30'52.1374"N	80°50'51.0280"W	5688.99	8.287	0.86	-0.84	-0.16	
12165.00	89.750	341.550	6520.54	5153.63	5719.52	789.43	1683393.73	14349384.83	39°30'53.0268"N	80°50'51.4162"W	5773.74	7.859	0.80	-0.39	0.69	
12260.00	90.460	339.830	6520.36	5248.62	5809.17	758.01	1683362.33	14349474.45	39°30'53.9134"N	80°50'51.8151"W	5858.42	7.434	1.96	0.75	-1.81	
12354.00	90.280	341.480	6519.76	5342.61	5897.86	726.88	1683331.21	14349563.10	39°30'54.7904"N	80°50'52.2105"W	5942.48	7.026	1.77	-0.19	1.76	
12449.00	90.680	340.740	6518.96	5437.61	5987.74	696.12	1683300.46	14349652.94	39°30'55.6793"N	80°50'52.6010"W	6028.07	6.631	0.89	0.42	-0.78	
12544.00	90.180	340.470	6518.25	5532.60	6077.34	664.58	1683268.93	14349742.51	39°30'56.5654"N	80°50'53.0016"W	6113.57	6.241	0.60	-0.53	-0.28	
12639.00	90.030	341.130	6518.07	5627.60	6167.06	633.33	1683237.70	14349832.19	39°30'57.4526"N	80°50'53.3983"W	6199.49	5.864	0.71	-0.16	0.69	
12734.00	89.910	339.980	6518.12	5722.60	6256.64	601.71	1683206.09	14349921.74	39°30'58.3385"N	80°50'53.7999"W	6285.51	5.493	1.22	-0.13	-1.21	
12829.00	90.460	340.610	6517.82	5817.59	6346.07	569.68	1683174.07	14350011.14	39°30'59.2229"N	80°50'54.2067"W	6371.59	5.130	0.88	0.58	0.68	
12924.00	90.400	341.310	6517.10	5912.58	6435.87	538.69	1683143.09	14350100.90	39°31'0.1110"N	80°50'54.6002"W	6458.38	4.785	0.74	-0.06	0.74	
13019.00	90.150	340.960	6516.65	6007.58	6525.77	507.97	1683112.39	14350190.76	39°31'0.9999"N	80°50'54.9902"W	6545.51	4.451	0.45	-0.26	-0.37	
13114.00	90.430	341.050	6516.17	6102.58	6615.60	477.05	1683081.48	14350280.55	39°31'1.8882"N	80°50'55.3828"W	6632.77	4.124	0.31	0.29	0.09	
13208.00	90.250	340.980	6515.61	6196.58	6704.48	446.47	1683050.91	14350369.40	39°31'2.7672"N	80°50'55.7711"W	6719.33	3.810	0.21	-0.19	-0.07	
13303.00	90.250	341.970	6515.19	6291.57	6794.56	416.29	1683020.74	14350459.44	39°31'3.6580"N	80°50'56.1543"W	6807.30	3.506	1.04	0.00	1.04	



Actual Wellpath Report

Kerns Unit 2H AWP Proj: 23319'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Kerns Unit 2H
Field	Tyler	API	47-095-02689-0000
Facility	Blizzard Pad	Wellbore	Kerns Unit 2H AWB
Slot	Slot #12		

WELLPATH DATA (255 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
13398.00	90.610	339.830	6514.48	6386.57	6884.32	385.20	1682989.67	14350549.16	39°31'4.5456"N	80°50'56.5490"W	6895.09	3.203	2.28	0.38	-2.25	
13493.00	90.340	340.580	6513.69	6481.55	6973.70	353.03	1682957.51	14350638.51	39°31'5.4296"N	80°50'56.9576"W	6982.63	2.898	0.84	-0.28	0.79	
13588.00	90.310	340.220	6513.16	6576.54	7063.19	321.17	1682925.66	14350727.97	39°31'6.3146"N	80°50'57.3623"W	7070.49	2.603	0.38	-0.03	-0.38	
13777.00	90.150	340.970	6512.40	6765.53	7241.46	258.37	1682862.89	14350906.16	39°31'8.0774"N	80°50'58.1597"W	7246.06	2.043	0.41	-0.08	0.40	
13872.00	90.580	340.790	6511.79	6860.53	7331.21	227.26	1682831.79	14350995.88	39°31'8.9650"N	80°50'58.5549"W	7334.73	1.776	0.49	0.45	-0.19	
13967.00	90.490	341.420	6510.90	6955.53	7421.09	196.49	1682801.04	14351085.72	39°31'9.8538"N	80°50'58.9455"W	7423.69	1.517	0.67	-0.09	0.66	
14062.00	90.520	341.140	6510.07	7050.52	7511.06	166.01	1682770.56	14351175.66	39°31'10.7435"N	80°50'59.3326"W	7512.89	1.266	0.30	0.03	-0.29	
14157.00	90.740	340.760	6509.02	7145.52	7600.85	135.00	1682739.57	14351265.41	39°31'11.6315"N	80°50'59.7263"W	7602.05	1.018	0.46	0.23	-0.40	
14252.00	90.800	341.350	6507.75	7240.51	7690.70	104.16	1682708.74	14351355.22	39°31'12.5200"N	80°51'0.1180"W	7691.40	0.776	0.62	0.06	0.62	
14346.00	90.580	341.020	6506.61	7334.50	7779.67	73.85	1682678.44	14351444.16	39°31'13.3998"N	80°51'0.5029"W	7780.02	0.544	0.42	-0.23	-0.35	
14441.00	90.520	341.120	6505.70	7429.49	7869.53	43.03	1682647.63	14351533.98	39°31'14.2884"N	80°51'0.8942"W	7869.64	0.313	0.12	-0.06	0.11	
14536.00	90.550	341.170	6504.81	7524.49	7959.42	12.33	1682616.94	14351623.84	39°31'15.1774"N	80°51'1.2841"W	7959.43	0.089	0.06	0.03	0.05	
14631.00	90.550	341.610	6503.90	7619.48	8049.45	-17.99	1682586.64	14351713.83	39°31'16.0677"N	80°51'1.6690"W	8049.47	359.872	0.46	0.00	0.46	
14726.00	90.740	340.850	6502.83	7714.48	8139.39	-48.55	1682556.09	14351803.74	39°31'16.9571"N	80°51'2.0571"W	8139.54	359.658	0.82	0.20	-0.80	
14820.00	90.920	340.580	6501.47	7808.47	8228.11	-79.59	1682525.06	14351892.42	39°31'17.8344"N	80°51'2.4514"W	8228.49	359.446	0.35	0.19	-0.29	
14915.00	90.490	341.140	6500.30	7903.46	8317.85	-110.74	1682493.92	14351982.12	39°31'18.7218"N	80°51'2.8469"W	8318.59	359.237	0.74	-0.45	0.59	
15010.00	90.830	341.880	6499.21	7998.45	8407.94	-140.87	1682463.81	14352072.18	39°31'19.6127"N	80°51'3.2295"W	8409.12	359.040	0.86	0.36	0.78	
15105.00	90.090	340.680	6498.45	8093.44	8497.91	-171.35	1682433.33	14352162.11	39°31'20.5024"N	80°51'3.6166"W	8499.64	358.845	1.48	-0.78	-1.26	
15200.00	90.490	341.280	6497.97	8188.44	8587.72	-202.31	1682402.39	14352251.89	39°31'21.3906"N	80°51'4.0098"W	8590.10	358.650	0.76	0.42	0.83	
15294.00	90.250	340.980	6497.36	8282.44	8676.67	-232.72	1682372.00	14352340.80	39°31'22.2701"N	80°51'4.3958"W	8679.79	358.464	0.41	-0.26	-0.32	
15389.00	90.680	341.220	6496.59	8377.43	8766.54	-263.49	1682341.24	14352430.63	39°31'23.1589"N	80°51'4.7866"W	8770.50	358.278	0.52	0.45	0.25	
15484.00	90.120	340.500	6495.92	8472.43	8856.29	-294.63	1682310.10	14352520.34	39°31'24.0464"N	80°51'5.1822"W	8861.19	358.095	0.96	-0.59	-0.76	
15579.00	90.950	340.950	6495.04	8567.42	8945.96	-325.99	1682278.76	14352609.98	39°31'24.9331"N	80°51'5.5805"W	8951.89	357.913	0.99	0.87	0.47	
15674.00	90.520	340.440	6493.82	8662.41	9035.61	-357.40	1682247.37	14352699.59	39°31'25.8197"N	80°51'5.9793"W	9042.67	357.735	0.70	-0.45	-0.54	
15769.00	90.580	340.850	6492.91	8757.41	9125.23	-388.88	1682215.90	14352789.18	39°31'26.7060"N	80°51'6.3792"W	9133.52	357.560	0.44	0.06	0.43	
15864.00	90.340	341.930	6492.14	8852.40	9215.26	-419.19	1682185.59	14352879.18	39°31'27.5963"N	80°51'6.7642"W	9224.79	357.395	1.16	-0.25	1.14	
15958.00	90.400	341.990	6491.54	8946.39	9304.64	-448.30	1682156.50	14352968.52	39°31'28.4801"N	80°51'7.1338"W	9315.43	357.242	0.09	0.06	0.06	
16053.00	90.580	341.860	6490.72	9041.37	9394.95	-477.78	1682127.03	14353058.79	39°31'29.3731"N	80°51'7.5080"W	9407.09	357.089	0.23	0.19	-0.14	
16148.00	90.250	341.600	6490.04	9136.36	9485.16	-507.56	1682097.26	14353148.96	39°31'30.2652"N	80°51'7.8862"W	9498.73	356.937	0.44	-0.35	-0.27	
16243.00	90.550	341.830	6489.37	9231.35	9575.36	-537.36	1682067.47	14353239.13	39°31'31.1571"N	80°51'8.2646"W	9590.42	356.788	0.40	0.32	0.24	



Actual Wellpath Report

Kerns Unit 2H AWP Proj: 23319'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Kerns Unit 2H
Field	Tyler	API	47-095-02689-0000
Facility	Blizzard Pad	Wellbore	Kerns Unit 2H AWB
Slot	Slot #12		

WELLPATH DATA (255 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
16338.00	90.280	341.550	6488.68	9326.35	9665.54	-567.21	1682037.64	14353329.28	39°31'32.0490"N	80°51'8.6436"W	9682.17	356.642	0.41	-0.28	-0.29	
16432.00	90.090	341.440	6488.38	9420.34	9754.68	-597.04	1682007.82	14353418.38	39°31'32.9304"N	80°51'9.0224"W	9772.94	356.498	0.23	-0.20	-0.12	
16527.00	90.150	341.450	6488.18	9515.34	9844.75	-627.27	1681977.60	14353508.41	39°31'33.8210"N	80°51'9.4064"W	9864.71	356.354	0.06	0.06	0.01	
16622.00	90.370	341.830	6487.75	9610.33	9934.91	-657.20	1681947.69	14353598.53	39°31'34.7126"N	80°51'9.7863"W	9956.62	356.215	0.46	0.23	0.40	
16812.00	90.150	340.800	6486.89	9800.33	10114.89	-718.06	1681886.84	14353778.44	39°31'36.4924"N	80°51'10.5594"W	10140.35	355.939	0.55	-0.12	-0.54	
16907.00	90.490	341.970	6486.36	9895.32	10204.92	-748.39	1681856.53	14353868.44	39°31'37.3827"N	80°51'10.9445"W	10232.32	355.806	1.28	0.36	1.23	
17001.00	90.150	341.590	6485.83	9989.31	10294.20	-777.78	1681827.15	14353957.68	39°31'38.2656"N	80°51'11.3177"W	10323.54	355.679	0.54	-0.36	-0.40	
17096.00	90.180	341.500	6485.56	10084.31	10384.32	-807.85	1681797.09	14354047.76	39°31'39.1567"N	80°51'11.6996"W	10415.69	355.552	0.10	0.03	-0.09	
17191.00	90.460	341.220	6485.03	10179.31	10474.33	-838.21	1681766.74	14354137.74	39°31'40.0468"N	80°51'12.0852"W	10507.82	355.425	0.42	0.29	-0.29	
17286.00	90.520	341.620	6484.22	10274.30	10564.38	-868.48	1681736.49	14354227.75	39°31'40.9372"N	80°51'12.4696"W	10600.01	355.300	0.43	0.06	0.42	
17381.00	90.550	342.230	6483.33	10369.29	10654.68	-897.96	1681707.02	14354318.02	39°31'41.8303"N	80°51'12.8439"W	10692.46	355.183	0.64	0.03	0.64	
17476.00	90.460	341.570	6482.49	10464.27	10744.98	-927.47	1681677.52	14354408.28	39°31'42.7231"N	80°51'13.2186"W	10784.93	355.067	0.70	-0.09	-0.69	
17571.00	90.710	342.100	6481.52	10559.26	10835.24	-957.08	1681647.92	14354498.51	39°31'43.6157"N	80°51'13.5947"W	10877.43	354.952	0.62	0.26	0.56	
17665.00	90.580	341.830	6480.46	10653.24	10924.62	-986.18	1681618.83	14354587.85	39°31'44.4995"N	80°51'13.9642"W	10969.04	354.842	0.32	-0.14	-0.29	
17760.00	90.580	342.370	6479.50	10748.22	11015.01	-1015.38	1681589.64	14354678.21	39°31'45.3934"N	80°51'14.3350"W	11061.71	354.733	0.57	0.00	0.57	
17855.00	90.220	341.880	6478.84	10843.20	11105.42	-1044.54	1681560.50	14354768.58	39°31'46.2874"N	80°51'14.7052"W	11154.44	354.627	0.64	-0.38	-0.52	
17950.00	90.180	341.390	6478.51	10938.19	11195.58	-1074.47	1681530.58	14354858.71	39°31'47.1790"N	80°51'15.0854"W	11247.03	354.518	0.52	-0.04	-0.52	
18045.00	90.460	341.900	6477.98	11033.19	11285.75	-1104.39	1681500.68	14354948.83	39°31'48.0706"N	80°51'15.4653"W	11339.66	354.411	0.61	0.29	0.54	
18140.00	90.400	341.760	6477.26	11128.18	11376.01	-1134.01	1681471.06	14355039.06	39°31'48.9631"N	80°51'15.8415"W	11432.39	354.307	0.16	-0.06	-0.15	
18234.00	90.460	341.680	6476.56	11222.17	11465.26	-1163.49	1681441.59	14355128.28	39°31'49.8457"N	80°51'16.2159"W	11524.15	354.205	0.11	0.06	-0.09	
18329.00	90.310	342.030	6475.92	11317.15	11555.54	-1193.08	1681412.02	14355218.51	39°31'50.7384"N	80°51'16.5916"W	11616.96	354.105	0.40	-0.16	0.37	
18424.00	90.340	341.780	6475.38	11412.14	11645.84	-1222.58	1681382.53	14355308.78	39°31'51.6313"N	80°51'16.9663"W	11709.83	354.007	0.27	0.03	-0.26	
18519.00	90.400	341.710	6474.77	11507.13	11736.05	-1252.34	1681352.78	14355398.96	39°31'52.5234"N	80°51'17.3442"W	11802.68	353.909	0.10	0.06	-0.07	
18613.00	90.310	341.710	6474.19	11601.13	11825.30	-1281.84	1681323.29	14355488.17	39°31'53.4060"N	80°51'17.7189"W	11894.57	353.813	0.10	-0.10	0.00	
18708.00	90.250	341.660	6473.72	11696.12	11915.49	-1311.69	1681293.45	14355578.32	39°31'54.2978"N	80°51'18.0980"W	11987.47	353.718	0.08	-0.06	-0.05	
18803.00	90.520	341.600	6473.08	11791.11	12005.65	-1341.63	1681263.52	14355668.44	39°31'55.1893"N	80°51'18.4783"W	12080.38	353.624	0.29	0.28	-0.06	
18898.00	90.250	341.690	6472.44	11886.11	12095.81	-1371.55	1681233.62	14355758.57	39°31'56.0809"N	80°51'18.8582"W	12173.32	353.531	0.30	-0.28	0.09	
18993.00	90.060	341.370	6472.19	11981.10	12185.92	-1401.64	1681203.54	14355848.64	39°31'56.9719"N	80°51'19.2405"W	12266.26	353.439	0.39	-0.20	-0.34	
19088.00	90.490	342.320	6471.73	12076.09	12276.19	-1431.24	1681173.95	14355938.88	39°31'57.8646"N	80°51'19.6164"W	12359.34	353.350	1.10	0.45	1.00	
19183.00	90.310	341.820	6471.07	12171.07	12366.57	-1460.49	1681144.71	14356029.22	39°31'58.7583"N	80°51'19.9878"W	12452.51	353.265	0.58	-0.19	-0.53	



Actual Wellpath Report

Kerns Unit 2H AWP Proj: 23319'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Kerns Unit 2H
Field	Tyler	API	47-095-02689-0000
Facility	Blizzard Pad	Wellbore	Kerns Unit 2H AWB
Slot	Slot #12		

WELLPATH DATA (255 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
19278.00	90.890	342.010	6470.07	12266.06	12456.87	-1489.98	1681115.24	14356119.49	39°31'59.6512"N	80°51'20.3623"W	12545.66	353.179	0.64	0.61	0.20	
19372.00	90.490	341.310	6468.94	12360.04	12546.09	-1519.55	1681085.67	14356208.67	39°32'0.5335"N	80°51'20.7380"W	12637.78	353.094	0.86	-0.43	-0.74	
19467.00	90.620	341.430	6468.02	12455.04	12636.11	-1549.90	1681055.34	14356298.65	39°32'1.4236"N	80°51'21.1234"W	12730.80	353.007	0.19	0.14	0.13	
19562.00	90.310	340.540	6467.25	12550.03	12725.92	-1580.85	1681024.40	14356388.43	39°32'2.3118"N	80°51'21.5166"W	12823.73	352.919	0.99	-0.33	-0.94	
19657.00	90.990	341.250	6466.17	12645.03	12815.68	-1611.94	1680993.32	14356478.15	39°32'3.1994"N	80°51'21.9118"W	12916.66	352.831	1.03	0.72	0.75	
19752.00	90.860	341.530	6464.64	12740.01	12905.70	-1642.26	1680963.02	14356568.14	39°32'4.0896"N	80°51'22.2967"W	13009.77	352.748	0.32	-0.14	0.29	
19848.00	90.890	341.760	6463.17	12836.00	12996.80	-1672.48	1680932.81	14356659.21	39°32'4.9905"N	80°51'22.6806"W	13103.97	352.667	0.24	0.03	0.24	
19942.00	90.980	341.650	6461.64	12929.98	13086.04	-1701.99	1680903.31	14356748.41	39°32'5.8729"N	80°51'23.0553"W	13196.26	352.590	0.15	0.10	-0.12	
20037.00	91.200	341.550	6459.83	13024.96	13176.17	-1731.97	1680873.35	14356838.50	39°32'6.7641"N	80°51'23.4362"W	13289.51	352.512	0.25	0.23	-0.11	
20132.00	90.770	340.760	6458.20	13119.94	13266.06	-1762.65	1680842.68	14356928.36	39°32'7.6530"N	80°51'23.8259"W	13382.65	352.431	0.95	-0.45	-0.83	
20226.00	90.800	341.150	6456.91	13213.93	13354.91	-1793.32	1680812.02	14357017.17	39°32'8.5316"N	80°51'24.2156"W	13474.77	352.352	0.42	0.03	0.41	
20321.00	90.400	341.450	6455.92	13308.92	13444.89	-1823.78	1680781.57	14357107.11	39°32'9.4214"N	80°51'24.6025"W	13568.02	352.275	0.53	-0.42	0.32	
20416.00	90.620	341.780	6455.07	13403.92	13535.04	-1853.74	1680751.62	14357197.22	39°32'10.3128"N	80°51'24.9830"W	13661.39	352.201	0.42	0.23	0.35	
20511.00	90.490	341.380	6454.15	13498.91	13625.16	-1883.75	1680721.62	14357287.31	39°32'11.2040"N	80°51'25.3643"W	13754.77	352.128	0.44	-0.14	-0.42	
20606.00	90.550	341.700	6453.29	13593.90	13715.27	-1913.83	1680691.55	14357377.39	39°32'12.0951"N	80°51'25.7464"W	13848.16	352.056	0.34	0.06	0.34	
20701.00	90.490	341.510	6452.43	13688.89	13805.41	-1943.81	1680661.59	14357467.49	39°32'12.9864"N	80°51'26.1272"W	13941.59	351.985	0.21	-0.06	-0.20	
20796.00	90.520	341.310	6451.59	13783.89	13895.45	-1974.10	1680631.31	14357557.50	39°32'13.8768"N	80°51'26.5119"W	14034.98	351.914	0.21	0.03	-0.21	
20891.00	90.740	341.700	6450.54	13878.88	13985.54	-2004.23	1680601.19	14357647.55	39°32'14.7676"N	80°51'26.8947"W	14128.42	351.845	0.47	0.23	0.41	
20985.00	90.430	341.620	6449.58	13972.87	14074.76	-2033.81	1680571.63	14357736.73	39°32'15.6499"N	80°51'27.2704"W	14220.94	351.778	0.34	-0.33	-0.09	
21081.00	90.580	341.750	6448.74	14068.86	14165.89	-2063.97	1680541.47	14357827.83	39°32'16.5511"N	80°51'27.6536"W	14315.47	351.710	0.21	0.16	0.14	
21175.00	90.430	341.730	6447.91	14162.85	14255.16	-2093.42	1680512.03	14357917.06	39°32'17.4337"N	80°51'28.0277"W	14408.05	351.646	0.16	-0.16	-0.02	
21270.00	90.550	341.260	6447.10	14257.84	14345.24	-2123.57	1680481.90	14358007.10	39°32'18.3245"N	80°51'28.4107"W	14501.57	351.579	0.51	0.13	-0.49	
21365.00	90.580	341.490	6446.16	14352.84	14435.26	-2153.91	1680451.57	14358097.09	39°32'19.2147"N	80°51'28.7962"W	14595.07	351.513	0.24	0.03	0.24	
21460.00	90.310	341.190	6445.42	14447.83	14525.27	-2184.31	1680421.19	14358187.06	39°32'20.1047"N	80°51'29.1823"W	14688.59	351.448	0.42	-0.28	-0.32	
21554.00	90.370	341.140	6444.86	14541.83	14614.23	-2214.65	1680390.85	14358275.99	39°32'20.9844"N	80°51'29.5679"W	14781.08	351.383	0.08	0.06	-0.05	
21649.00	90.370	341.130	6444.25	14636.83	14704.13	-2245.37	1680360.15	14358365.84	39°32'21.8734"N	80°51'29.9581"W	14874.58	351.318	0.01	0.00	-0.01	
21744.00	90.280	341.240	6443.71	14731.83	14794.05	-2276.01	1680329.52	14358455.73	39°32'22.7626"N	80°51'30.3474"W	14968.10	351.254	0.15	-0.09	0.12	
21839.00	90.310	341.430	6443.22	14826.82	14884.05	-2306.41	1680299.13	14358545.70	39°32'23.6526"N	80°51'30.7336"W	15061.69	351.192	0.20	0.03	0.20	
21934.00	90.370	341.390	6442.66	14921.82	14974.09	-2336.70	1680268.86	14358635.70	39°32'24.5430"N	80°51'31.1184"W	15155.32	351.131	0.08	0.06	-0.04	
22029.00	90.340	341.440	6442.07	15016.82	15064.14	-2366.97	1680238.59	14358725.71	39°32'25.4334"N	80°51'31.5030"W	15248.96	351.070	0.06	-0.03	0.05	



Actual Wellpath Report

Kerns Unit 2H AWP Proj: 23319'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Kerns Unit 2H
Field	Tyler	API	47-095-02689-0000
Facility	Blizzard Pad	Wellbore	Kerns Unit 2H AWB
Slot	Slot #12		

WELLPATH DATA (255 stations) † = interpolated, ‡ = extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
22124.00	90.220	341.520	6441.61	15111.81	15154.22	-2397.15	1680208.43	14358815.75	39°32'26.3241"N	80°51'31.8864"W	15342.64	351.011	0.15	-0.13	0.08	
22219.00	90.280	342.010	6441.19	15206.80	15244.44	-2426.88	1680178.72	14358905.95	39°32'27.2163"N	80°51'32.2640"W	15436.41	350.955	0.52	0.06	0.52	
22314.00	90.060	341.800	6440.91	15301.79	15334.74	-2456.38	1680149.22	14358996.21	39°32'28.1092"N	80°51'32.6388"W	15530.24	350.899	0.32	-0.23	-0.22	
22408.00	90.090	340.590	6440.79	15395.79	15423.73	-2486.68	1680118.93	14359085.16	39°32'28.9891"N	80°51'33.0238"W	15622.90	350.841	1.29	0.03	-1.29	
22503.00	90.150	340.440	6440.59	15490.79	15513.28	-2518.37	1680087.26	14359174.68	39°32'29.8748"N	80°51'33.4265"W	15716.37	350.779	0.17	0.06	-0.16	
22598.00	90.150	341.000	6440.34	15585.78	15602.96	-2549.74	1680055.90	14359264.32	39°32'30.7615"N	80°51'33.8251"W	15809.91	350.719	0.59	0.00	0.59	
22693.00	90.250	340.870	6440.01	15680.78	15692.74	-2580.77	1680024.88	14359354.07	39°32'31.6494"N	80°51'34.2194"W	15903.54	350.661	0.17	0.11	-0.14	
22787.00	90.180	340.550	6439.66	15774.78	15781.47	-2611.82	1679993.84	14359442.75	39°32'32.5267"N	80°51'34.6140"W	15996.13	350.603	0.35	-0.07	-0.34	
22882.00	90.150	340.470	6439.38	15869.78	15871.02	-2643.52	1679962.16	14359532.27	39°32'33.4123"N	80°51'35.0168"W	16089.67	350.543	0.09	-0.03	-0.08	
22977.00	90.120	340.750	6439.16	15964.77	15980.63	-2675.06	1679930.63	14359621.85	39°32'34.2985"N	80°51'35.4176"W	16183.26	350.485	0.30	-0.03	0.29	
23072.00	90.340	340.990	6438.78	16059.77	16050.39	-2706.19	1679899.51	14359711.57	39°32'35.1860"N	80°51'35.8132"W	16276.93	350.430	0.34	0.23	0.25	
23167.00	90.180	341.040	6438.35	16154.77	16140.22	-2737.09	1679868.62	14359801.36	39°32'36.0743"N	80°51'36.2059"W	16370.65	350.375	0.18	-0.17	0.05	
23262.00	90.220	340.950	6438.01	16249.77	16230.04	-2768.03	1679837.70	14359891.15	39°32'36.9625"N	80°51'36.5990"W	16464.39	350.321	0.10	0.04	-0.09	
23295.00	90.250	341.220	6437.88	16282.77	16261.26	-2778.73	1679827.00	14359922.35	39°32'37.2712"N	80°51'36.7350"W	16496.96	350.303	0.82	0.09	0.82	
23319.00‡	90.250	341.220	6437.77	16306.77	16283.98	-2786.45	1679819.28	14359945.07	39°32'37.4959"N	80°51'36.8331"W	16520.66	350.290	0.00	0.00	0.00	Projected MD at TD: 23319'



Actual Wellpath Report

Kerns Unit 2H AWP Proj: 23319'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Kerns Unit 2H
Field	Tyler	API	47-095-02689-0000
Facility	Blizzard Pad	Wellbore	Kerns Unit 2H AWB
Slot	Slot #12		

HOLE & CASING SECTIONS - Ref Wellbore: Kerns Unit 2H AWB Ref Wellpath: Kerns Unit 2H AWP Proj: 23319'									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
20in Conductor	25.50	105.50	80.00	25.50	105.50	0.00	0.00	0.05	-0.08
17.5in Open Hole	105.50	513.50	408.00	105.50	513.49	0.05	-0.08	-1.08	-1.73
13.375in Casing Surface	25.50	513.50	488.00	25.50	513.49	0.00	0.00	-1.08	-1.73
12.25in Open Hole	513.50	2798.00	2284.50	513.49	2622.34	-1.08	-1.73	216.69	775.94
9.625in Casing Intermediate	25.50	2778.00	2752.50	25.50	2604.21	0.00	0.00	213.58	768.07
8.75in Open Hole	2798.00	6344.00	3546.00	2622.34	5809.75	216.69	775.94	576.43	2281.24
8.5in Open Hole	6344.00	23319.00	16975.00	5809.75	6437.77	576.43	2281.24	16283.98	-2786.45
5.5in Casing Production	25.50	23319.00	23293.50	25.50	6437.77	0.00	0.00	16283.98	-2786.45

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Kerns Unit 2H POE Rev-3	6512.00	1186.76	2366.80	1684970.47	14344853.89	39°30'8.2013"N	80°50'31.3914"W	point
Kerns Unit 2H BHL Rev-3	6535.00	16249.28	-2801.04	1679804.70	14359910.38	39°32'37.1531"N	80°51'37.0200"W	point
Kerns Unit 2H LP Rev-3	6535.00	1347.16	2311.77	1684915.46	14345014.22	39°30'9.7875"N	80°50'32.0898"W	point
Kerns Unit 2H - 50' L/R Hard Line	6600.00	8718.02	-217.12	1682387.58	14352382.14	39°31'22.6786"N	80°51'4.1960"W	rectangle
2D Rectangle 15924.4 x 100.								



Actual Wellpath Report

Kerns Unit 2H AWP Proj: 23319'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Kerns Unit 2H
Field	Tyler	API	47-095-02689-0000
Facility	Blizzard Pad	Wellbore	Kerns Unit 2H AWB
Slot	Slot #12		

WELLPATH COMPOSITION - Ref Wellbore: Kerns Unit 2H AWB Ref Wellpath: Kerns Unit 2H AWP Proj: 23319'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
25.50	476.00	Gyrodata 2015 - GC+WIR+DPIPE	01_Gyrodata MS Gyro <17-1/2"> (100'-476')	Kerns Unit 2H AWB	5/27/2020
476.00	2722.00	BH NaviTrak (2019) (Axial)	02_APS EM <12-1/4"> (476')(601'-2722')	Kerns Unit 2H AWB	5/21/2020
2722.00	6271.00	BH NaviTrak (2019) (Axial)	03_APS EM <8-3/4"> (2722')(2854'-6271') Proj: 6342'	Kerns Unit 2H AWB	5/21/2020
6271.00	23319.00	BH AutoTrak Curve (2019) (Short spacing)	04_BH AT Curve <8-1/2"> (6271')(6320'-23295')	Kerns Unit 2H AWB	7/10/2020



Actual Wellpath Report

Kerns Unit 2H AWP Proj: 23319'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Kerns Unit 2H
Field	Tyler	API	47-095-02689-0000
Facility	Blizzard Pad	Wellbore	Kerns Unit 2H AWB
Slot	Slot #12		

COMMENTS

Wellpath general comments

API: 47-095-02689-0000
BHI Job #: 110423091B
Rig: H&P 317
Duration: 05/25/2020-07/26/2020
Gyrodax MS Gyro <17-1/2"> (100'-476')
APS EM <12-1/4"> (476')(601'-2722')
APS EM <8-3/4"> (2722')(2854'-6271')
BH AT Curve <8-1/2"> (6271')(6320'-23295')
Middlesex: 6998' MD
Burkett: 7185' MD
Tully: 7251' MD
Marcellus POE: 7446' MD
Projected MD at TD: 23319'