



ANTERO RESOURCES CORPORATION

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

Slot: Slot #07
Well: Kramer Unit 1H
Wellbore: Kramer Unit 1H PWB



Field reference wellbore is Kramer Unit 1H PWB Row#0
True vertical depth are referenced to H&P 317 (RKB)
North Reference: Grid north
Scale: True distance
Reference wellbore measured depths are referenced to H&P 317 (RKB)
H&P 317 (RKB) to Mean Sea Level: 1000 feet
Mean Sea Level to Ground level (At Slot Slot #07): -1014.6 ft
Other wellbore MDs are referenced to each profile's relevant MD station
Created by: seth@antero on 2020-05-28; Database: W.A. U.S. EASTERNUS Data

Location Information

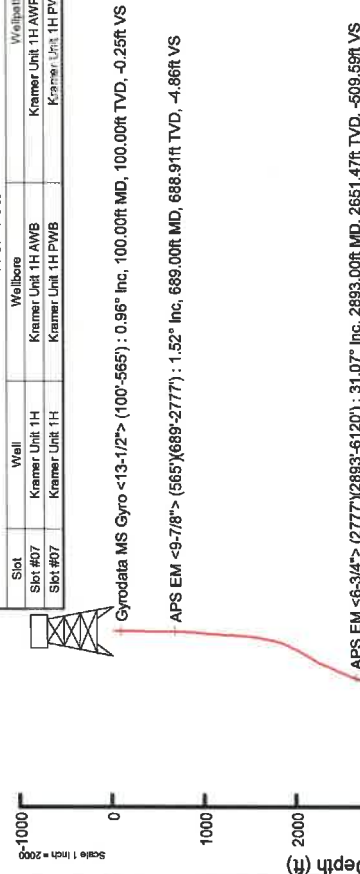
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Hogue Pad	1609140.410	14333604.260	39°28'17.1980"N	80°55'53.5810"W
Slot	Local E (ft)	Local N (ft)	Latitude	Longitude
Slot #07	65.63	81.40	39°28'17.8400"N	80°55'52.7980"W
H&P 317 (RKB) to Ground level (At Slot Slot #07)			25.5R	
Mean Sea Level to Ground level (At Slot Slot #07)			-1014.6R	
H&P 317 (RKB) to Mean Sea Level			104.0R	

Well Profile Data

Design Comment	MD (ft)	Inc (ft)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (ft/100R)	VS (ft)
Tie On	2777.00	33.530	107.930	2553.42	-245.06	736.06	6.89	-472.39
Pro. To Bottom	2850.00	33.530	107.930	2614.28	-257.46	775.32	0.00	-498.66
Drill Out Ceg.	2850.00	33.530	107.930	2697.64	-374.48	827.88	0.00	-529.00
Held Tangent	3122.85	26.449	110.255	2879.10	-510.71	932.84	2.00	-598.47
Curve KOP	6211.26	26.449	110.255	5333.63	-926.58	2339.02	0.00	-1946.27
POE	7978.04	79.928	340.928	6405.00	-289.30	2450.81	8.00	-1095.26
Landing PL	7578.97	90.000	340.928	6433.00	-81.80	2388.01	8.00	-658.98
BH	18295.78	90.000	340.928	6433.00	-1423.20		0.00	10799.85

Well Data

Slot	Well	Wellbore	Wellpath
Slot #07	Kramer Unit 1H	Kramer Unit 1H AWB	Kramer Unit 1H ANWP Proj: 19229°
Slot #07	Kramer Unit 1H	Kramer Unit 1H PWB	Kramer Unit 1H PWB Rev-B-D



Laser specified (HDMI) Dip: 66.48° Field: 91728 nt
 Magnetic North is 7.60 degrees West of True North (at 05/May/2020)
 Grid North is 0.00 degrees West of True North (at 05/May/2020)
 To correct azimuth from Magnetic to Grid subtract 0.00 degrees
 To correct azimuth from Magnetic to Grid subtract 7.60 degrees

API: 47-095-02673-0000
 BH Job #: 110293518-B
 Rig: H&P 317
 Duration: 2/24/2020-5/15/2020

04/02/2021

Actual Wellpath Report

Kramer Unit 1H AWP Proj: 19229'
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REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Field	Tyler
Facility	Hogue Pad
Slot	Slot #07
Well	Kramer Unit 1H
API/Legal	
Wellbore	Kramer Unit 1H AWB

REPORT SETUP INFORMATION	
Projection System	NAD27 / UTM Zone 17 North, US feet
North Reference	Grid
Scale	0.999601
Convergence at slot	0.06° East
Software System	WellArchitect® 6.0
User	Edsaryar
Report Generated	26/May/2020 at 12:49
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	65.63	61.49	1669201.87	14333669.87	39°28'17.8460"N	80°53'52.7960"W
Facility Reference Pt			1669140.41	14333604.26	39°28'17.1980"N	80°53'53.5810"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.3013"W

WELLPATH DATUM	
Calculation method	H&P 317 (RKB) to Facility Vertical Datum
Horizontal Reference Pt	H&P 317 (RKB) to Mean Sea Level
Vertical Reference Pt	H&P 317 (RKB) to Ground Level at Slot (Slot #07)
MD Reference Pt	Section Origin
Field Vertical Reference	Section Azimuth
	25.50ft
	1040.00ft
	25.50ft
	N 0.00, E 0.00 ft
	340.93°

Actual Wellpath Report

Kramer Unit 1H AWP Proj: 19229'
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Facility	Hogue Pad
Slot	Slot #07
Well	Kramer Unit 1H
API/Legal	
Wellbore	Kramer Unit 1H AWB

WELLPATH DATA (213 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	ft	ft	ft	ft	ft	ft	ft/100ft	ft/100ft	ft/100ft	
0.00†	0.000	227.680	0.00	0.00	0.00	0.00	1669201.87	14333669.87	39°28'17.8460"N	80°53'52.7960"W	0.00	0.000	0.00	0.00	0.00	
25.50	0.000	227.680	25.50	0.00	0.00	0.00	1669201.87	14333669.87	39°28'17.8460"N	80°53'52.7960"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.960	227.680	100.00	-0.25	-0.42	-0.46	1669201.41	14333669.45	39°28'17.8419"N	80°53'52.8019"W	0.62	227.680	1.29	1.29	0.00	Gyrodata MIS Gyro <13-1/2"> (100'-565')
200.00	0.970	232.980	199.98	-0.84	-1.49	-1.76	1669200.12	14333668.37	39°28'17.8313"N	80°53'52.8184"W	2.31	229.623	0.09	0.01	5.30	
300.00	0.990	230.960	299.97	-1.39	-2.55	-3.10	1669198.77	14333667.32	39°28'17.8209"N	80°53'52.8356"W	4.02	230.618	0.04	0.02	-2.02	
400.00	1.000	223.270	399.95	-2.09	-3.73	-4.37	1669197.50	14333666.14	39°28'17.8092"N	80°53'52.8518"W	5.75	229.556	0.13	0.01	-7.69	
500.00	0.780	221.580	499.94	-2.83	-4.87	-5.42	1669196.45	14333665.00	39°28'17.7979"N	80°53'52.8652"W	7.29	228.063	0.22	-0.22	-1.69	
565.00	0.650	218.920	564.94	-3.24	-5.49	-5.95	1669195.93	14333664.38	39°28'17.7918"N	80°53'52.8719"W	8.09	227.294	0.21	-0.20	-4.09	
689.00	1.520	201.960	688.91	-4.86	-7.56	-7.00	1669194.87	14333662.31	39°28'17.7713"N	80°53'52.8854"W	10.31	222.809	0.74	0.70	-13.68	APS EIM <9-7/8"> (565')(689-2777')
783.00	2.890	162.260	782.85	-8.17	-10.98	-6.75	1669195.13	14333658.90	39°28'17.7376"N	80°53'52.8822"W	12.88	211.587	2.10	1.46	-42.23	
869.00	4.610	148.560	868.66	-13.71	-15.99	-4.29	1669197.59	14333653.88	39°28'17.6880"N	80°53'52.8509"W	16.55	195.003	2.24	2.00	-15.93	
961.00	6.760	134.150	960.21	-22.16	-22.92	1.53	1669203.40	14333646.96	39°28'17.6195"N	80°53'52.7768"W	22.97	176.182	2.79	2.34	-15.66	
1056.00	7.110	113.140	1054.53	-31.10	-29.12	10.95	1669212.82	14333640.76	39°28'17.5580"N	80°53'52.6568"W	31.11	159.396	2.68	0.37	-22.12	
1151.00	9.060	97.910	1148.59	-38.45	-32.46	23.77	1669225.63	14333637.42	39°28'17.5249"N	80°53'52.4934"W	40.23	143.792	3.03	2.05	-16.03	
1246.00	9.200	86.570	1242.39	-43.89	-33.04	38.76	1669240.61	14333636.84	39°28'17.5190"N	80°53'52.3023"W	50.93	130.446	1.90	0.15	-11.94	
1341.00	11.600	85.860	1335.82	-48.40	-31.89	55.87	1669257.72	14333637.99	39°28'17.5302"N	80°53'52.0841"W	64.33	119.722	2.53	2.53	-0.75	
1436.00	13.260	90.420	1428.60	-54.49	-31.28	76.29	1669278.13	14333638.59	39°28'17.5359"N	80°53'51.8236"W	82.45	112.297	2.03	1.75	4.80	
1530.00	15.490	96.030	1519.65	-63.42	-32.68	99.56	1669301.39	14333637.20	39°28'17.5219"N	80°53'51.5270"W	104.78	108.174	2.79	2.37	5.97	
1625.00	18.250	101.760	1610.56	-76.42	-37.05	126.74	1669328.56	14333632.83	39°28'17.4784"N	80°53'51.1804"W	132.05	106.294	3.39	2.91	6.03	
1720.00	19.940	106.010	1700.34	-93.36	-44.55	156.88	1669358.69	14333625.34	39°28'17.4040"N	80°53'50.7962"W	163.08	105.853	2.30	1.78	4.47	
1815.00	23.200	108.670	1788.67	-114.13	-55.01	190.19	1669391.98	14333614.88	39°28'17.3002"N	80°53'50.3716"W	197.98	106.132	3.58	3.43	2.80	
1909.00	31.950	109.790	1871.92	-141.12	-69.38	231.21	1669432.99	14333600.51	39°28'17.1577"N	80°53'49.8487"W	241.40	106.703	9.32	9.31	1.18	
2004.00	39.060	110.420	1950.65	-174.68	-87.65	281.09	1669482.85	14333582.25	39°28'16.9766"N	80°53'49.2129"W	294.44	107.319	4.34	4.33	0.87	
2099.00	38.210	111.640	2026.38	-211.63	-108.24	334.61	1669536.35	14333561.67	39°28'16.7724"N	80°53'48.5308"W	351.68	107.926	2.39	2.26	1.28	
2194.00	40.060	113.220	2100.07	-251.37	-131.13	390.02	1669591.74	14333536.79	39°28'16.5456"N	80°53'47.8245"W	411.48	106.584	2.21	1.95	1.66	
2289.00	43.310	112.770	2171.01	-293.68	-155.80	448.17	1669649.87	14333514.13	39°28'16.3011"N	80°53'47.0634"W	474.48	109.170	3.44	3.42	-0.47	
2384.00	40.890	109.560	2241.50	-394.84	-178.83	507.53	1669709.20	14333491.11	39°28'16.0728"N	80°53'46.3266"W	538.12	109.410	3.41	-2.55	-3.38	
2479.00	36.690	106.270	2315.54	-370.69	-197.20	564.11	1669765.75	14333472.74	39°28'15.8906"N	80°53'45.8056"W	597.58	109.269	4.92	-4.42	-3.46	
2573.00	38.380	104.730	2390.08	-403.17	-212.49	619.29	1669820.92	14333457.46	39°28'15.7389"N	80°53'44.9022"W	654.73	108.938	2.06	1.80	-1.64	
2668.00	37.630	104.910	2464.93	-435.78	-227.45	675.84	1669877.44	14333442.51	39°28'15.5904"N	80°53'44.1813"W	713.09	108.600	0.80	-0.79	0.19	

Actual Wellpath Report

Kramer Unit 1H AWP Proj: 19229'
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Operator	ANTERO RESOURCES CORPORATION
Field	Tyler
Facility	Hogue Pad
Slot	Slot #07
Well	Kramer Unit 1H
API/Legal	
Wellbore	Kramer Unit 1H AWB

WELLPATH DATA (213 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)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (°/100ft)	Comments
2763.00	34.320	108.940	2541.81	-467.75	-242.72	729.50	1669931.08	14333427.24	39°28'15.4388"N	80°53'43.4973"W	768.82	108.403	3.70	-3.48	2.14
2777.00	33.530	107.930	2553.42	-472.39	-245.06	736.96	1669938.53	14333424.90	39°28'15.4156"N	80°53'43.4023"W	776.63	108.394	6.89	-5.64	7.07
2893.00	31.070	107.680	2651.47	-509.59	-264.02	795.97	1669997.52	14333405.95	39°28'15.2276"N	80°53'42.6501"W	838.61	108.350	2.12	-2.12	-0.22
2988.00	31.640	102.920	2732.60	-537.46	-277.04	843.62	1670045.15	14333392.94	39°28'15.0964"N	80°53'42.0427"W	887.94	108.180	2.67	0.60	-5.01
3082.00	30.610	105.010	2813.07	-563.94	-288.75	890.77	1670092.28	14333381.23	39°28'14.9821"N	80°53'41.4416"W	936.40	107.960	1.59	-1.10	2.22
3177.00	31.810	108.440	2894.33	-592.74	-302.93	937.89	1670139.38	14333367.05	39°28'14.8413"N	80°53'40.8410"W	985.59	107.900	2.26	1.26	3.61
3272.00	32.030	107.460	2974.96	-622.98	-318.41	985.67	1670187.15	14333351.58	39°28'14.6878"N	80°53'40.2319"W	1035.82	107.903	0.59	0.23	-1.03
3367.00	31.570	108.880	3055.71	-653.27	-334.02	1033.23	1670234.69	14333335.98	39°28'14.5330"N	80°53'39.6257"W	1085.88	107.915	0.92	-0.48	1.49
3461.00	29.480	115.120	3136.69	-684.53	-351.81	1077.47	1670278.91	14333318.20	39°28'14.3567"N	80°53'39.0618"W	1133.45	108.082	4.04	-2.22	6.84
3561.00	30.060	117.680	3223.50	-719.93	-373.89	1121.93	1670323.36	14333296.13	39°28'14.1379"N	80°53'38.4852"W	1182.59	108.431	1.40	0.56	2.56
3655.00	31.390	112.720	3304.32	-753.40	-394.28	1165.37	1670366.78	14333275.74	39°28'13.9358"N	80°53'37.9416"W	1230.26	108.692	3.04	1.41	-5.28
3749.00	31.650	111.110	3384.45	-785.62	-412.62	1210.96	1670412.35	14333257.41	39°28'13.7541"N	80°53'37.3606"W	1279.33	108.816	0.94	0.28	-1.71
3845.00	29.860	112.340	3466.94	-817.68	-430.78	1256.56	1670457.93	14333239.26	39°28'13.5741"N	80°53'36.7793"W	1328.35	108.923	1.98	-1.86	1.28
3940.00	29.210	106.490	3549.62	-846.81	-446.35	1300.68	1670502.03	14333223.70	39°28'13.4197"N	80°53'36.2171"W	1375.13	108.941	3.11	-0.68	-6.16
4035.00	27.260	109.060	3633.31	-873.73	-460.04	1343.47	1670544.81	14333210.02	39°28'13.2839"N	80°53'35.6716"W	1420.05	108.902	2.42	-2.05	2.71
4129.00	29.510	110.030	3716.01	-901.63	-475.00	1385.58	1670586.89	14333195.06	39°28'13.1355"N	80°53'35.1349"W	1464.73	108.923	2.44	2.39	1.03
4224.00	28.190	110.230	3799.21	-930.80	-490.77	1428.61	1670629.91	14333179.29	39°28'12.9791"N	80°53'34.5864"W	1510.56	108.959	1.39	-1.39	0.21
4319.00	29.070	109.060	3882.60	-959.06	-506.07	1471.48	1670672.77	14333164.00	39°28'12.8275"N	80°53'34.0400"W	1556.06	108.979	1.10	0.93	-1.23
4414.00	28.730	109.390	3965.77	-987.51	-521.18	1514.84	1670716.10	14333148.89	39°28'12.6775"N	80°53'33.4874"W	1601.99	108.986	0.40	-0.36	0.35
4509.00	31.400	114.020	4047.99	-1018.63	-536.84	1558.99	1670760.24	14333131.24	39°28'12.5025"N	80°53'32.9246"W	1649.49	109.067	3.72	2.81	4.87
4603.00	31.420	110.020	4128.22	-1050.81	-557.20	1604.39	1670805.61	14333112.89	39°28'12.3205"N	80°53'32.3461"W	1698.39	109.152	2.22	0.02	-4.26
4698.00	29.820	109.800	4209.97	-1081.25	-573.68	1649.88	1670851.09	14333096.42	39°28'12.1571"N	80°53'31.7662"W	1746.77	109.173	1.89	-1.68	-0.23
4793.00	28.840	111.670	4292.80	-1111.03	-590.14	1693.40	1670894.59	14333079.96	39°28'11.9939"N	80°53'31.2116"W	1793.28	109.213	1.41	-1.03	1.97
4888.00	29.870	111.270	4375.60	-1141.30	-607.19	1736.74	1670937.91	14333062.92	39°28'11.8249"N	80°53'30.6592"W	1839.82	109.270	1.10	1.08	-0.42
4982.00	28.400	107.800	4457.71	-1169.86	-622.51	1779.84	1670981.00	14333047.60	39°28'11.6729"N	80°53'30.1098"W	1895.56	109.278	2.38	-1.96	-3.69
5077.00	26.800	107.860	4541.90	-1196.30	-636.00	1821.74	1671022.88	14333034.13	39°28'11.5392"N	80°53'29.5758"W	1929.56	109.245	1.68	-1.68	0.08
5170.00	24.220	104.630	4625.83	-1219.49	-647.25	1860.15	1671061.28	14333022.87	39°28'11.4275"N	80°53'29.0861"W	1969.55	109.186	3.16	-2.77	-3.49
5267.00	25.890	110.310	4713.71	-1243.97	-659.63	1899.28	1671100.30	14333010.50	39°28'11.3046"N	80°53'28.5874"W	2010.56	109.152	3.02	1.72	5.86
5362.00	27.890	108.780	4798.43	-1270.77	-673.99	1939.77	1671140.86	14332996.15	39°28'11.1823"N	80°53'28.0713"W	2053.52	109.160	2.23	2.11	-1.61
5456.00	29.360	110.850	4890.94	-1299.05	-689.28	1982.12	1671183.19	14332980.86	39°28'11.0106"N	80°53'27.5316"W	2098.55	109.175	1.89	1.56	2.23

Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION		Well	Kramer Unit 1H
Operator	ANTERO RESOURCES CORPORATION	API/Legal	
Field	Tyler	Wellbore	Kramer Unit 1H AWB
Facility	Hogue Pad		
Slot	Slot #07		

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MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Dir (ft)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
5551.00	30.730	111.400	4963.18	-1329.76	-706.44	2026.48	1671227.54	14332963.71	39°28'10.8405"N	80°53'26.9662"W	2146.08	109.219	1.47	1.44	0.55	
5645.00	32.420	112.240	5043.26	-1361.99	-724.74	2072.16	1671273.21	14332945.42	39°28'10.6591"N	80°53'26.3839"W	2195.25	109.277	1.86	1.80	0.89	
5740.00	32.160	108.940	5123.57	-1394.37	-742.58	2119.65	1671320.68	14332927.58	39°28'10.4822"N	80°53'25.7786"W	2245.97	109.307	1.88	-0.27	-3.47	
5835.00	29.760	112.310	5205.04	-1425.53	-759.75	2165.39	1671366.40	14332910.43	39°28'10.3120"N	80°53'25.1957"W	2294.81	109.334	3.12	-2.53	-3.55	
5930.00	30.030	111.100	5287.40	-1456.45	-777.25	2209.38	1671410.37	14332892.92	39°28'10.1384"N	80°53'24.6350"W	2342.11	109.382	0.70	0.28	-1.27	
6025.00	27.680	106.850	5370.61	-1484.74	-792.21	2252.69	1671453.66	14332877.97	39°28'9.9901"N	80°53'24.0830"W	2387.93	109.375	3.28	-2.47	-4.47	
6120.00	28.770	108.080	5454.31	-1511.49	-805.69	2295.54	1671496.50	14332864.50	39°28'9.8563"N	80°53'23.5388"W	2432.83	109.340	1.30	1.15	1.27	
6186.00	27.450	103.150	5512.53	-1529.19	-814.08	2325.46	1671526.40	14332856.11	39°28'9.7731"N	80°53'23.1554"W	2483.84	109.294	4.03	-2.00	-7.44	BH AutoTrak X-Gen <6-3/4"> (6120°)(6186°-6254°)
6254.00	24.530	98.440	5573.65	-1544.07	-819.72	2354.70	1671555.63	14332845.48	39°28'9.7170"N	80°53'22.7827"W	2493.30	109.194	5.26	-4.29	-6.93	
6379.00	23.230	93.360	5687.96	-1565.46	-824.97	2404.98	1671605.89	14332845.22	39°28'9.6644"N	80°53'22.1417"W	2542.54	108.933	1.95	-1.04	-4.06	BH AutoTrak eXact <6-3/4"> (6254°)(6379°-19165°)
6474.00	23.050	71.980	5775.48	-1572.96	-820.30	2441.43	1671642.33	14332849.89	39°28'9.7101"N	80°53'21.6768"W	2575.56	108.572	8.81	-0.19	-22.53	
6569.00	24.010	50.230	5862.74	-1566.45	-802.15	2474.03	1671674.91	14332868.04	39°28'9.8892"N	80°53'21.2608"W	2600.82	107.964	9.14	1.01	-22.87	
6664.00	26.330	34.170	5948.82	-1546.98	-772.31	2500.76	1671701.63	14332897.86	39°28'10.1837"N	80°53'20.9196"W	2617.30	107.162	7.57	2.44	-16.91	
6759.00	31.170	15.820	6032.24	-1514.12	-731.12	2519.34	1671720.20	14332939.04	39°28'10.5906"N	80°53'20.6820"W	2623.28	106.183	10.54	5.09	-19.32	
6853.00	36.680	4.060	6110.30	-1468.27	-679.62	2527.98	1671728.83	14332930.52	39°28'11.0996"N	80°53'20.5711"W	2617.74	105.048	9.09	5.86	-12.51	
6948.00	43.700	356.820	6182.86	-1410.51	-618.44	2528.16	1671729.02	14333051.68	39°28'11.7042"N	80°53'20.5677"W	2602.71	103.746	8.87	7.39	-7.82	
7043.00	50.350	350.190	6247.62	-1342.73	-549.51	2520.10	1671720.96	14333120.57	39°28'12.3855"N	80°53'20.6694"W	2579.31	102.301	8.66	7.00	-6.98	
7081.00†	52.754	348.429	6271.25	-1313.29	-520.28	2514.57	1671715.44	14333149.80	39°28'12.6745"N	80°53'20.7395"W	2567.83	101.690	7.29	6.33	-4.63	Middlesex: 7081' MD
7137.00	56.340	346.030	6303.73	-1287.96	-475.80	2504.47	1671705.34	14333194.25	39°28'13.1142"N	80°53'20.8676"W	2549.27	100.757	7.29	6.40	-4.28	
7186.00	60.890	344.710	6329.25	-1226.27	-435.35	2493.90	1671694.77	14333234.70	39°28'13.5142"N	80°53'21.0018"W	2531.61	99.902	9.57	9.29	-2.69	
7232.00	64.370	344.620	6350.39	-1185.51	-395.96	2483.09	1671683.97	14333274.07	39°28'13.9036"N	80°53'21.1389"W	2514.47	99.060	7.57	7.57	-0.20	
7255.00†	65.692	344.368	6360.10	-1164.70	-375.86	2477.52	1671678.40	14333294.15	39°28'14.1023"N	80°53'21.2097"W	2505.87	98.627	5.83	5.75	-1.10	Burkett: 7255' MD
7280.00	67.130	344.100	6370.10	-1141.83	-353.82	2471.29	1671672.18	14333316.19	39°28'14.3203"N	80°53'21.2887"W	2496.49	98.148	5.83	5.75	-1.07	
7312.00†	68.805	343.724	6382.11	-1112.21	-325.32	2463.02	1671663.96	14333334.68	39°28'14.6020"N	80°53'21.3931"W	2494.46	97.524	5.35	5.23	-1.18	Tully: 7312' MD
7327.00	69.590	343.550	6387.43	-1098.20	-311.86	2459.12	1671660.01	14333358.13	39°28'14.7351"N	80°53'21.4432"W	2478.82	97.228	5.35	5.24	-1.16	
7421.00	77.150	342.800	6414.32	-1008.27	-225.72	2433.08	1671633.96	14333444.24	39°28'15.5868"N	80°53'21.7742"W	2443.51	95.300	8.08	8.04	-0.80	
7449.00†	78.405	343.306	6420.24	-890.92	-199.54	2425.09	1671625.99	14333470.41	39°28'15.8456"N	80°53'21.8755"W	2433.28	94.704	4.82	4.48	1.81	Marcellus POE: 7449' MD
7516.00	81.410	344.500	6431.98	-915.05	-136.17	2406.80	1671607.71	14333533.75	39°28'16.4721"N	80°53'22.1077"W	2410.65	93.238	4.82	4.49	1.78	
7611.00	86.890	347.800	6441.67	-820.99	-44.46	2384.20	1671686.12	14333625.43	39°28'17.3788"N	80°53'22.3944"W	2384.62	91.068	6.72	5.71	3.47	
7706.00	90.340	349.700	6443.96	-726.92	48.67	2365.68	1671666.60	14333718.52	39°28'18.2995"N	80°53'22.6291"W	2366.18	88.821	4.15	3.63	2.00	

Actual Wellpath Report

Kramer Unit 1H AWP Proj: 19229'
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REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Field	Tyler
Facility	Hogue Pad
Slot	Slot #07
Well	Kramer Unit 1H
API/Legal	
Wellbore	Kramer Unit 1H AWB

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Built Rate	Turn Rate	Comments
ft	°	°	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft/100ft	ft/100ft	ft/100ft	
7800.00	90.340	344.310	6443.40	-633.49	140.23	2344.55	1671545.48	14333810.04	39°28'19.2047"N	80°53'22.8971"W	2348.74	86.577	5.73	0.00	-5.73	
7895.00	90.490	339.030	6442.72	-538.53	230.37	2314.69	1671515.63	14333900.15	39°28'20.0960"N	80°53'23.2766"W	2326.12	84.316	5.56	0.16	-5.56	
7990.00	90.650	338.190	6441.77	-443.61	318.83	2280.04	1671481.00	14333988.56	39°28'20.9706"N	80°53'23.7170"W	2302.22	82.040	0.90	0.17	-0.88	
8085.00	90.220	337.990	6441.05	-348.73	406.96	2244.59	1671445.56	14334076.66	39°28'21.8421"N	80°53'24.1676"W	2281.19	79.723	0.50	-0.45	-0.21	
8179.00	91.080	338.240	6439.98	-254.85	494.18	2209.56	1671410.54	14334163.85	39°28'22.7045"N	80°53'24.6130"W	2264.15	77.393	0.95	0.91	0.27	
8274.00	90.860	339.130	6438.37	-159.94	582.67	2175.03	1671376.03	14334252.30	39°28'23.5795"N	80°53'25.0519"W	2251.72	75.003	0.96	-0.23	0.94	
8369.00	90.370	338.870	6437.35	-65.00	671.35	2140.99	1671342.00	14334340.95	39°28'24.4564"W	80°53'25.4847"W	2243.78	72.590	0.58	-0.52	-0.27	
8463.00	90.000	339.040	6437.05	28.94	759.08	2107.23	1671308.26	14334428.65	39°28'25.3239"N	80°53'25.9138"W	2239.78	70.190	0.43	-0.39	0.18	
8558.00	90.520	338.740	6436.62	123.88	847.71	2073.02	1671274.06	14334517.23	39°28'26.2002"N	80°53'26.3487"W	2236.64	67.759	0.63	0.55	-0.32	
8653.00	89.820	337.860	6436.34	216.78	935.97	2037.89	1671238.95	14334605.46	39°28'27.0730"N	80°53'26.7952"W	2242.55	65.331	1.18	-0.74	-0.93	
8748.00	89.850	340.680	6436.61	313.73	1024.81	2004.27	1671205.34	14334694.27	39°28'27.9514"N	80°53'27.2226"W	2251.07	62.919	2.87	0.03	2.97	
8842.00	90.430	342.840	6436.36	407.71	1114.08	1974.85	1671175.93	14334783.50	39°28'28.8341"N	80°53'27.5964"W	2267.42	60.571	2.36	0.62	2.30	
8937.00	90.990	342.570	6435.20	502.66	1204.78	1946.61	1671147.70	14334874.16	39°28'29.7308"N	80°53'27.9651"W	2289.28	58.246	0.65	0.59	-0.28	
9032.00	90.770	340.750	6433.75	597.64	1294.94	1916.72	1671117.83	14334964.29	39°28'30.6223"N	80°53'28.3348"W	2313.16	55.957	1.93	-0.23	-1.92	
9127.00	90.550	339.990	6432.65	692.63	1384.41	1884.81	1671085.93	14335053.72	39°28'31.5069"N	80°53'28.7405"W	2338.61	53.702	0.83	-0.23	-0.80	
9222.00	90.180	340.150	6431.14	787.61	1473.63	1862.19	1671053.32	14335142.91	39°28'32.3891"N	80°53'29.1551"W	2366.89	51.494	0.16	0.00	-0.16	
9316.00	90.150	340.060	6430.87	881.59	1561.96	1820.03	1671021.17	14335231.20	39°28'33.2624"N	80°53'29.5638"W	2398.38	49.364	0.51	-0.39	0.33	
9411.00	90.220	339.780	6430.56	1070.57	1739.57	1755.43	1670988.86	14335320.49	39°28'34.1457"N	80°53'29.9747"W	2433.64	47.272	0.10	-0.03	-0.09	
9505.00	90.150	339.920	6430.26	1165.55	1828.76	1722.70	1670956.60	14335408.74	39°28'35.0187"N	80°53'30.3849"W	2471.36	45.260	0.31	0.07	-0.30	
9600.00	90.250	340.030	6429.93	1260.54	1918.01	1690.17	1670923.88	14335497.99	39°28'35.9005"N	80°53'30.8009"W	2512.36	43.290	0.16	-0.07	0.15	
9695.00	90.180	340.200	6429.57	1354.52	2006.41	1658.20	1670891.37	14335587.11	39°28'36.7830"N	80°53'31.2144"W	2556.45	41.387	0.16	0.11	0.12	
9789.00	90.280	340.230	6429.19	1449.52	2095.80	1626.04	1670859.41	14335675.47	39°28'37.6571"N	80°53'31.6207"W	2602.94	39.572	0.20	-0.07	0.18	
9884.00	90.150	340.090	6428.83	1544.51	2185.16	1593.80	1670827.26	14335764.83	39°28'38.5409"N	80°53'32.0296"W	2652.62	37.806	0.11	0.11	0.03	
9979.00	90.290	340.120	6428.51	1638.50	2273.55	1561.81	1670795.03	14335854.15	39°28'39.4245"N	80°53'32.4393"W	2704.65	36.106	0.20	-0.14	-0.15	
10073.00	90.150	339.950	6428.18	1733.48	2362.84	1529.38	1670763.06	14335942.50	39°28'40.2984"N	80°53'32.8459"W	2756.31	34.487	0.11	0.11	0.03	
10168.00	90.280	340.920	6427.82	1828.48	2452.35	1497.56	1670730.64	14336031.76	39°28'41.1813"N	80°53'33.2582"W	2814.61	32.913	0.21	-0.11	-0.18	
10263.00	90.250	340.810	6427.38	1922.48	2541.16	1466.75	1670698.04	14336121.24	39°28'42.0664"N	80°53'33.6625"W	2873.45	31.411	1.03	0.14	1.02	
10357.00	90.060	340.920	6427.13	2016.48	2629.96	1435.94	1670666.04	14336210.01	39°28'42.9445"N	80°53'34.0541"W	2934.08	29.993	0.12	-0.03	-0.12	
10451.00	90.220	340.780	6426.90	2111.48	2719.71	1404.77	1670637.24	14336298.78	39°28'43.8225"N	80°53'34.4457"W	2996.44	28.634	0.23	-0.20	0.12	
10546.00	90.220	340.780	6426.90	2111.48	2719.71	1404.77	1670606.08	14336388.48	39°28'44.7098"N	80°53'34.8418"W	3061.08	27.317	0.22	0.17	-0.15	

Actual Wellpath Report

Kramer Unit 1H AWP Proj: 19229'
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REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Field	Tyler
Facility	Hogue Pad
Slot	Slot #07
Well	Kramer Unit 1H
API/Legal	
Wellbore	Kramer Unit 1H AWB

WELLPATH DATA (213 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	ft	ft	°	°	ft	°	"/100ft	"/100ft	"/100ft	
10641.00	90.310	341.030	6426.46	2206.46	2809.48	1373.70	1670575.02	14336478.22	39°28'45.5975"N	80°53'35.2367"W	3127.33	26.056	0.28	0.09	0.26	
10735.00	90.030	341.000	6426.18	2300.48	2898.37	1343.12	1670544.45	14336667.07	39°28'48.4763"N	80°53'35.6254"W	3194.45	24.863	0.30	-0.30	-0.03	
10830.00	89.420	341.060	6426.64	2395.47	2968.20	1312.24	1670513.58	14336656.87	39°28'47.3646"N	80°53'36.0179"W	3263.64	23.708	0.65	-0.64	0.06	
10925.00	89.660	340.270	6427.40	2490.47	3077.84	1280.78	1670482.14	14336746.47	39°28'48.2509"N	80°53'36.4176"W	3333.69	22.594	0.87	0.25	-0.83	
11019.00	90.250	341.240	6427.47	2584.47	3168.59	1249.80	1670451.17	14336835.18	39°28'49.1284"N	80°53'36.8114"W	3404.30	21.538	1.21	0.63	1.03	
11114.00	90.340	341.150	6428.98	2679.46	3256.52	1219.18	1670420.56	14336925.08	39°28'50.0175"N	80°53'37.2006"W	3477.25	20.525	0.13	0.09	-0.09	
11209.00	89.940	341.200	6428.75	2774.46	3346.43	1188.52	1670389.92	14337014.96	39°28'50.9066"N	80°53'37.5902"W	3551.23	19.553	0.42	-0.42	0.05	
11303.00	90.250	340.850	6428.59	2868.46	3435.33	1157.96	1670359.37	14337103.81	39°28'51.7855"N	80°53'37.9786"W	3625.24	18.628	0.50	0.33	-0.37	
11398.00	90.430	340.940	6428.03	2963.46	3525.09	1126.87	1670328.29	14337193.54	39°28'52.6730"N	80°53'38.3738"W	3700.82	17.728	0.71	0.19	0.09	
11493.00	89.910	341.460	6425.75	3058.46	3615.02	1096.25	1670297.68	14337283.44	39°28'53.5622"N	80°53'38.7629"W	3777.59	16.870	0.77	-0.55	0.55	
11588.00	90.000	341.180	6425.82	3153.46	3705.02	1065.82	1670267.27	14337373.40	39°28'54.4520"N	80°53'39.1496"W	3855.27	16.049	0.31	0.09	-0.29	
11682.00	89.660	340.540	6426.10	3247.46	3793.82	1035.00	1670236.46	14337462.17	39°28'55.3300"N	80°53'39.5413"W	3932.47	15.260	0.77	-0.36	-0.68	
11777.00	89.850	341.370	6426.51	3342.45	3883.62	1004.01	1670205.48	14337551.93	39°28'56.2179"N	80°53'39.9354"W	4011.30	14.495	0.90	0.20	0.87	
11872.00	89.570	340.560	6426.99	3437.45	3973.42	973.02	1670174.51	14337641.69	39°28'57.1056"N	80°53'40.3292"W	4090.83	13.760	0.90	-0.29	-0.85	
11966.00	89.820	341.050	6427.49	3531.45	4062.19	942.12	1670143.61	14337730.43	39°28'57.9835"N	80°53'40.7220"W	4170.01	13.057	0.59	0.27	0.52	
12061.00	89.860	341.360	6427.74	3626.45	4152.13	911.51	1670113.02	14337820.33	39°28'58.8728"N	80°53'41.1110"W	4251.00	12.382	0.33	0.06	0.33	
12155.00	89.450	341.430	6428.29	3720.44	4241.21	881.52	1670083.04	14337909.38	39°28'59.7536"N	80°53'41.4921"W	4331.86	11.742	0.46	-0.46	0.07	
12250.00	89.380	340.680	6429.26	3815.44	4331.06	850.68	1670052.21	14338008.78	39°29'0.6419"N	80°53'41.8841"W	4413.81	11.112	0.79	-0.07	-0.79	
12345.00	89.350	340.620	6430.31	3910.43	4420.69	819.20	1670020.75	14338098.78	39°29'1.5281"N	80°53'42.2842"W	4495.95	10.498	0.07	-0.03	-0.06	
12439.00	89.450	340.900	6431.30	4004.42	4509.44	788.23	1669989.79	14338177.49	39°29'2.4056"N	80°53'42.6780"W	4577.81	9.915	0.32	0.11	0.30	
12534.00	89.050	340.100	6432.54	4099.41	4598.98	756.52	1669958.09	14338267.00	39°29'3.2909"N	80°53'43.0810"W	4660.79	9.341	0.94	-0.42	-0.84	
12628.00	89.290	340.280	6433.90	4193.40	4687.41	724.67	1669926.25	14338355.39	39°29'4.1653"N	80°53'43.4860"W	4743.09	8.788	0.32	0.26	0.19	
12723.00	89.850	342.340	6434.61	4288.39	4777.39	694.23	1669895.82	14338445.34	39°29'5.0549"N	80°53'43.8729"W	4827.57	8.268	2.25	0.59	2.17	
12818.00	90.030	342.130	6434.71	4383.36	4867.86	665.24	1669866.85	14338535.77	39°29'5.9494"N	80°53'44.2412"W	4913.10	7.782	0.29	0.19	-0.22	
12912.00	90.770	341.520	6434.06	4477.36	4957.17	635.92	1669837.54	14338625.04	39°29'6.8324"N	80°53'44.6138"W	4997.79	7.310	1.02	0.79	-0.65	
13007.00	90.830	341.160	6432.73	4572.33	5047.16	605.53	1669807.16	14338715.00	39°29'7.7222"N	80°53'45.0001"W	5083.36	6.841	0.38	0.06	-0.38	
13102.00	90.650	339.980	6431.50	4667.32	5136.74	573.93	1669775.58	14338804.55	39°29'8.6080"N	80°53'45.4018"W	5168.71	6.375	1.26	-0.19	-1.24	
13196.00	89.200	339.000	6431.63	4761.29	5224.78	541.00	1669742.65	14338892.55	39°29'9.4784"N	80°53'45.8208"W	5252.72	5.912	1.86	-1.54	-1.04	
13291.00	89.820	337.670	6432.44	4856.19	5313.06	505.93	1669707.60	14338980.80	39°29'10.3514"N	80°53'46.2668"W	5337.10	5.440	1.54	0.65	-1.40	
13386.00	89.970	338.020	6432.61	4951.05	5401.05	470.10	1669671.79	14339068.75	39°29'11.2214"N	80°53'46.7222"W	5421.47	4.974	0.40	0.18	0.37	

Actual Wellpath Report

Kramer Unit 1H AWP Proj: 19229'
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REFERENCE WELL PATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Field	Tyler
Facility	Hogue Pad
Slot	Slot #07
Well	Kramer Unit 1H
API/Legal	
Wellbore	Kramer Unit 1H AWB

WELLPATH DATA (213 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
13480.00	89.880	340.790	6432.74	5045.00	5489.03	437.04	1669638.74	14339156.70	39°29'12.0913"N	80°53'47.1428"W	5506.40	4.552	2.95	-0.10	2.95	
13575.00	90.310	341.060	6432.58	5140.00	5578.92	405.99	1669607.70	14339246.45	39°29'12.9790"N	80°53'47.9273"W	5593.57	4.162	0.53	0.45	0.28	
13669.00	90.260	340.840	6432.09	5234.00	5667.87	375.31	1669577.04	14339335.26	39°29'13.8575"N	80°53'47.9273"W	5680.08	3.789	0.24	-0.03	-0.23	
13764.00	90.150	339.380	6431.74	5328.99	5757.00	343.00	1669544.73	14339424.56	39°29'14.7408"N	80°53'48.3382"W	5767.21	3.410	1.54	-0.14	-1.54	
13858.00	90.220	338.400	6431.43	5422.93	5844.89	309.14	1669510.89	14339512.21	39°29'15.6078"N	80°53'48.7687"W	5852.86	3.028	1.05	0.07	-1.04	
13953.00	90.250	338.140	6431.04	5517.83	5932.94	273.97	1669475.73	14339600.42	39°29'16.4804"N	80°53'49.2160"W	5939.26	2.644	0.26	0.03	-0.27	
14047.00	90.090	337.960	6430.77	5611.71	6020.12	238.83	1669440.61	14339688.57	39°29'17.3425"N	80°53'49.6629"W	6024.86	2.272	0.26	-0.17	-0.19	
14142.00	90.060	337.300	6430.64	5706.55	6107.97	202.68	1669404.47	14339775.39	39°29'18.2112"N	80°53'50.1228"W	6111.33	1.901	0.70	-0.03	-0.69	
14237.00	89.850	340.600	6430.72	5801.48	6196.62	168.56	1669370.36	14339864.00	39°29'19.0877"N	80°53'50.5566"W	6198.91	1.558	3.48	-0.22	3.47	
14331.00	89.820	339.730	6430.99	5895.47	6285.04	136.66	1669338.48	14339952.39	39°29'19.9620"N	80°53'50.9622"W	6286.53	1.246	0.93	-0.03	-0.93	
14426.00	89.850	339.590	6431.26	5990.44	6374.12	103.64	1669305.47	14340041.43	39°29'20.8427"N	80°53'51.3820"W	6374.96	0.932	0.15	0.03	-0.15	
14521.00	90.250	340.960	6431.18	6085.44	6463.54	71.58	1669273.42	14340130.82	39°29'21.7269"N	80°53'51.7897"W	6463.94	0.634	1.50	0.42	1.44	
14615.00	89.720	342.370	6431.20	6179.43	6552.77	42.01	1669243.87	14340220.01	39°29'22.6091"N	80°53'52.1655"W	6552.90	0.367	1.60	-0.56	1.50	
14710.00	90.250	343.160	6431.23	6274.38	6643.50	13.86	1669215.73	14340310.70	39°29'23.5061"N	80°53'52.5232"W	6643.51	0.120	1.00	0.56	0.83	
14804.00	90.460	343.100	6430.64	6368.30	6733.45	-13.41	1669188.46	14340400.82	39°29'24.3955"N	80°53'52.8699"W	6733.47	359.886	0.23	0.22	-0.06	
14899.00	90.310	343.800	6430.01	6463.21	6824.51	-40.47	1669161.41	14340491.54	39°29'25.2958"N	80°53'53.2137"W	6824.63	359.660	0.75	-0.16	0.74	
14994.00	91.200	343.380	6428.75	6558.10	6915.64	-67.31	1669134.59	14340582.73	39°29'26.1967"N	80°53'53.5547"W	6915.96	359.442	1.04	0.94	-0.44	
15089.00	90.430	343.370	6427.40	6653.00	7006.65	-94.49	1669107.42	14340673.71	39°29'27.0965"N	80°53'53.9000"W	7007.29	359.227	0.81	-0.81	-0.01	
15183.00	90.550	343.880	6426.60	6746.89	7096.84	-120.99	1669080.93	14340763.86	39°29'27.9881"N	80°53'54.2367"W	7097.87	359.023	0.56	0.13	0.54	
15278.00	90.150	343.390	6426.02	6841.79	7187.99	-147.75	1669054.18	14340854.97	39°29'28.8893"N	80°53'54.5768"W	7189.51	358.822	0.67	-0.42	-0.52	
15373.00	90.120	343.260	6425.77	6936.70	7278.99	-175.01	1669026.93	14340945.94	39°29'29.7890"N	80°53'54.9232"W	7281.10	358.623	0.14	0.00	-0.14	
15467.00	90.120	343.170	6425.55	7030.63	7368.99	-202.16	1668999.80	14341035.90	39°29'30.6788"N	80°53'55.2682"W	7371.76	358.429	0.10	-0.03	-0.10	
15562.00	90.450	343.570	6425.09	7125.54	7460.01	-229.35	1668972.62	14341126.89	39°29'31.5787"N	80°53'55.6137"W	7463.54	358.239	0.53	0.33	0.42	
15657.00	90.560	343.030	6424.28	7220.45	7551.00	-256.64	1668945.33	14341217.84	39°29'32.4783"N	80°53'55.9605"W	7555.36	358.053	0.58	0.13	-0.57	
15751.00	90.620	342.100	6423.32	7314.41	7640.88	-284.81	1668917.18	14341307.48	39°29'33.3649"N	80°53'56.3185"W	7645.98	357.865	0.99	0.07	-0.99	
15846.00	90.180	341.240	6422.66	7409.40	7730.85	-314.68	1668887.32	14341397.82	39°29'34.2585"N	80°53'56.6983"W	7737.26	357.669	1.02	-0.46	-0.91	
15940.00	90.180	341.070	6422.36	7503.40	7819.81	-345.04	1668856.97	14341486.54	39°29'35.1361"N	80°53'57.0843"W	7827.42	357.474	0.18	0.00	-0.18	
16035.00	90.430	341.580	6421.86	7598.39	7909.81	-375.46	1668826.56	14341576.51	39°29'36.0259"N	80°53'57.4710"W	7918.72	357.282	0.60	0.26	0.54	
16129.00	90.120	340.210	6421.41	7692.39	7998.63	-406.23	1668795.81	14341665.29	39°29'36.9041"N	80°53'57.8622"W	8008.94	357.093	1.49	-0.33	-1.46	
16224.00	89.820	341.210	6421.46	7787.39	8088.30	-437.61	1668764.44	14341754.92	39°29'37.7966"N	80°53'58.2612"W	8100.13	356.903	1.10	-0.32	1.05	

Actual Wellpath Report

Kramer Unit 1H AWP Proj: 19229'
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REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Field	Tyler
Field	Hogue Pad
Slot	Slot #07
Well	Kramer Unit 1H
API/Legal	
Wellbore	Kramer Unit 1H AWB
Wellbore	

WELLPATH DATA (213 stations)															
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	DLS	Build Rate	Turn Rate	Comments
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]	[ft]	[ft]	[ft]	["/100ft]	["/100ft]	[°/100ft]	
16319.00	90.180	341.280	6421.46	7882.39	8178.25	-488.16	1668733.91	14341844.84	39°29'38.6800"N	80°53'58.6495"W	8191.64	0.39	0.38	0.07	
16413.00	89.880	341.220	6421.41	7976.39	8287.26	-498.37	1668703.70	14341933.81	39°29'39.5601"N	80°53'59.0337"W	8282.27	0.33	-0.32	-0.08	
16508.00	89.540	340.970	6421.89	8071.38	8357.14	-529.15	1668672.94	14342023.65	39°29'40.4487"N	80°53'59.4250"W	8373.87	0.44	-0.36	-0.28	
16602.00	89.830	341.130	6422.57	8165.38	8446.04	-559.67	1668642.42	14342112.52	39°29'41.3277"N	80°53'59.8131"W	8464.56	0.20	0.10	0.17	
16697.00	90.120	340.690	6422.77	8260.38	8535.81	-590.74	1668611.36	14342202.26	39°29'42.2153"N	80°54'0.2082"W	8556.23	0.69	0.52	-0.46	
16792.00	90.180	341.330	6422.53	8355.38	8625.64	-621.66	1668580.46	14342292.05	39°29'43.1034"N	80°54'0.6012"W	8648.02	0.68	0.06	0.57	
16886.00	90.250	341.280	6422.17	8449.38	8714.68	-651.79	1668550.35	14342381.05	39°29'43.9838"N	80°54'0.9843"W	8739.02	0.99	0.07	-0.05	
16980.00	90.220	341.320	6421.79	8543.37	8803.72	-681.92	1668520.22	14342470.06	39°29'44.8641"N	80°54'1.3675"W	8830.09	0.05	-0.03	0.04	
17075.00	90.120	341.250	6421.51	8638.37	8893.70	-712.41	1668489.75	14342560.00	39°29'45.7537"N	80°54'1.7500"W	8922.18	0.13	-0.11	-0.07	
17169.00	90.090	341.270	6421.33	8732.37	8982.71	-742.61	1668459.56	14342648.98	39°29'46.6388"N	80°54'2.1350"W	9013.36	0.04	-0.03	0.02	
17264.00	89.940	341.400	6421.31	8827.37	9072.72	-773.01	1668429.17	14342738.94	39°29'47.5237"N	80°54'2.5256"W	9105.59	0.21	-0.16	0.14	
17359.00	90.280	342.240	6421.13	8922.35	9162.97	-802.65	1668399.55	14342829.17	39°29'48.4160"N	80°54'2.9024"W	9198.06	0.95	0.36	0.88	
17453.00	89.880	341.240	6421.00	9016.34	9252.24	-832.10	1668370.10	14342918.39	39°29'49.2986"N	80°54'3.2769"W	9289.58	1.15	-0.43	-1.06	
17548.00	90.220	341.330	6420.91	9111.34	9342.22	-862.58	1668339.64	14343008.34	39°29'50.1852"N	80°54'3.6644"W	9381.95	0.37	0.36	0.09	
17643.00	90.310	341.090	6420.47	9206.34	9432.15	-893.18	1668309.05	14343098.24	39°29'51.0774"N	80°54'4.0535"W	9474.35	0.27	0.09	-0.25	
17737.00	90.580	341.290	6419.74	9300.34	9521.13	-923.49	1668278.75	14343187.78	39°29'51.9671"N	80°54'4.4389"W	9566.81	0.36	0.29	0.21	
17832.00	89.880	341.270	6419.36	9395.33	9611.10	-953.98	1668248.28	14343277.11	39°29'52.8467"N	80°54'4.8265"W	9658.33	0.74	-0.74	-0.02	
17927.00	90.220	341.180	6419.28	9490.33	9701.05	-984.56	1668217.71	14343367.02	39°29'53.7360"N	80°54'5.2153"W	9750.88	0.37	0.36	-0.09	
18022.00	89.940	341.320	6419.15	9585.33	9791.00	-1015.09	1668187.19	14343456.94	39°29'54.6254"N	80°54'5.6036"W	9843.48	0.33	-0.29	0.15	
18117.00	89.850	340.650	6419.32	9680.33	9880.82	-1046.04	1668156.25	14343546.72	39°29'55.5134"N	80°54'5.9972"W	9936.04	0.71	-0.09	-0.71	
18212.00	89.970	341.160	6419.47	9775.33	9970.59	-1077.12	1668125.18	14343636.46	39°29'56.4010"N	80°54'6.3924"W	10028.60	0.55	0.13	0.54	
18307.00	91.260	343.140	6418.45	9870.29	10061.01	-1106.24	1668096.08	14343726.84	39°29'57.2949"N	80°54'6.7626"W	10121.64	2.49	1.36	2.08	
18401.00	90.060	340.600	6417.37	9964.27	10150.33	-1135.48	1668066.84	14343816.12	39°29'58.1780"N	80°54'7.1344"W	10213.64	2.99	-1.28	-2.70	
18496.00	90.490	340.600	6416.91	10059.26	10239.93	-1167.04	1668035.30	14343905.69	39°29'59.0639"N	80°54'7.5357"W	10306.22	0.45	0.45	0.00	
18591.00	90.860	339.980	6415.78	10154.25	10329.36	-1199.08	1668003.28	14343995.08	39°29'59.9481"N	80°54'7.9431"W	10398.72	0.76	0.39	-0.65	
18685.00	89.850	339.900	6415.21	10248.23	10417.65	-1231.32	1667971.05	14344083.34	39°30'0.8211"N	80°54'8.3532"W	10490.17	1.08	-1.07	-0.09	
18780.00	90.060	340.320	6415.28	10343.22	10506.99	-1263.64	1667938.74	14344172.64	39°30'1.7043"N	80°54'8.7643"W	10582.70	0.49	0.22	0.44	
18875.00	90.150	340.330	6415.11	10438.22	10596.44	-1295.62	1667906.77	14344262.06	39°30'2.5888"N	80°54'9.1711"W	10675.35	0.10	0.09	0.01	
18970.00	90.220	340.260	6414.80	10533.21	10685.88	-1327.65	1667874.75	14344351.46	39°30'3.4731"N	80°54'9.5785"W	10768.04	0.10	0.07	-0.07	
19065.00	90.400	341.830	6414.29	10628.21	10775.72	-1358.51	1667843.91	14344441.26	39°30'4.3614"N	80°54'9.9709"W	10861.02	1.66	0.19	1.65	

REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Field	Tyler
Facility	Hogue Pad
Slot	Slot #07
Well	Kramer Unit 1H
API/Legal	
Wellbore	Kramer Unit 1H AWB

WELLPATH DATA (213 stations) † = interpolated, ‡ = extrapolated station																
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Interval [ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
19160.00	90.150	340.970	6413.83	10723.20	10865.74	1667813.57	14344531.25	39°30'5.2514"N	80°54'10.3568"W	10954.14	352.716	1.00	-0.26	-0.97		
19165.00	90.220	340.750	6413.82	10728.20	10870.48	1667811.93	14344535.97	39°30'5.2981"N	80°54'10.3776"W	10959.03	352.711	3.49	1.40	-3.20		
19229.00	90.220	340.750	6413.57	10792.20	10930.88	1667790.84	14344596.37	39°30'5.8955"N	80°54'10.6460"W	11021.65	352.642	0.00	0.00	0.00	Projected MD at TD: 19229' MD	

HOLE & CASING SECTIONS - Ref Wellbore: Kramer Unit 1H AWB Ref Wellpath: Kramer Unit 1H AWP Proj: 19229'											
String/Diameter	Start MD [ft]	End MD [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	End N/S [ft]	Start E/W [ft]	End E/W [ft]			
16in Conductor	25.50	105.50	80.00	25.50	105.50	0.00	0.00	-0.48			
13.5in Open Hole	105.50	620.80	515.30	105.50	620.73	-0.48	-0.53	-6.18			
10.75in Casing Surface	25.50	620.80	595.30	25.50	620.73	0.00	0.00	-6.18			
9.875in Open Hole	620.80	2850.00	2229.20	620.73	2614.81	-6.18	-6.38	-257.17			
7.625in Casing Intermediate	25.50	2829.80	2804.30	25.50	2597.72	0.00	0.00	-253.88			
6.75in Open Hole	2850.00	19229.00	16379.00	2614.81	6413.57	-257.17	774.55	10930.88			
5in Casing Production	25.50	19229.00	19203.50	25.50	6413.57	0.00	0.00	10930.88			

REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Kramer Unit 1H
Field	Tyler	API/Legal	
Facility	Hogue Pad	Wellbore	Kramer Unit 1H AWB
Slot	Slot #07		

TARGETS

Name	TVD (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Shape
Kramer Unit 1H - POE - Rev-2	6405.00	-269.30	2450.81	1671651.70	14333400.67	39°28'15.1558"N	80°53'21.5486"W	point
Kramer Unit 1H - BHL - Rev-2	6433.00	10934.94	-1423.29	1667779.15	14344600.42	39°30'5.9357"N	80°54'10.7951"W	point
Kramer Unit 1H - LP - Rev-2	6433.00	-81.89	2386.01	1671586.92	14333588.01	39°28'17.0088"N	80°53'22.3720"W	point
Kramer Unit 1H - 50' L/R Hardline	6500.00	5332.82	513.76	1669715.43	14339000.54	39°29'10.5465"N	80°53'46.1664"W	rectangle
2D Rectangle 11857.7 x 100.								

WELLPATH COMPOSITION - Ref Wellbore: Kramer Unit 1H AWB Ref Wellpath: Kramer Unit 1H AWP Proj: 19229'

Start MD (ft)	End MD (ft)	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
25.50	565.00	Gyrodata 2015 - GC+WIR+DPIPE	01 Gyrodata MS Gyro <3-1/2'> (100'-565')	Kramer Unit 1H AWB	24/Feb/2020
565.00	2777.00	BH NaviTrak (2019) (Axial)	02 APS EM <9-7/8'> (665') (689'-2777')	Kramer Unit 1H AWB	24/Feb/2020
2777.00	6120.00	BH NaviTrak (2019) (Axial)	03 APS EM <6-3/4'> (2777') (2893'-6120')	Kramer Unit 1H AWB	24/Feb/2020
6120.00	6254.00	BH OnTrak (2019) (Short spacing)	04 AutoTrak X-Gen <6-3/4'> (6120') (6186'-6254')	Kramer Unit 1H AWB	24/Feb/2020
6254.00	19229.00	BH AutoTrak G3/GT4/eXact (2019) (X Short spacing)	05 BH AutoTrak eXact (X-Short) <6-3/4'> (6254') (6379'-19165')	Kramer Unit 1H AWB	12/May/2020

REFERENCE WELLPATH IDENTIFICATION		
Operator	ANTERO RESOURCES CORPORATION	Kramer Unit 1H
Field	Tyler	API/Legal
Facility	Hogue Pad	Wellbore
Slot	Slot #07	Kramer Unit 1H AWB

COMMENTS
<p>Wellpath general comments API: 47-095-02673-0000 BH Job #: 110293518-B Rig: H&P 317 Duration: 2/24/2020-5/15/2020 Gyrodatta MS Gyro <13-1/2"> (100'-565') APS EM <9-7/8"> (565')(689'-2777') APS EM <6-3/4"> (2777')(2893'-6120') AutoTrak X-Gen <6-3/4"> (6120')(6186'-6254') BH AT eXact <6-3/4"> (6254')(6379'-19165') Middlesex: 7081' MD Burkett: 7255' MD Tully: 7312' MD Marcellus POE: 7449' MD Projected MD at TD: 19229'</p>