



ANTERO RESOURCES CORPORATION

Location: Ritchie County, WV
Field: Ritchie
Facility: Weekley Trust Pad

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



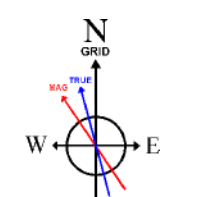
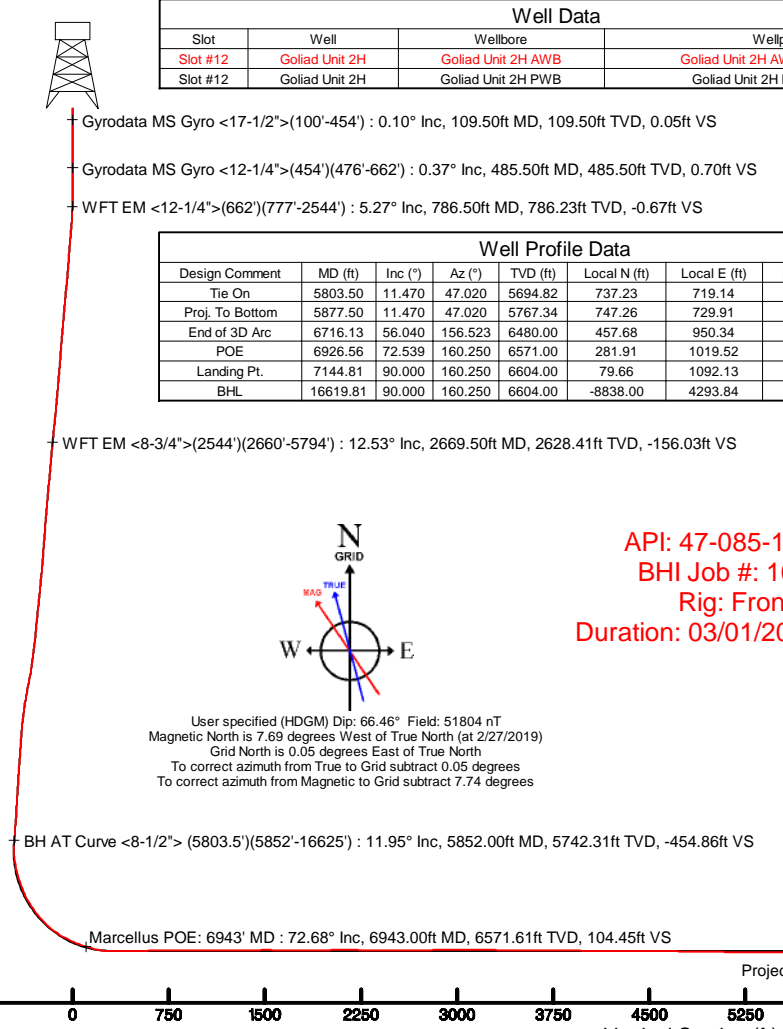
Plot reference wellpath is Goliad Unit 2H PWP Rev-A.0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to Frontier 22 (RKB)	North Reference: Grid north
Measured depths are referenced to Frontier 22 (RKB)	Scale: True distance
Frontier 22 (RKB) to Mean Sea Level: 1259.5 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot: Slot #12): -1235 feet	Created by: delaset on 2019-03-13
Coordinates are in feet referenced to Slot	Database: WA_MPL_EasternUS_Defn

Location Information				
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Weekley Trust Pad	1661856.457	14297226.975	39°22'17.590"N	80°55'26.890"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
Slot #12	17.29	108.36	1661964.776	14297244.259
Frontier 22 (RKB) to Ground level (At Slot: Slot #12)			24.5ft	
Mean Sea Level to Ground level (At Slot: Slot #12)			-1235ft	
Frontier 22 (RKB) to Mean Sea Level			1259.5ft	

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #12	Goliad Unit 2H	Goliad Unit 2H AWB	Goliad Unit 2H AWP Proj: 16650'
Slot #12	Goliad Unit 2H	Goliad Unit 2H PWB	Goliad Unit 2H PWP Rev-A.0

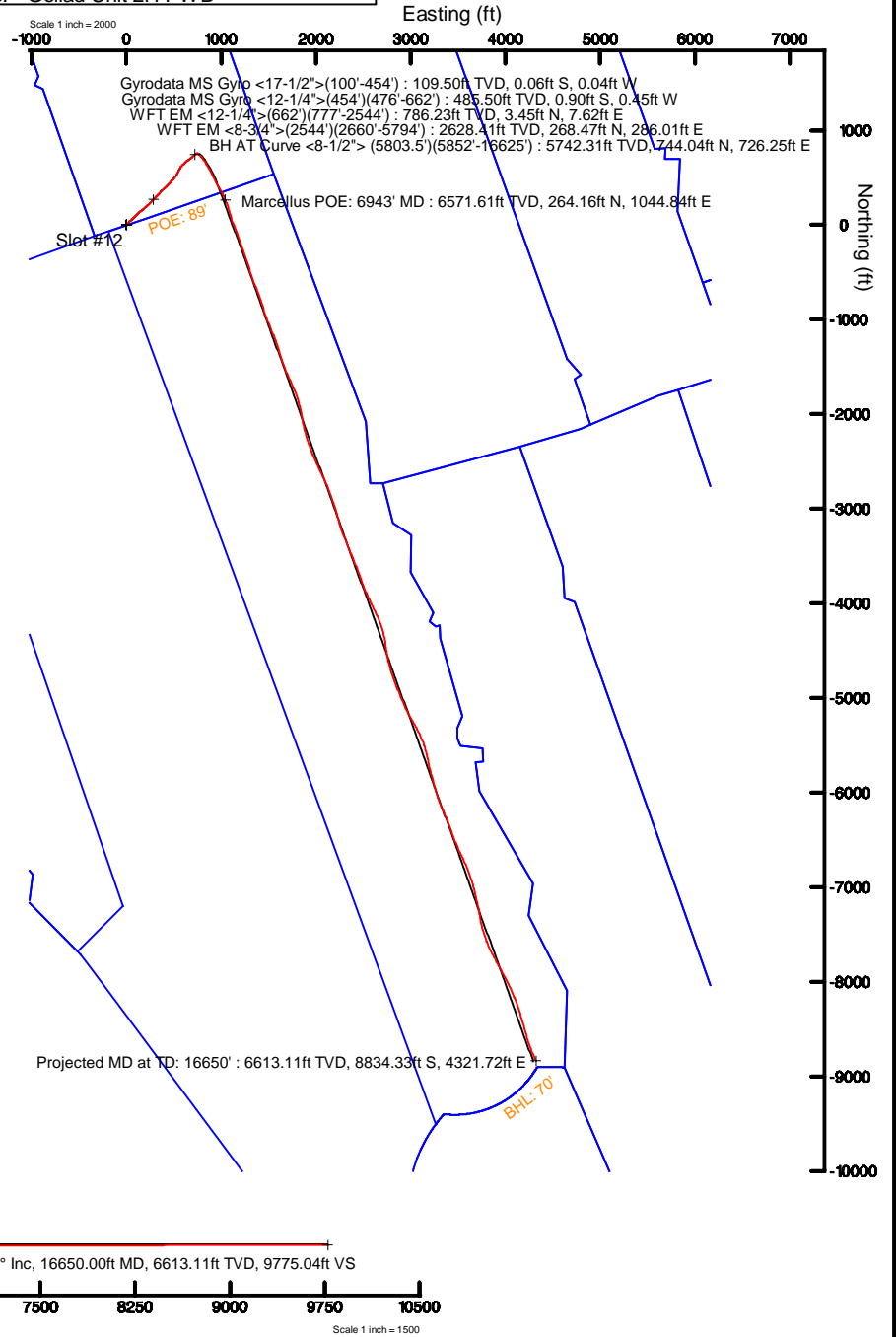
Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	5803.50	11.470	47.020	5694.82	737.23	719.14	0.82	-450.85
Proj. To Bottom	5877.50	11.470	47.020	5767.34	747.26	729.91	0.00	-456.65
End of 3D Arc	6716.13	56.040	156.523	6480.00	457.68	950.34	7.21	-109.63
POE	6926.56	72.539	160.250	6571.00	281.91	1019.52	8.00	79.18
Landing Pt.	7144.81	90.000	160.250	6604.00	79.66	1092.13	8.00	294.08
BHL	16619.81	90.000	160.250	6604.00	-8838.00	4293.84	0.00	9769.08

Scale 1 inch = 1500
True Vertical Depth (ft)



User specified (HDGM) Dip: 66.46° Field: 51804 nT
Magnetic North is 7.69 degrees West of True North (at 2/27/2019)
Grid North is 0.05 degrees East of True North
To correct azimuth from True to Grid subtract 0.05 degrees
To correct azimuth from Magnetic to Grid subtract 7.74 degrees

API: 47-085-10345-0000
BHI Job #: 109679465
Rig: Frontier 22
Duration: 03/01/2019-03/05/2019



Vertical Section (ft)
Azimuth 160.25° with reference 0.00 N, 0.00 E



Actual Wellpath Report

Goliad Unit 2H AWP Proj: 16650'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #12
Area	Ritchie County, WV	Well	Goliad Unit 2H
Field	Ritchie	Wellbore	Goliad Unit 2H AWB
Facility	Weekley Trust Pad		

REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Delaset
Scale	0.999601	Report Generated	3/13/2019 at 9:52:53 AM
Convergence at slot	0.05° East	Database/Source file	WA_MPL_EasternUS_Defn/Goliad_Unit_2H_AWP_Proj_16650_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	17.29	108.36	1661964.78	14297244.26	39°22'17.760"N	80°55'25.510"W
Facility Reference Pt			1661856.46	14297226.98	39°22'17.590"N	80°55'26.890"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM

Calculation method	Minimum curvature	Frontier 22 (RKB) to Facility Vertical Datum	24.50ft
Horizontal Reference Pt	Slot	Frontier 22 (RKB) to Mean Sea Level	1259.50ft
Vertical Reference Pt	Frontier 22 (RKB)	Frontier 22 (RKB) to Ground Level at Slot (Slot #12)	24.50ft
MD Reference Pt	Frontier 22 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	160.25°



Actual Wellpath Report

Goliad Unit 2H AWP Proj: 16650'

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REFERENCE WELLPATH IDENTIFICATION

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Field	Ritchie	Wellbore	Goliad Unit 2H AWB
Facility	Weekley Trust Pad		

WELLPATH DATA (198 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
0.00†	0.000	209.360	0.00	0.00	0.00	0.00	1661964.78	14297244.26	39°22'17.760"N	80°55'25.510"W	0.00	0.000	0.00	0.00	0.00	
24.50	0.000	209.360	24.50	0.00	0.00	0.00	1661964.78	14297244.26	39°22'17.760"N	80°55'25.510"W	0.00	0.000	0.00	0.00	0.00	
109.50	0.100	209.360	109.50	0.05	-0.06	-0.04	1661964.74	14297244.19	39°22'17.759"N	80°55'25.510"W	0.07	209.360	0.12	0.12	-177.22	Gyrodata MS Gyro <17-1/2">(100'-454')
209.50	0.180	193.200	209.50	0.24	-0.29	-0.12	1661964.66	14297243.97	39°22'17.757"N	80°55'25.511"W	0.32	201.391	0.09	0.08	-16.16	
309.50	0.070	229.150	309.50	0.39	-0.49	-0.20	1661964.58	14297243.77	39°22'17.755"N	80°55'25.513"W	0.52	202.054	0.13	-0.11	35.95	
409.50	0.140	218.400	409.50	0.48	-0.62	-0.32	1661964.46	14297243.64	39°22'17.754"N	80°55'25.514"W	0.70	207.157	0.07	0.07	-10.75	
463.50	0.280	212.460	463.50	0.59	-0.79	-0.43	1661964.35	14297243.47	39°22'17.752"N	80°55'25.515"W	0.90	208.760	0.26	0.26	-11.00	
485.50	0.370	171.860	485.50	0.70	-0.90	-0.45	1661964.33	14297243.36	39°22'17.751"N	80°55'25.516"W	1.01	206.530	1.09	0.41	-184.55	Gyrodata MS Gyro <12-1/4">(454')(476'-662')
578.50	0.580	118.820	578.50	1.34	-1.43	0.01	1661964.78	14297242.83	39°22'17.746"N	80°55'25.510"W	1.43	179.793	0.50	0.23	-57.03	
671.50	2.010	65.400	671.47	1.56	-0.97	1.90	1661966.68	14297243.29	39°22'17.750"N	80°55'25.486"W	2.14	117.111	1.86	1.54	-57.44	
786.50	5.270	47.350	786.23	-0.67	3.45	7.62	1661972.39	14297247.70	39°22'17.794"N	80°55'25.413"W	8.36	65.667	2.97	2.83	-15.70	WFT EM <12-1/4">(662')(777'-2544')
880.50	7.180	42.080	879.67	-5.12	10.73	14.73	1661979.50	14297254.99	39°22'17.866"N	80°55'25.322"W	18.23	53.931	2.12	2.03	-5.61	
975.50	9.290	37.470	973.69	-12.08	21.23	23.38	1661988.14	14297265.48	39°22'17.970"N	80°55'25.212"W	31.58	47.763	2.33	2.22	-4.85	
1072.50	9.950	41.080	1069.32	-20.40	33.76	33.65	1661998.41	14297278.00	39°22'18.093"N	80°55'25.081"W	47.66	44.908	0.92	0.68	3.72	
1167.50	10.950	49.900	1162.75	-27.54	45.76	45.94	1662010.70	14297290.00	39°22'18.212"N	80°55'24.924"W	64.84	45.117	1.98	1.05	9.28	
1262.50	12.540	50.660	1255.76	-34.14	58.11	60.82	1662025.57	14297302.34	39°22'18.334"N	80°55'24.735"W	84.12	46.308	1.68	1.67	0.80	
1357.50	12.290	45.300	1348.54	-41.86	71.76	75.99	1662040.73	14297315.99	39°22'18.469"N	80°55'24.542"W	104.51	46.640	1.24	-0.26	-5.64	
1451.50	12.620	41.960	1440.33	-50.95	86.43	89.96	1662054.70	14297330.65	39°22'18.613"N	80°55'24.364"W	124.75	46.148	0.84	0.35	-3.55	
1546.50	11.580	44.720	1533.22	-59.97	100.92	103.61	1662068.35	14297345.14	39°22'18.757"N	80°55'24.190"W	144.64	45.753	1.25	-1.09	2.91	
1641.50	11.400	46.250	1626.31	-67.90	114.19	117.10	1662081.83	14297358.40	39°22'18.888"N	80°55'24.018"W	163.56	45.722	0.37	-0.19	1.61	
1736.50	12.630	48.480	1719.23	-75.57	127.57	131.66	1662096.39	14297371.78	39°22'19.020"N	80°55'23.832"W	183.33	45.905	1.38	1.29	2.35	
1831.50	13.530	50.940	1811.77	-83.10	141.46	148.07	1662112.78	14297385.66	39°22'19.157"N	80°55'23.623"W	204.78	46.308	1.11	0.95	2.59	
1926.50	13.090	50.160	1904.22	-90.47	155.35	164.96	1662129.67	14297399.55	39°22'19.294"N	80°55'23.408"W	226.59	46.718	0.50	-0.46	-0.82	
2021.50	12.930	50.030	1996.78	-97.84	169.07	181.36	1662146.07	14297413.26	39°22'19.429"N	80°55'23.199"W	247.95	47.009	0.17	-0.17	-0.14	
2116.50	12.820	49.360	2089.39	-105.27	182.76	197.51	1662162.20	14297426.95	39°22'19.565"N	80°55'22.993"W	269.09	47.220	0.20	-0.12	-0.71	
2211.50	13.530	49.400	2181.89	-112.98	196.86	213.94	1662178.63	14297441.04	39°22'19.704"N	80°55'22.784"W	290.73	47.381	0.75	0.75	0.04	
2305.50	13.930	49.500	2273.20	-120.91	211.36	230.89	1662195.58	14297455.54	39°22'19.847"N	80°55'22.568"W	313.03	47.529	0.43	0.43	0.11	
2400.50	12.890	45.490	2365.61	-129.40	226.22	247.15	1662211.82	14297470.39	39°22'19.994"N	80°55'22.361"W	335.05	47.532	1.47	-1.09	-4.22	
2495.50	12.120	42.240	2458.36	-138.52	241.03	261.41	1662226.08	14297485.19	39°22'20.140"N	80°55'22.179"W	355.57	47.323	1.10	-0.81	-3.42	
2553.50	12.060	41.850	2515.07	-144.26	250.05	269.54	1662234.21	14297494.21	39°22'20.229"N	80°55'22.075"W	367.67	47.148	0.17	-0.10	-0.67	



Actual Wellpath Report

Golliad Unit 2H AWP Proj: 16650'
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Area	Ritchie County, WV	Well	Golliad Unit 2H
Field	Ritchie	Wellbore	Golliad Unit 2H AWB
Facility	Weekley Trust Pad		

WELLPATH DATA (198 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
2669.50	12.530	41.760	2628.41	-156.03	268.47	286.01	1662250.67	14297512.62	39°22'20.411"N	80°55'21.865"W	392.27	46.812	0.41	0.41	-0.08	WFT EM <8-3/4">(2544')(2660'-5794')
2763.50	11.940	46.580	2720.28	-164.79	282.76	299.86	1662264.52	14297526.90	39°22'20.552"N	80°55'21.689"W	412.15	46.682	1.25	-0.63	5.13	
2858.50	11.550	45.680	2813.29	-172.69	296.15	313.81	1662278.46	14297540.29	39°22'20.684"N	80°55'21.511"W	431.49	46.658	0.45	-0.41	-0.95	
2953.50	11.070	43.690	2906.44	-180.73	309.39	326.91	1662291.56	14297553.53	39°22'20.815"N	80°55'21.344"W	450.11	46.577	0.65	-0.51	-2.09	
3048.50	10.630	41.230	2999.75	-189.05	322.58	338.99	1662303.63	14297566.71	39°22'20.945"N	80°55'21.190"W	467.94	46.421	0.67	-0.46	-2.59	
3143.50	9.970	38.810	3093.22	-197.60	335.58	349.92	1662314.55	14297579.70	39°22'21.074"N	80°55'21.051"W	484.82	46.198	0.83	-0.69	-2.55	
3238.50	10.210	45.290	3186.75	-205.44	347.91	361.05	1662325.68	14297592.03	39°22'21.196"N	80°55'20.909"W	501.40	46.062	1.22	0.25	6.82	
3338.50	9.760	44.290	3285.23	-212.89	360.21	373.27	1662337.90	14297604.33	39°22'21.317"N	80°55'20.753"W	518.73	46.020	0.48	-0.45	-1.00	
3433.50	10.620	46.850	3378.74	-219.89	371.96	385.28	1662349.90	14297616.07	39°22'21.433"N	80°55'20.600"W	535.53	46.008	1.02	0.91	2.69	
3528.50	12.000	49.100	3471.89	-226.93	384.42	399.13	1662363.75	14297628.52	39°22'21.556"N	80°55'20.423"W	554.15	46.076	1.52	1.45	2.37	
3623.50	11.770	48.000	3564.85	-234.16	397.37	413.80	1662378.41	14297641.47	39°22'21.684"N	80°55'20.237"W	573.70	46.160	0.34	-0.24	-1.16	
3718.50	12.770	45.190	3657.68	-242.28	411.25	428.45	1662393.05	14297655.34	39°22'21.821"N	80°55'20.050"W	593.88	46.173	1.23	1.05	-2.96	
3813.50	12.430	43.230	3750.39	-251.37	426.10	442.90	1662407.50	14297670.19	39°22'21.968"N	80°55'19.866"W	614.59	46.108	0.57	-0.36	-2.06	
3908.50	11.740	41.140	3843.29	-260.72	440.83	456.26	1662420.85	14297684.91	39°22'22.113"N	80°55'19.695"W	634.43	45.986	0.86	-0.73	-2.20	
4003.50	11.210	39.480	3936.39	-270.14	455.23	468.49	1662433.08	14297699.31	39°22'22.255"N	80°55'19.540"W	653.24	45.822	0.66	-0.56	-1.75	
4097.50	11.580	43.490	4028.54	-279.07	469.13	480.79	1662445.38	14297713.20	39°22'22.393"N	80°55'19.383"W	671.75	45.703	0.93	0.39	4.27	
4192.50	12.470	42.780	4121.45	-288.09	483.58	494.32	1662458.90	14297727.64	39°22'22.535"N	80°55'19.210"W	691.52	45.630	0.95	0.94	-0.75	
4287.50	12.670	39.960	4214.18	-298.08	499.09	507.98	1662472.55	14297743.15	39°22'22.689"N	80°55'19.036"W	712.13	45.506	0.68	0.21	-2.97	
4382.50	13.300	37.830	4306.75	-309.19	515.71	521.37	1662485.94	14297759.76	39°22'22.853"N	80°55'18.865"W	733.34	45.313	0.83	0.66	-2.24	
4477.50	13.860	31.640	4399.10	-322.15	534.03	534.04	1662498.61	14297778.07	39°22'23.034"N	80°55'18.704"W	755.24	45.001	1.64	0.59	-6.52	
4571.50	15.440	24.020	4490.05	-338.21	555.04	545.05	1662509.60	14297799.08	39°22'23.241"N	80°55'18.564"W	777.91	44.479	2.65	1.68	-8.11	
4665.50	14.850	25.730	4580.78	-355.70	577.32	555.37	1662519.92	14297821.35	39°22'23.461"N	80°55'18.432"W	801.09	43.890	0.79	-0.63	1.82	
4760.50	14.080	31.680	4672.77	-371.44	598.13	566.72	1662531.27	14297842.15	39°22'23.667"N	80°55'18.287"W	823.97	43.456	1.76	-0.81	6.26	
4855.50	13.090	38.920	4765.12	-384.24	616.33	579.55	1662544.10	14297860.34	39°22'23.847"N	80°55'18.124"W	846.02	43.238	2.07	-1.04	7.62	
4950.50	12.310	44.900	4857.80	-394.17	631.88	593.46	1662558.00	14297875.88	39°22'24.000"N	80°55'17.946"W	866.87	43.204	1.61	-0.82	6.29	
5045.50	10.610	49.030	4950.90	-401.67	644.79	607.21	1662571.74	14297888.79	39°22'24.128"N	80°55'17.771"W	885.69	43.281	1.99	-1.79	4.35	
5140.50	10.280	48.590	5044.33	-407.96	656.13	620.17	1662584.70	14297900.12	39°22'24.240"N	80°55'17.606"W	902.84	43.386	0.36	-0.35	-0.46	
5235.50	10.200	45.330	5137.82	-414.64	667.65	632.51	1662597.04	14297911.64	39°22'24.353"N	80°55'17.449"W	919.69	43.452	0.62	-0.08	-3.43	
5330.50	11.780	50.600	5231.08	-421.44	679.72	645.99	1662610.51	14297923.70	39°22'24.473"N	80°55'17.277"W	937.72	43.543	1.97	1.66	5.55	
5424.50	11.480	54.880	5323.15	-427.15	691.19	661.06	1662625.57	14297935.17	39°22'24.586"N	80°55'17.085"W	956.42	43.723	0.97	-0.32	4.55	



Actual Wellpath Report

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5519.50	11.740	52.030	5416.20	-432.68	702.57	676.41	1662640.91	14297946.55	39°22'24.698"N	80°55'16.889"W	975.26	43.913	0.66	0.27	-3.00	
5613.50	10.860	53.000	5508.38	-438.29	713.79	691.02	1662655.52	14297957.76	39°22'24.809"N	80°55'16.703"W	993.48	44.072	0.96	-0.94	1.03	
5708.50	11.070	50.450	5601.65	-444.04	724.98	705.20	1662669.69	14297968.95	39°22'24.919"N	80°55'16.522"W	1011.39	44.208	0.56	0.22	-2.68	
5803.50	11.470	47.020	5694.82	-450.85	737.23	719.14	1662683.63	14297981.19	39°22'25.040"N	80°55'16.345"W	1029.89	44.289	0.82	0.42	-3.61	
5852.00	11.950	45.460	5742.31	-454.86	744.04	726.25	1662690.73	14297988.00	39°22'25.108"N	80°55'16.254"W	1039.73	44.307	1.19	0.99	-3.22	BH AT Curve <8-1/2"> (5803.5')(5852'-16625')
5905.00	11.600	57.390	5794.20	-458.35	750.76	734.65	1662699.13	14297994.72	39°22'25.174"N	80°55'16.147"W	1050.40	44.379	4.63	-0.66	22.51	
5952.00	11.060	88.990	5840.33	-457.95	753.39	743.15	1662707.62	14297997.34	39°22'25.200"N	80°55'16.039"W	1058.23	44.608	13.10	-1.15	67.23	
5999.00	11.900	112.410	5886.41	-453.24	751.62	752.14	1662716.61	14297995.58	39°22'25.182"N	80°55'15.924"W	1063.32	45.020	10.01	1.79	49.83	
6046.00	13.140	121.720	5932.30	-445.81	746.96	761.16	1662725.63	14297990.92	39°22'25.136"N	80°55'15.810"W	1066.45	45.540	5.03	2.64	19.81	
6094.00	15.700	130.460	5978.79	-435.90	739.88	770.75	1662735.22	14297983.84	39°22'25.066"N	80°55'15.688"W	1068.40	46.171	6.99	5.33	18.21	
6141.00	17.980	136.590	6023.77	-423.74	730.48	780.57	1662745.04	14297974.44	39°22'24.973"N	80°55'15.563"W	1069.06	46.899	6.14	4.85	13.04	
6188.00	19.860	141.410	6068.23	-409.54	718.97	790.54	1662755.00	14297962.94	39°22'24.859"N	80°55'15.436"W	1068.58	47.715	5.20	4.00	10.26	
6235.00	21.420	141.820	6112.22	-393.84	705.98	800.83	1662765.28	14297949.95	39°22'24.731"N	80°55'15.305"W	1067.58	48.602	3.33	3.32	0.87	
6284.00	24.660	143.160	6157.30	-375.57	690.76	812.49	1662776.94	14297934.74	39°22'24.580"N	80°55'15.157"W	1066.44	49.630	6.70	6.61	2.73	
6331.00	28.760	144.890	6199.28	-355.29	673.66	824.88	1662789.32	14297917.65	39°22'24.411"N	80°55'14.999"W	1065.00	50.762	8.88	8.72	3.68	
6379.00	33.050	146.480	6240.45	-331.43	653.29	838.75	1662803.19	14297897.29	39°22'24.210"N	80°55'14.823"W	1063.15	52.086	9.10	8.94	3.31	
6426.00	36.020	148.830	6279.17	-305.43	630.77	852.99	1662817.42	14297874.78	39°22'23.987"N	80°55'14.642"W	1060.88	53.518	6.92	6.32	5.00	
6473.00	39.460	151.590	6316.33	-277.11	605.80	867.25	1662831.68	14297849.82	39°22'23.740"N	80°55'14.460"W	1057.88	55.064	8.15	7.32	5.87	
6520.00	41.240	152.540	6352.15	-246.99	578.92	881.50	1662845.92	14297822.94	39°22'23.474"N	80°55'14.279"W	1054.60	56.705	4.01	3.79	2.02	
6567.00	44.130	153.260	6386.70	-215.39	550.55	896.01	1662860.43	14297794.59	39°22'23.194"N	80°55'14.095"W	1051.64	58.431	6.24	6.15	1.53	
6614.00	48.460	153.120	6419.16	-181.68	520.24	911.33	1662875.74	14297764.29	39°22'22.894"N	80°55'13.900"W	1049.37	60.280	9.22	9.21	-0.30	
6619.00†	48.981	153.103	6422.46	-177.95	516.88	913.03	1662877.44	14297760.94	39°22'22.861"N	80°55'13.878"W	1049.19	60.485	10.43	10.43	-0.34	Middlesex: 6619' MD
6661.00	53.360	152.970	6448.79	-145.50	487.73	927.87	1662892.27	14297731.79	39°22'22.573"N	80°55'13.690"W	1048.24	62.271	10.43	10.43	-0.32	
6708.00	57.900	151.920	6475.32	-107.08	453.35	945.81	1662910.21	14297697.43	39°22'22.233"N	80°55'13.462"W	1048.85	64.391	9.83	9.66	-2.23	
6757.00	61.840	150.150	6499.91	-65.26	416.29	966.34	1662930.73	14297660.38	39°22'21.866"N	80°55'13.201"W	1052.20	66.694	8.63	8.04	-3.61	
6800.00†	64.219	149.976	6519.41	-27.54	383.08	985.47	1662949.85	14297627.19	39°22'21.538"N	80°55'12.957"W	1057.31	68.757	5.54	5.53	-0.41	Burkett: 6800' MD
6804.00	64.440	149.960	6521.14	-23.99	379.96	987.27	1662951.65	14297624.07	39°22'21.507"N	80°55'12.934"W	1057.86	68.950	5.54	5.53	-0.40	
6852.00	67.530	152.640	6540.68	19.31	341.50	1008.31	1662972.68	14297585.63	39°22'21.127"N	80°55'12.667"W	1064.57	71.289	8.21	6.44	5.58	
6878.00†	69.020	153.912	6550.30	43.28	319.93	1019.17	1662983.54	14297564.06	39°22'20.913"N	80°55'12.529"W	1068.21	72.572	7.31	5.73	4.89	Tully: 6878' MD
6899.00	70.230	154.920	6557.61	62.87	302.18	1027.67	1662992.04	14297546.31	39°22'20.738"N	80°55'12.421"W	1071.18	73.615	7.31	5.76	4.80	



Actual Wellpath Report

Golliad Unit 2H AWP Proj: 16650'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #12
Area	Ritchie County, WV	Well	Golliad Unit 2H
Field	Ritchie	Wellbore	Golliad Unit 2H AWB
Facility	Weekley Trust Pad		

WELLPATH DATA (198 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
6943.00†	72.677	156.471	6571.61	104.45	264.16	1044.84	1663009.19	14297508.31	39°22'20.362"N	80°55'12.203"W	1077.71	75.812	6.49	5.56	3.53	Marcellus POE: 6943' MD
6947.00	72.900	156.610	6572.79	108.26	260.66	1046.36	1663010.71	14297504.81	39°22'20.327"N	80°55'12.183"W	1078.33	76.012	6.49	5.58	3.47	
6994.00	74.400	159.500	6586.03	153.32	218.83	1063.21	1663027.55	14297463.00	39°22'19.914"N	80°55'11.969"W	1085.49	78.370	6.71	3.19	6.15	
7042.00	77.880	162.640	6597.52	199.90	174.76	1078.31	1663042.65	14297418.95	39°22'19.478"N	80°55'11.778"W	1092.38	80.794	9.64	7.25	6.54	
7089.00	83.800	164.760	6605.00	246.19	130.24	1091.32	1663055.66	14297374.45	39°22'19.038"N	80°55'11.612"W	1099.06	83.194	13.36	12.60	4.51	
7136.00	89.850	163.980	6607.61	292.98	85.07	1103.96	1663068.29	14297329.30	39°22'18.591"N	80°55'11.452"W	1107.23	85.594	12.98	12.87	-1.66	
7231.00	91.140	156.620	6606.78	387.91	-4.30	1135.96	1663100.28	14297239.96	39°22'17.708"N	80°55'11.046"W	1135.97	90.217	7.87	1.36	-7.75	
7325.00	90.860	158.650	6605.14	481.79	-91.21	1171.72	1663136.02	14297153.08	39°22'16.848"N	80°55'10.591"W	1175.26	94.451	2.18	-0.30	2.16	
7420.00	90.860	161.970	6603.72	576.77	-180.64	1203.72	1663168.01	14297063.70	39°22'15.964"N	80°55'10.185"W	1217.20	98.534	3.49	0.00	3.49	
7514.00	89.690	160.600	6603.27	670.75	-269.66	1233.88	1663198.16	14296974.71	39°22'15.084"N	80°55'09.802"W	1263.00	102.328	1.92	-1.24	-1.46	
7609.00	90.920	161.670	6602.76	765.73	-359.55	1264.59	1663228.86	14296884.85	39°22'14.195"N	80°55'09.412"W	1314.71	105.872	1.72	1.29	1.13	
7703.00	90.400	162.940	6601.68	859.66	-449.10	1293.16	1663257.42	14296795.34	39°22'13.310"N	80°55'09.049"W	1368.93	109.151	1.46	-0.55	1.35	
7798.00	90.800	161.790	6600.68	954.59	-539.63	1321.94	1663286.19	14296704.85	39°22'12.415"N	80°55'08.683"W	1427.84	112.206	1.28	0.42	-1.21	
7893.00	90.980	158.040	6599.21	1049.56	-628.82	1354.55	1663318.79	14296615.69	39°22'11.533"N	80°55'08.269"W	1493.40	114.902	3.95	0.19	-3.95	
7987.00	89.350	158.770	6598.94	1143.51	-716.22	1389.15	1663353.37	14296528.33	39°22'10.669"N	80°55'07.830"W	1562.92	117.275	1.90	-1.73	0.78	
8081.00	89.910	162.210	6599.54	1237.49	-804.81	1420.54	1663384.74	14296439.77	39°22'09.793"N	80°55'07.431"W	1632.68	119.534	3.71	0.60	3.66	
8176.00	89.850	162.650	6599.74	1332.42	-895.38	1449.21	1663413.41	14296349.24	39°22'08.898"N	80°55'07.067"W	1703.50	121.709	0.47	-0.06	0.46	
8271.00	90.890	159.360	6599.13	1427.40	-985.19	1480.13	1663444.31	14296259.47	39°22'08.010"N	80°55'06.674"W	1778.03	123.648	3.63	1.09	-3.46	
8365.00	89.880	157.650	6598.50	1521.35	-1072.64	1514.57	1663478.74	14296172.05	39°22'07.145"N	80°55'06.237"W	1855.93	125.307	2.11	-1.07	-1.82	
8460.00	89.480	157.380	6599.03	1616.24	-1160.42	1550.90	1663515.06	14296084.30	39°22'06.277"N	80°55'05.775"W	1936.98	126.805	0.51	-0.42	-0.28	
8554.00	89.570	161.140	6599.81	1710.20	-1248.31	1584.18	1663548.32	14295996.45	39°22'05.409"N	80°55'05.352"W	2016.91	128.238	4.00	0.10	4.00	
8649.00	90.060	163.130	6600.11	1805.14	-1338.72	1613.33	1663577.45	14295906.07	39°22'04.515"N	80°55'04.982"W	2096.43	129.686	2.16	0.52	2.09	
8744.00	90.680	162.080	6599.50	1900.06	-1429.38	1641.73	1663605.84	14295815.46	39°22'03.618"N	80°55'04.622"W	2176.78	131.045	1.28	0.65	-1.11	
8839.00	90.310	157.890	6598.68	1995.03	-1518.61	1674.23	1663638.34	14295726.25	39°22'02.736"N	80°55'04.209"W	2260.36	132.210	4.43	-0.39	-4.41	
8933.00	89.940	155.600	6598.47	2088.85	-1604.97	1711.34	1663675.43	14295639.93	39°22'01.882"N	80°55'03.737"W	2346.19	133.163	2.47	-0.39	-2.44	
9028.00	90.060	155.860	6598.47	2183.56	-1691.58	1750.39	1663714.46	14295553.36	39°22'01.026"N	80°55'03.241"W	2434.19	134.021	0.30	0.13	0.27	
9123.00	89.230	157.950	6599.06	2278.39	-1778.95	1787.65	1663751.71	14295466.02	39°22'00.162"N	80°55'02.768"W	2521.98	134.860	2.37	-0.87	2.20	
9219.00	89.940	164.990	6599.76	2374.30	-1869.92	1818.14	1663782.19	14295375.09	39°21'59.263"N	80°55'02.381"W	2608.11	135.804	7.37	0.74	7.33	
9311.00	89.880	168.210	6599.90	2465.73	-1959.40	1839.46	1663803.50	14295285.64	39°21'58.378"N	80°55'02.110"W	2687.54	136.808	3.50	-0.07	3.50	
9406.00	89.940	169.730	6600.05	2559.62	-2052.64	1857.63	1663821.66	14295192.44	39°21'57.456"N	80°55'01.880"W	2768.42	137.855	1.60	0.06	1.60	



Actual Wellpath Report

Golliad Unit 2H AWP Proj: 16650'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #12
Area	Ritchie County, WV	Well	Golliad Unit 2H
Field	Ritchie	Wellbore	Golliad Unit 2H AWB
Facility	Weekley Trust Pad		

WELLPATH DATA (198 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
9499.00	89.910	167.660	6600.17	2651.61	-2143.83	1875.86	1663839.89	14295101.29	39°21'56.555"N	80°55'01.649"W	2848.66	138.814	2.23	-0.03	-2.23	
9594.00	90.990	162.670	6599.43	2746.23	-2235.63	1900.18	1663864.19	14295009.52	39°21'55.647"N	80°55'01.341"W	2934.07	139.637	5.37	1.14	-5.25	
9689.00	90.220	161.080	6598.42	2841.18	-2325.91	1929.73	1663893.73	14294919.28	39°21'54.755"N	80°55'00.965"W	3022.20	140.319	1.86	-0.81	-1.67	
9784.00	90.310	158.920	6597.99	2936.17	-2415.18	1962.22	1663926.21	14294830.05	39°21'53.872"N	80°55'00.553"W	3111.81	140.908	2.28	0.09	-2.27	
9879.00	89.910	155.190	6597.80	3031.01	-2502.64	1999.25	1663963.22	14294742.62	39°21'53.007"N	80°55'00.082"W	3203.16	141.380	3.95	-0.42	-3.93	
9974.00	90.090	154.250	6597.80	3125.56	-2588.54	2039.82	1664003.77	14294656.75	39°21'52.158"N	80°54'59.567"W	3295.67	141.761	1.01	0.19	-0.99	
10069.00	89.570	154.290	6598.08	3220.05	-2674.12	2081.06	1664045.00	14294571.21	39°21'51.312"N	80°54'59.043"W	3388.47	142.109	0.55	-0.55	0.04	
10164.00	89.720	157.350	6598.67	3314.75	-2760.78	2119.97	1664083.89	14294484.59	39°21'50.455"N	80°54'58.548"W	3480.83	142.480	3.22	0.16	3.22	
10259.00	89.420	159.910	6599.39	3409.70	-2849.24	2154.58	1664118.49	14294396.17	39°21'49.580"N	80°54'58.109"W	3572.16	142.904	2.71	-0.32	2.69	
10353.00	89.450	161.670	6600.31	3503.69	-2937.99	2185.51	1664149.40	14294307.44	39°21'48.703"N	80°54'57.716"W	3661.73	143.355	1.87	0.03	1.87	
10448.00	89.200	163.290	6601.43	3598.61	-3028.58	2214.10	1664177.99	14294216.90	39°21'47.807"N	80°54'57.353"W	3751.60	143.831	1.73	-0.26	1.71	
10543.00	89.690	165.500	6602.35	3693.35	-3120.07	2239.65	1664203.53	14294125.45	39°21'46.903"N	80°54'57.029"W	3840.68	144.328	2.38	0.52	2.33	
10638.00	90.180	161.220	6602.46	3788.19	-3211.07	2266.85	1664230.72	14294034.48	39°21'46.003"N	80°54'56.684"W	3930.59	144.780	4.53	0.52	-4.51	
10733.00	89.420	157.290	6602.79	3883.15	-3299.89	2300.49	1664264.35	14293945.70	39°21'45.125"N	80°54'56.256"W	4022.63	145.118	4.21	-0.80	-4.14	
10828.00	89.480	159.100	6603.70	3978.08	-3388.08	2335.78	1664299.62	14293857.54	39°21'44.253"N	80°54'55.808"W	4115.21	145.417	1.91	0.06	1.91	
10923.00	90.220	157.470	6603.95	4073.02	-3476.34	2370.93	1664334.75	14293769.32	39°21'43.380"N	80°54'55.362"W	4207.88	145.705	1.88	0.78	-1.72	
11018.00	89.450	157.450	6604.23	4167.91	-3564.08	2407.34	1664371.15	14293681.61	39°21'42.513"N	80°54'54.899"W	4300.93	145.963	0.81	-0.81	-0.02	
11113.00	89.260	160.570	6605.30	4262.87	-3652.76	2441.36	1664405.16	14293592.97	39°21'41.636"N	80°54'54.467"W	4393.51	146.243	3.29	-0.20	3.28	
11207.00	89.570	160.580	6606.26	4356.86	-3741.40	2472.62	1664436.41	14293504.36	39°21'40.760"N	80°54'54.070"W	4484.64	146.540	0.33	0.33	0.01	
11303.00	90.030	157.880	6606.59	4452.84	-3831.16	2506.66	1664470.43	14293414.64	39°21'39.872"N	80°54'53.638"W	4578.33	146.804	2.85	0.48	-2.81	
11398.00	89.350	154.890	6607.11	4547.61	-3918.19	2544.72	1664508.47	14293327.64	39°21'39.012"N	80°54'53.154"W	4672.02	146.998	3.23	-0.72	-3.15	
11493.00	89.660	154.610	6607.93	4642.17	-4004.11	2585.24	1664548.98	14293241.76	39°21'38.162"N	80°54'52.639"W	4766.17	147.152	0.44	0.33	-0.29	
11589.00	89.320	152.970	6608.78	4737.55	-4090.23	2627.63	1664591.36	14293155.67	39°21'37.311"N	80°54'52.101"W	4861.53	147.283	1.74	-0.35	-1.71	
11683.00	89.450	157.900	6609.79	4831.18	-4175.69	2666.70	1664630.40	14293070.24	39°21'36.466"N	80°54'51.604"W	4954.56	147.437	5.25	0.14	5.24	
11777.00	88.710	162.340	6611.30	4925.15	-4264.06	2698.65	1664662.34	14292981.91	39°21'35.592"N	80°54'51.199"W	5046.28	147.671	4.79	-0.79	4.72	
11870.00	89.290	169.290	6612.93	5017.64	-4354.15	2721.42	1664685.11	14292891.86	39°21'34.701"N	80°54'50.910"W	5134.66	147.994	7.50	0.62	7.47	
11965.00	89.480	172.820	6613.95	5110.93	-4447.98	2736.19	1664699.87	14292798.07	39°21'33.774"N	80°54'50.723"W	5222.19	148.402	3.72	0.20	3.72	
12059.00	89.450	170.110	6614.82	5203.13	-4540.92	2750.14	1664713.81	14292705.16	39°21'32.855"N	80°54'50.547"W	5308.79	148.799	2.88	-0.03	-2.88	
12154.00	89.480	164.790	6615.71	5297.34	-4633.62	2770.77	1664734.44	14292612.50	39°21'31.939"N	80°54'50.285"W	5398.85	149.122	5.60	0.03	-5.60	
12248.00	89.850	163.610	6616.26	5391.11	-4724.06	2796.37	1664760.02	14292522.10	39°21'31.044"N	80°54'49.960"W	5489.66	149.377	1.32	0.39	-1.26	



Actual Wellpath Report

Goliad Unit 2H AWP Proj: 16650'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #12
Area	Ritchie County, WV	Well	Goliad Unit 2H
Field	Ritchie	Wellbore	Goliad Unit 2H AWB
Facility	Weekley Trust Pad		

WELLPATH DATA (198 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
12343.00	90.250	159.790	6616.18	5486.06	-4814.24	2826.19	1664789.83	14292431.95	39°21'30.153"N	80°54'49.582"W	5582.50	149.585	4.04	0.42	-4.02	
12438.00	89.750	157.750	6616.18	5581.03	-4902.79	2860.59	1664824.22	14292343.44	39°21'29.277"N	80°54'49.145"W	5676.29	149.738	2.21	-0.53	-2.15	
12532.00	89.780	157.090	6616.56	5674.91	-4989.58	2896.68	1664860.30	14292256.68	39°21'28.419"N	80°54'48.686"W	5769.46	149.863	0.70	0.03	-0.70	
12628.00	89.910	156.310	6616.82	5770.73	-5077.75	2934.65	1664898.25	14292168.55	39°21'27.547"N	80°54'48.204"W	5864.79	149.974	0.82	0.14	-0.81	
12723.00	91.360	152.320	6615.77	5865.19	-5163.34	2975.82	1664939.40	14292082.99	39°21'26.701"N	80°54'47.681"W	5959.49	150.044	4.47	1.53	-4.20	
12818.00	89.600	149.850	6614.97	5958.96	-5246.48	3021.74	1664985.31	14291999.88	39°21'25.879"N	80°54'47.097"W	6054.46	150.060	3.19	-1.85	-2.60	
12913.00	89.660	151.520	6615.59	6052.64	-5329.31	3068.25	1665031.80	14291917.09	39°21'25.060"N	80°54'46.506"W	6149.45	150.070	1.76	0.06	1.76	
13007.00	89.850	157.400	6615.99	6146.11	-5414.09	3108.76	1665072.29	14291832.34	39°21'24.222"N	80°54'45.992"W	6243.14	150.136	6.26	0.20	6.26	
13102.00	89.290	160.620	6616.70	6241.08	-5502.77	3142.79	1665106.30	14291743.70	39°21'23.345"N	80°54'45.560"W	6337.00	150.268	3.44	-0.59	3.39	
13196.00	89.630	166.530	6617.59	6334.87	-5592.89	3169.35	1665132.86	14291653.61	39°21'22.454"N	80°54'45.222"W	6428.47	150.461	6.30	0.36	6.29	
13291.00	89.780	169.380	6618.08	6429.00	-5685.79	3189.18	1665152.67	14291560.75	39°21'21.535"N	80°54'44.971"W	6519.13	150.712	3.00	0.16	3.00	
13385.00	89.970	164.650	6618.28	6522.32	-5777.36	3210.29	1665173.78	14291469.22	39°21'20.630"N	80°54'44.704"W	6609.38	150.940	5.04	0.20	-5.03	
13480.00	90.280	163.950	6618.08	6617.08	-5868.81	3236.00	1665199.48	14291377.80	39°21'19.726"N	80°54'44.377"W	6701.84	151.128	0.81	0.33	-0.74	
13575.00	90.710	165.150	6617.26	6711.81	-5960.37	3261.30	1665224.77	14291286.28	39°21'18.821"N	80°54'44.056"W	6794.28	151.314	1.34	0.45	1.26	
13670.00	90.220	161.530	6616.48	6806.65	-6051.37	3288.54	1665251.99	14291195.32	39°21'17.921"N	80°54'43.711"W	6887.20	151.479	3.85	-0.52	-3.81	
13766.00	90.090	157.630	6616.23	6902.63	-6141.32	3322.02	1665285.47	14291105.41	39°21'17.032"N	80°54'43.286"W	6982.24	151.590	4.06	-0.14	-4.06	
13861.00	90.090	156.200	6616.08	6997.47	-6228.71	3359.27	1665322.70	14291018.05	39°21'16.168"N	80°54'42.813"W	7076.83	151.661	1.51	0.00	-1.51	
13956.00	89.880	158.360	6616.10	7092.33	-6316.33	3395.96	1665359.37	14290930.46	39°21'15.301"N	80°54'42.347"W	7171.37	151.735	2.28	-0.22	2.27	
14051.00	90.180	159.910	6616.05	7187.31	-6405.10	3429.80	1665393.19	14290841.73	39°21'14.424"N	80°54'41.917"W	7265.59	151.832	1.66	0.32	1.63	
14145.00	90.150	159.760	6615.78	7281.31	-6493.34	3462.20	1665425.59	14290753.53	39°21'13.551"N	80°54'41.506"W	7358.69	151.934	0.16	-0.03	-0.16	
14240.00	90.340	157.530	6615.37	7376.26	-6581.81	3496.79	1665460.16	14290665.09	39°21'12.677"N	80°54'41.066"W	7453.04	152.019	2.36	0.20	-2.35	
14335.00	90.120	153.450	6614.99	7470.92	-6668.23	3536.19	1665499.55	14290578.71	39°21'11.822"N	80°54'40.566"W	7547.84	152.063	4.30	-0.23	-4.29	
14429.00	89.970	154.730	6614.92	7564.37	-6752.78	3577.27	1665540.61	14290494.19	39°21'10.986"N	80°54'40.044"W	7641.78	152.088	1.37	-0.16	1.36	
14524.00	89.910	160.180	6615.02	7659.22	-6840.48	3613.68	1665577.00	14290406.52	39°21'10.119"N	80°54'39.582"W	7736.34	152.153	5.74	-0.06	5.74	
14619.00	90.120	162.870	6614.99	7754.19	-6930.58	3643.78	1665607.09	14290316.46	39°21'09.228"N	80°54'39.200"W	7830.07	152.267	2.84	0.22	2.83	
14714.00	89.940	166.100	6614.94	7848.92	-7022.11	3669.19	1665632.49	14290224.97	39°21'08.323"N	80°54'38.877"W	7922.94	152.412	3.41	-0.19	3.40	
14809.00	90.000	166.550	6614.99	7943.38	-7114.41	3691.65	1665654.94	14290132.70	39°21'07.411"N	80°54'38.593"W	8015.18	152.575	0.48	0.06	0.47	
14904.00	90.000	168.810	6614.99	8037.58	-7207.22	3711.91	1665675.20	14290039.93	39°21'06.493"N	80°54'38.336"W	8106.93	152.750	2.38	0.00	2.38	
14999.00	90.180	169.640	6614.84	8131.42	-7300.54	3729.68	1665692.95	14289946.65	39°21'05.571"N	80°54'38.111"W	8198.07	152.939	0.89	0.19	0.87	
15093.00	90.030	168.490	6614.67	8224.30	-7392.83	3747.51	1665710.78	14289854.39	39°21'04.658"N	80°54'37.885"W	8288.41	153.119	1.23	-0.16	-1.22	



Actual Wellpath Report

Goliad Unit 2H AWP Proj: 16650'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #12
Area	Ritchie County, WV	Well	Goliad Unit 2H
Field	Ritchie	Wellbore	Goliad Unit 2H AWB
Facility	Weekley Trust Pad		

WELLPATH DATA (198 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
15188.00	90.370	162.660	6614.34	8318.85	-7484.80	3771.16	1665734.42	14289762.46	39°21'03.749"N	80°54'37.585"W	8381.16	153.259	6.15	0.36	-6.14	
15282.00	90.060	159.020	6613.99	8412.83	-7573.58	3802.01	1665765.26	14289673.72	39°21'02.871"N	80°54'37.193"W	8474.33	153.343	3.89	-0.33	-3.87	
15377.00	90.800	154.240	6613.27	8507.61	-7660.75	3839.68	1665802.91	14289586.58	39°21'02.009"N	80°54'36.715"W	8569.15	153.379	5.09	0.78	-5.03	
15472.00	90.000	151.100	6612.61	8601.77	-7745.14	3883.29	1665846.50	14289502.23	39°21'01.175"N	80°54'36.161"W	8664.13	153.372	3.41	-0.84	-3.31	
15566.00	89.940	151.690	6612.66	8694.64	-7827.66	3928.29	1665891.49	14289419.74	39°21'00.359"N	80°54'35.589"W	8758.07	153.350	0.63	-0.06	0.63	
15661.00	89.850	151.930	6612.83	8788.62	-7911.39	3973.17	1665936.35	14289336.04	39°20'59.531"N	80°54'35.019"W	8853.04	153.334	0.27	-0.09	0.25	
15756.00	90.030	152.550	6612.93	8882.69	-7995.46	4017.42	1665980.58	14289252.01	39°20'58.699"N	80°54'34.457"W	8948.02	153.322	0.68	0.19	0.65	
15851.00	89.940	155.000	6612.96	8977.07	-8080.68	4059.39	1666022.54	14289166.83	39°20'57.857"N	80°54'33.923"W	9043.01	153.327	2.58	-0.09	2.58	
15946.00	89.780	160.190	6613.19	9071.94	-8168.47	4095.59	1666058.72	14289079.06	39°20'56.989"N	80°54'33.464"W	9137.71	153.371	5.47	-0.17	5.46	
16041.00	90.000	159.860	6613.37	9166.94	-8257.76	4128.04	1666091.16	14288989.82	39°20'56.106"N	80°54'33.052"W	9232.08	153.440	0.42	0.23	-0.35	
16135.00	90.000	162.240	6613.37	9260.92	-8346.66	4158.57	1666121.67	14288900.95	39°20'55.227"N	80°54'32.664"W	9325.25	153.516	2.53	0.00	2.53	
16230.00	89.940	163.830	6613.42	9355.81	-8437.52	4186.29	1666149.38	14288810.13	39°20'54.329"N	80°54'32.313"W	9418.96	153.612	1.67	-0.06	1.67	
16325.00	90.090	165.240	6613.40	9450.54	-8529.08	4211.62	1666174.70	14288718.61	39°20'53.423"N	80°54'31.992"W	9512.25	153.720	1.49	0.16	1.48	
16419.00	90.090	163.160	6613.25	9544.31	-8619.52	4237.21	1666200.28	14288628.20	39°20'52.529"N	80°54'31.667"W	9604.69	153.822	2.21	0.00	-2.21	
16514.00	90.120	158.410	6613.08	9639.28	-8709.20	4268.47	1666231.53	14288538.55	39°20'51.643"N	80°54'31.270"W	9698.97	153.890	5.00	0.03	-5.00	
16609.00	89.880	155.830	6613.08	9734.13	-8796.72	4305.40	1666268.45	14288451.07	39°20'50.777"N	80°54'30.801"W	9793.81	153.921	2.73	-0.25	-2.72	
16625.00	89.970	156.710	6613.10	9750.09	-8811.37	4311.84	1666274.88	14288436.43	39°20'50.632"N	80°54'30.719"W	9809.80	153.925	5.53	0.56	5.50	
16650.00	89.970	156.710	6613.11	9775.04	-8834.33	4321.72	1666284.76	14288413.47	39°20'50.405"N	80°54'30.594"W	9834.77	153.932	0.00	0.00	0.00	Projected MD at TD: 16650'



Actual Wellpath Report

Goliad Unit 2H AWP Proj: 16650'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #12
Area	Ritchie County, WV	Well	Goliad Unit 2H
Field	Ritchie	Wellbore	Goliad Unit 2H AWB
Facility	Weekley Trust Pad		

HOLE & CASING SECTIONS - Ref Wellbore: Goliad Unit 2H AWB Ref Wellpath: Goliad Unit 2H AWP Proj: 16650'

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	24.50	104.50	80.00	24.50	104.50	0.00	0.00	-0.06	-0.03
17.5in Open Hole	104.50	486.50	382.00	104.50	486.50	-0.06	-0.03	-0.91	-0.45
13.375in Casing Surface	24.50	486.50	462.00	24.50	486.50	0.00	0.00	-0.91	-0.45
12.25in Open Hole	486.50	2634.50	2148.00	486.50	2594.24	-0.91	-0.45	262.83	280.98
9.625in Casing Intermediate	24.50	2634.50	2610.00	24.50	2594.24	0.00	0.00	262.83	280.98
8.75in Open Hole	2634.50	5877.50	3243.00	2594.24	5767.27	262.83	280.98	747.51	730.15
8.5in Open Hole	5877.50	16650.00	10772.50	5767.27	6613.11	747.51	730.15	-8834.33	4321.72
5.5in Casing Production	24.50	16650.00	16625.50	24.50	6613.11	0.00	0.00	-8834.33	4321.72

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Goliad Unit 2H - POE - Rev-3	6571.00	281.91	1019.52	1662983.89	14297526.06	39°22'20.538"N	80°55'12.525"W	point
Goliad Unit 2H - BHL - Rev-5	6604.00	-8838.00	4293.84	1666256.89	14288409.80	39°20'50.369"N	80°54'30.949"W	point
Goliad Unit 2H - LP - Rev-3	6604.00	79.66	1092.13	1663056.47	14297323.89	39°22'18.538"N	80°55'11.603"W	point



Actual Wellpath Report

Goliad Unit 2H AWP Proj: 16650'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #12
Area	Ritchie County, WV	Well	Goliad Unit 2H
Field	Ritchie	Wellbore	Goliad Unit 2H AWB
Facility	Weekley Trust Pad		

WELLPATH COMPOSITION - Ref Wellbore: Goliad Unit 2H AWB Ref Wellpath: Goliad Unit 2H AWP Proj: 16650'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
24.50	463.50	Gyrodatab standard - Drop gyro or Multi-shot	01_Gyrodatab MS Gyro <17-1/2">(100'-454')	Goliad Unit 2H AWB
463.50	671.50	Gyrodatab standard - Drop gyro or Multi-shot	02_Gyrodatab MS Gyro <12-1/4">(454')(476'-662')	Goliad Unit 2H AWB
671.50	2553.50	ISCWSA MWD, Rev. 4 (Standard)	03_WFT EM <12-1/4">(662')(777'-2544')	Goliad Unit 2H AWB
2553.50	5803.50	ISCWSA MWD, Rev. 4 (Standard)	04_WFT EM <8-3/4">(2544')(2660'-5794')	Goliad Unit 2H AWB
5803.50	16625.00	BHI AutoTrak Curve (Short)	05_BH AT Curve <8-1/2"> (5803.5')(5852'-16625')	Goliad Unit 2H AWB
16625.00	16650.00	Blind Drilling (std)	Projection to bit	Goliad Unit 2H AWB



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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #12
Area	Ritchie County, WV	Well	Goliad Unit 2H
Field	Ritchie	Wellbore	Goliad Unit 2H AWB
Facility	Weekley Trust Pad		

COMMENTS

Wellpath general comments

API: 47-085-10345-0000

BHI Job #: 109679465

Rig: Frontier 22

Duration: 03/01/2019-03/05/2019

Gyrodata MS Gyro <17-1/2">(100'-454')

Gyrodata MS Gyro <12-1/4">(454')(476'-662')

WFT EM <12-1/4">(662')(777'-2544')

WFT EM <8-3/4">(2544')(2660'-5794')

BH AT Curve <8-1/2"> (5803.5')(5852'-16625')

Middlesex: 6619' MD

Burkett: 6800' MD

Tully: 6878' MD

Marcellus POE: 6943' MD

Projected MD at TD: 16650'