



Actual Wellpath Report

Willett S-8HM AWB Proj:20714'

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REFERENCE WELLPATH IDENTIFICATION

Operator	EQT (TUG HILL OPERATING, LLC)	Well	Willett S-8HM
Field	Marshall	API	47-051-02422-0000
Facility	Willett	Wellbore	Willett S-8HM AWB
Slot	Slot 08		

REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Scurdan
Scale	0.999611	Report Generated	9/6/2023 at 10:27:56 AM
Convergence at slot	0.22° 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	56.98	-18.78	1736947.03	14462504.49	39°49'23.1698"N	80°39'22.3104"W
Facility Reference Pt			1736965.80	14462447.53	39°49'22.6060"N	80°39'22.0725"W
Field Reference Pt			1920470.12	14528304.49	40°00'0.0000"N	80°00'0.0000"W

WELLPATH DATUM

Calculation method	Minimum curvature	Nabors X14 (RKB) to Facility Vertical Datum	1342.50ft
Horizontal Reference Pt	Slot	Nabors X14 (RKB) to Mean Sea Level	1342.50ft
Vertical Reference Pt	Nabors X14 (RKB)	Nabors X14 (RKB) to Ground Level at Slot (Slot 08)	32.50ft
MD Reference Pt	Nabors X14 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	133.35°

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WELLPATH DATA (214 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]
0.00†	0.000	300.350	0.00	0.00	0.00	0.00	1736947.03	14462504.49	39°49'23.1698"N	80°39'22.3104"W	0.00	0.000	0.00	0.00	0.00
32.50	0.000	300.350	32.50	0.00	0.00	0.00	1736947.03	14462504.49	39°49'23.1698"N	80°39'22.3104"W	0.00	0.000	0.00	0.00	0.00
100.00	0.100	300.350	100.00	-0.06	0.03	-0.05	1736946.98	14462504.52	39°49'23.1701"N	80°39'22.3110"W	0.06	300.350	0.15	0.15	0.00
200.00	0.150	35.150	200.00	-0.16	0.18	-0.05	1736946.98	14462504.67	39°49'23.1716"N	80°39'22.3110"W	0.19	344.320	0.19	0.05	94.80
300.00	0.410	46.010	300.00	-0.16	0.54	0.28	1736947.31	14462505.03	39°49'23.1751"N	80°39'22.3067"W	0.61	27.731	0.26	0.26	10.86
400.00	0.140	94.190	400.00	-0.05	0.78	0.66	1736947.69	14462505.27	39°49'23.1774"N	80°39'22.3018"W	1.02	40.436	0.33	-0.27	48.18
500.00	0.140	95.320	500.00	0.14	0.76	0.90	1736947.93	14462505.25	39°49'23.1772"N	80°39'22.2987"W	1.18	50.128	0.00	0.00	1.13
600.00	0.080	126.970	600.00	0.30	0.70	1.08	1736948.11	14462505.19	39°49'23.1767"N	80°39'22.2964"W	1.29	57.013	0.08	-0.06	31.65
700.00	0.180	33.900	700.00	0.35	0.79	1.23	1736948.26	14462505.28	39°49'23.1776"N	80°39'22.2946"W	1.46	57.167	0.20	0.10	-93.07
800.00	0.120	350.590	800.00	0.24	1.02	1.30	1736948.33	14462505.51	39°49'23.1799"N	80°39'22.2937"W	1.65	51.675	0.12	-0.06	-43.31
900.00	0.070	2.440	900.00	0.12	1.19	1.28	1736948.31	14462505.68	39°49'23.1815"N	80°39'22.2939"W	1.75	47.149	0.05	-0.05	11.85
1000.00	0.190	47.130	1000.00	0.09	1.36	1.41	1736948.44	14462505.85	39°49'23.1832"N	80°39'22.2923"W	1.96	45.889	0.15	0.12	44.69
1100.00	0.070	286.920	1100.00	0.04	1.49	1.47	1736948.50	14462505.98	39°49'23.1845"N	80°39'22.2915"W	2.09	44.526	0.23	-0.12	-120.21
1200.00	0.830	20.320	1199.99	-0.30	2.19	1.66	1736948.69	14462506.68	39°49'23.1914"N	80°39'22.2889"W	2.75	37.189	0.84	0.76	93.40
1300.00	4.100	71.770	1299.89	1.12	3.99	5.31	1736952.34	14462508.48	39°49'23.2090"N	80°39'22.2421"W	6.64	53.089	3.64	3.27	51.45
1400.00	7.310	80.960	1399.39	6.71	6.11	14.99	1736962.02	14462510.59	39°49'23.2296"N	80°39'22.1179"W	16.19	67.835	3.33	3.21	9.19
1500.00	8.070	80.410	1498.49	14.82	8.28	28.20	1736975.21	14462512.76	39°49'23.2505"N	80°39'21.9486"W	29.38	73.642	0.76	0.76	-0.55
1600.00	8.600	79.800	1597.43	23.49	10.77	42.47	1736989.49	14462515.26	39°49'23.2746"N	80°39'21.7654"W	43.82	75.773	0.54	0.53	-0.61
1700.00	9.880	80.280	1696.13	33.09	13.54	58.29	1737005.30	14462518.03	39°49'23.3014"N	80°39'21.5626"W	59.84	76.921	1.28	1.28	0.48
1800.00	13.930	76.320	1793.96	44.80	17.84	78.45	1737025.45	14462522.32	39°49'23.3431"N	80°39'21.3040"W	80.45	77.189	4.13	4.05	-3.96
1900.00	16.360	73.000	1890.48	58.32	24.80	103.62	1737050.61	14462529.28	39°49'23.4110"N	80°39'20.9811"W	106.55	76.538	2.58	2.43	-3.32
2000.00	17.010	75.830	1986.27	73.14	32.50	131.27	1737078.25	14462536.98	39°49'23.4860"N	80°39'20.6263"W	166.26	76.667	2.97	2.23	6.30
2100.00	19.240	82.130	2081.31	91.32	38.34	161.78	1737108.75	14462542.82	39°49'23.5426"N	80°39'20.2350"W	200.32	77.704	1.60	1.55	1.19
2200.00	20.790	83.320	2175.27	113.04	42.66	195.73	1737142.68	14462547.14	39°49'23.5840"N	80°39'19.7997"W	234.88	78.237	1.77	-1.05	-4.10
2300.00	19.740	79.220	2269.09	134.34	47.89	229.95	1737176.89	14462552.36	39°49'23.6343"N	80°39'19.3609"W	267.92	78.188	1.28	-0.88	-2.82
2400.00	18.860	76.400	2363.47	153.05	54.84	262.25	1737209.18	14462559.31	39°49'23.7018"N	80°39'18.9465"W	297.73	78.044	3.03	-3.02	0.77
2500.00	15.840	77.170	2458.91	169.47	61.68	291.27	1737238.19	14462566.14	39°49'23.7683"N	80°39'18.5742"W	324.27	77.961	0.89	-0.89	-0.29
2600.00	14.950	76.880	2555.32	184.19	67.64	317.14	1737264.05	14462572.10	39°49'23.8262"N	80°39'18.2424"W	349.90	77.879	0.20	-0.20	-0.09
2700.00	14.750	76.790	2651.98	198.33	73.47	342.10	1737288.99	14462577.93	39°49'23.8829"N	80°39'17.9222"W	374.98	77.849	0.56	-0.45	1.32
2800.00	14.300	78.110	2748.78	212.38	78.93	366.58	1737313.46	14462583.39	39°49'23.9359"N	80°39'17.6082"W					

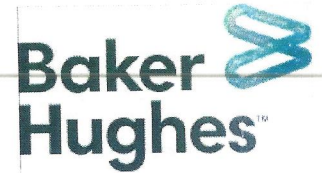
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Slot	Slot 08			

WELLPATH DATA (214 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]
2900.00	13.750	79.830	2845.80	226.49	83.57	390.36	1737337.24	14462588.03	39°49'23.9808"N	80°39'17.3032"W	399.20	77.916	0.69	-0.55	1.72
2977.00	12.670	80.610	2920.76	237.04	86.56	407.70	1737354.57	14462591.02	39°49'24.0098"N	80°39'17.0808"W	416.79	78.013	1.42	-1.40	1.01
3115.00	10.460	74.660	3055.96	252.72	92.35	434.71	1737381.57	14462596.80	39°49'24.0659"N	80°39'16.7343"W	444.41	78.007	1.82	-1.60	-4.31
3210.00	15.750	79.410	3148.45	264.80	97.00	455.72	1737402.57	14462601.45	39°49'24.1111"N	80°39'16.4648"W	465.93	77.984	5.68	5.57	5.00
3305.00	17.220	76.780	3239.55	280.14	102.59	482.08	1737428.93	14462607.04	39°49'24.1653"N	80°39'16.1266"W	492.88	77.987	1.73	1.55	-2.77
3399.00	16.540	78.570	3329.50	295.52	108.42	508.74	1737455.58	14462612.87	39°49'24.2219"N	80°39'15.7846"W	520.17	77.969	0.91	-0.72	1.90
3494.00	17.170	81.660	3420.42	312.01	113.13	535.87	1737482.69	14462617.58	39°49'24.2675"N	80°39'15.4367"W	547.69	78.079	1.15	0.66	3.25
3589.00	16.790	86.080	3511.28	330.02	116.11	563.44	1737510.25	14462620.55	39°49'24.2958"N	80°39'15.0833"W	575.28	78.356	1.42	-0.40	4.65
3683.00	17.230	84.020	3601.17	348.30	118.49	590.83	1737537.63	14462622.93	39°49'24.3182"N	80°39'14.7321"W	602.59	78.660	0.79	0.47	-2.19
3778.00	21.890	81.170	3690.66	368.34	122.67	622.34	1737569.13	14462627.11	39°49'24.3584"N	80°39'14.3280"W	634.31	78.849	5.01	4.91	-3.00
3873.00	26.390	79.200	3777.33	391.58	129.35	660.60	1737607.37	14462633.79	39°49'24.4229"N	80°39'13.8374"W	673.14	78.921	4.81	4.74	-2.07
3966.00	30.330	79.900	3859.15	417.68	137.34	704.04	1737650.79	14462641.78	39°49'24.5003"N	80°39'13.2802"W	717.31	78.961	4.25	4.24	0.75
4060.00	34.510	79.570	3938.49	447.56	146.33	753.61	1737700.35	14462650.76	39°49'24.5872"N	80°39'12.6444"W	767.69	79.011	4.45	4.45	-0.35
4155.00	35.670	77.650	4016.22	479.07	157.13	807.14	1737753.85	14462661.56	39°49'24.6918"N	80°39'11.9578"W	822.29	78.984	1.69	1.22	-2.02
4249.00	36.010	76.660	4092.42	509.69	169.37	860.80	1737807.49	14462673.79	39°49'24.8107"N	80°39'11.2695"W	877.30	78.869	0.71	0.36	-1.05
4343.00	36.120	78.670	4168.41	540.88	181.18	914.85	1737861.52	14462685.60	39°49'24.9255"N	80°39'10.5761"W	932.62	78.798	1.26	0.12	2.14
4438.00	39.300	83.130	4243.57	576.34	190.29	972.20	1737918.85	14462694.70	39°49'25.0132"N	80°39'9.8406"W	990.65	78.926	4.41	3.35	4.69
4532.00	42.500	82.260	4314.61	615.34	198.13	1033.24	1737979.86	14462702.54	39°49'25.0884"N	80°39'9.0580"W	1052.06	79.145	3.46	3.40	-0.93
4627.00	45.220	79.010	4383.11	655.16	208.88	1098.15	1738044.75	14462713.29	39°49'25.1921"N	80°39'8.2254"W	1117.84	79.230	3.72	2.86	-3.42
4722.00	47.500	78.050	4448.67	694.76	222.56	1165.52	1738112.10	14462726.96	39°49'25.3247"N	80°39'7.3613"W	1186.58	79.189	2.51	2.40	-1.01
4815.00	49.540	77.570	4510.27	734.18	237.28	1233.62	1738180.17	14462741.67	39°49'25.4676"N	80°39'6.4878"W	1256.23	79.113	2.23	2.19	-0.52
4910.00	51.500	76.930	4570.67	775.07	253.46	1305.13	1738251.65	14462757.85	39°49'25.6248"N	80°39'5.5704"W	1329.52	79.010	2.13	2.06	-0.67
5005.00	53.440	76.840	4628.54	816.69	270.56	1378.50	1738324.99	14462774.94	39°49'25.7909"N	80°39'4.6292"W	1404.80	78.896	2.04	2.04	-0.09
5098.00	53.260	75.870	4684.05	857.33	288.16	1451.01	1738397.47	14462792.54	39°49'25.9620"N	80°39'3.6990"W	1479.35	78.768	0.86	-0.19	-1.04
5193.00	51.720	76.200	4741.90	898.02	306.35	1524.14	1738470.57	14462810.72	39°49'26.1390"N	80°39'2.7609"W	1554.62	78.635	1.64	-1.62	0.35
5287.00	49.250	77.250	4801.70	937.90	323.01	1594.71	1738541.11	14462827.37	39°49'26.3009"N	80°39'1.8556"W	1627.09	78.550	2.77	-2.63	1.12
5382.00	47.880	75.920	4864.57	976.94	339.52	1663.98	1738610.36	14462843.88	39°49'26.4614"N	80°39'0.9669"W	1698.27	78.468	1.78	-1.44	-1.40
5474.00	47.880	75.550	4926.27	1013.49	356.34	1730.12	1738676.47	14462860.69	39°49'26.6250"N	80°39'0.1184"W	1766.43	78.362	0.30	0.00	-0.40
5567.00	48.090	79.020	4988.53	1052.05	371.54	1797.50	1738743.83	14462875.88	39°49'26.7726"N	80°38'59.2540"W	1835.50	78.322	2.78	0.23	3.73
5660.00	50.510	78.140	5049.17	1092.71	385.51	1866.60	1738812.90	14462889.85	39°49'26.9080"N	80°38'58.3676"W	1906.00	78.331	2.70	2.60	-0.95

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5755.00	53.100	77.930	5107.91	1135.20	400.99	1939.64	1738885.91	14462905.32	39°49'27.0582"N	80°38'57.4308"W	1980.65	78.320	2.73	2.73	-0.22
5850.00	50.820	78.900	5166.45	1178.17	416.02	2012.93	1738959.17	14462920.35	39°49'27.2039"N	80°38'56.4907"W	2055.47	78.323	2.53	-2.40	1.02
5945.00	49.370	77.290	5227.39	1219.71	431.04	2084.23	1739030.44	14462935.36	39°49'27.3496"N	80°38'55.5761"W	2128.33	78.315	2.00	-1.53	-1.69
6039.00	48.800	74.540	5288.96	1257.94	448.32	2153.12	1739099.30	14462952.63	39°49'27.5176"N	80°38'54.6923"W	2199.30	78.238	2.29	-0.61	-2.93
6133.00	51.350	74.690	5349.29	1295.35	467.44	2222.62	1739168.78	14462971.75	39°49'27.7039"N	80°38'53.8006"W	2271.24	78.123	2.72	2.71	0.16
6228.00	55.010	78.950	5406.23	1337.33	484.70	2296.64	1739242.77	14462989.00	39°49'27.8717"N	80°38'52.8510"W	2347.23	78.083	5.26	3.85	4.48
6323.00	54.270	79.500	5461.20	1382.73	499.19	2372.74	1739318.85	14463003.48	39°49'28.0119"N	80°38'51.8748"W	2424.69	78.119	0.91	-0.78	0.58
6417.00	53.870	77.770	5516.37	1426.69	514.19	2447.36	1739393.43	14463018.47	39°49'28.1571"N	80°38'50.9177"W	2500.79	78.135	1.55	-0.43	-1.84
6512.00	55.750	77.460	5571.11	1470.40	530.84	2523.19	1739469.23	14463035.12	39°49'28.3188"N	80°38'49.9450"W	2578.42	78.119	2.00	1.98	-0.33
6607.00	52.690	76.890	5626.65	1513.30	547.94	2598.33	1739544.34	14463052.21	39°49'28.4848"N	80°38'48.9811"W	2655.48	78.092	3.26	-3.22	-0.60
6702.00	51.810	76.240	5684.81	1554.45	565.39	2671.39	1739617.37	14463069.66	39°49'28.6544"N	80°38'48.0438"W	2730.56	78.050	1.07	-0.93	-0.68
6797.00	51.710	76.270	5743.61	1594.99	583.12	2743.87	1739689.82	14463087.38	39°49'28.8268"N	80°38'47.1140"W	2805.14	78.002	0.11	-0.11	0.03
6892.00	48.620	75.130	5804.46	1634.03	601.12	2814.55	1739760.48	14463105.37	39°49'29.0019"N	80°38'46.2071"W	2878.03	77.944	3.38	-3.25	-1.20
6923.00	47.190	74.650	5825.24	1646.06	607.11	2836.76	1739782.68	14463111.36	39°49'29.0603"N	80°38'45.9222"W	2901.00	77.920	4.75	-4.61	-1.55
6975.00	44.860	73.310	5861.34	1665.13	617.43	2872.72	1739818.63	14463121.68	39°49'29.1608"N	80°38'45.4607"W	2938.33	77.870	4.85	-4.48	-2.58
7079.00	48.320	76.100	5932.81	1704.48	637.30	2945.59	1739891.46	14463141.54	39°49'29.3544"N	80°38'44.5258"W	3013.74	77.792	3.86	3.33	2.68
7173.00	50.480	76.160	5993.98	1743.12	654.41	3014.87	1739960.72	14463158.64	39°49'29.5207"N	80°38'43.6369"W	3085.08	77.753	2.30	2.30	0.06
7268.00	50.520	76.210	6054.41	1782.86	671.91	3086.06	1740031.88	14463176.14	39°49'29.6909"N	80°38'42.7237"W	3158.36	77.717	0.06	0.04	0.05
7362.00	50.470	76.140	6114.20	1822.18	689.24	3156.48	1740102.28	14463193.46	39°49'29.8594"N	80°38'41.8202"W	3230.86	77.682	0.08	-0.05	-0.07
7458.00	50.550	76.170	6175.26	1862.32	706.97	3228.42	1740174.18	14463211.19	39°49'30.0318"N	80°38'40.8973"W	3304.92	77.648	0.09	0.08	0.03
7552.00	50.710	76.160	6234.88	1901.70	724.35	3298.98	1740244.72	14463228.56	39°49'30.2008"N	80°38'39.9920"W	3377.56	77.616	0.17	0.17	-0.01
7646.00	50.590	76.410	6294.48	1941.22	741.58	3369.59	1740315.31	14463245.78	39°49'30.3683"N	80°38'39.0861"W	3450.23	77.588	0.24	-0.13	0.27
7741.00	50.630	76.290	6354.77	1981.21	758.91	3440.94	1740386.62	14463263.10	39°49'30.5367"N	80°38'38.1708"W	3523.64	77.562	0.11	0.04	-0.13
7836.00	50.710	76.200	6414.98	2021.12	776.38	3512.32	1740457.97	14463280.57	39°49'30.7066"N	80°38'37.2550"W	3597.10	77.535	0.11	0.08	-0.09
7929.00	50.630	76.080	6473.92	2060.07	793.61	3582.16	1740527.79	14463297.79	39°49'30.8742"N	80°38'36.3590"W	3669.02	77.508	0.13	-0.09	-0.13
8023.00	50.680	76.030	6533.52	2099.35	811.13	3652.71	1740598.31	14463315.30	39°49'31.0445"N	80°38'35.4539"W	3741.69	77.480	0.07	0.05	-0.05
8118.00	51.200	76.230	6593.38	2139.29	828.82	3724.33	1740669.90	14463332.98	39°49'31.2164"N	80°38'34.5351"W	3815.43	77.454	0.57	0.55	0.21
8212.00	51.770	82.330	6651.95	2182.42	842.47	3796.53	1740742.08	14463346.63	39°49'31.3485"N	80°38'33.6089"W	3888.88	77.489	5.11	0.61	6.49
8306.00	52.640	92.940	6709.66	2234.19	845.49	3870.57	1740816.08	14463349.65	39°49'31.3754"N	80°38'32.6599"W	3961.83	77.678	8.96	0.93	11.29
8401.00	56.720	103.410	6764.67	2297.49	834.31	3947.07	1740892.56	14463338.48	39°49'31.2620"N	80°38'31.6799"W	4034.28	78.065	9.96	4.29	11.02

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Willett S-8HM AWB Proj:20714'

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REFERENCE WELLPATH IDENTIFICATION

Operator	EQT (TUG HILL OPERATING, LLC)	Well	Willett S-8HM
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Slot	Slot 08		

WELLPATH DATA (214 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]
8496.00	62.710	111.860	6812.62	2371.35	809.33	4025.05	1740970.51	14463313.50	39°49'31.0120"N	80°38'30.6817"W	4105.61	78.631	9.93	6.31	8.89
8590.00	68.560	119.150	6851.43	2452.78	772.40	4102.18	1741047.60	14463276.58	39°49'30.6439"N	80°38'29.6951"W	4174.26	79.337	9.41	6.22	7.76
8685.00	74.530	123.660	6881.50	2540.89	725.42	4179.00	1741124.40	14463229.63	39°49'30.1767"N	80°38'28.7128"W	4241.50	80.152	7.73	6.28	4.75
8779.00	76.090	130.220	6905.36	2631.19	670.80	4251.62	1741196.98	14463175.03	39°49'29.6340"N	80°38'27.7849"W	4304.21	81.034	6.95	1.66	6.98
8873.00	79.490	135.590	6925.26	2723.02	608.27	4318.86	1741264.20	14463112.52	39°49'29.0133"N	80°38'26.9263"W	4361.48	81.983	6.65	3.62	5.71
8968.00	83.200	143.500	6939.57	2816.29	536.85	4379.71	1741325.03	14463041.13	39°49'28.3052"N	80°38'26.1501"W	4412.49	83.012	9.11	3.91	8.33
9062.00	85.670	151.180	6948.70	2906.99	458.15	4430.15	1741375.44	14462962.46	39°49'27.5254"N	80°38'25.5077"W	4453.77	84.096	8.55	2.63	8.17
9156.00	85.730	153.680	6955.75	2995.57	375.06	4473.53	1741418.81	14462879.41	39°49'26.7025"N	80°38'24.9560"W	4489.22	85.208	2.65	0.06	2.66
9250.00	87.740	152.540	6961.10	3083.88	291.37	4515.97	1741461.23	14462795.74	39°49'25.8737"N	80°38'24.4163"W	4525.36	86.308	2.46	2.14	-1.21
9345.00	88.610	152.290	6964.13	3173.63	207.21	4559.94	1741505.18	14462711.62	39°49'25.0403"N	80°38'23.8572"W	4564.64	87.398	0.95	0.92	-0.26
9437.00	89.160	152.250	6965.92	3260.64	125.79	4602.74	1741547.97	14462630.23	39°49'24.2340"N	80°38'23.3128"W	4604.46	88.434	0.60	0.60	-0.04
9530.00	88.260	151.220	6968.01	3348.87	43.90	4646.77	1741591.98	14462548.38	39°49'23.4230"N	80°38'22.7527"W	4646.97	89.459	1.47	-0.97	-1.11
9624.00	88.910	151.510	6970.33	3438.23	-38.57	4691.80	1741636.99	14462465.93	39°49'22.6061"N	80°38'22.1798"W	4691.96	90.471	0.76	0.69	0.31
9718.00	89.280	152.550	6971.82	3527.27	-121.58	4735.88	1741681.06	14462382.96	39°49'21.7840"N	80°38'21.6192"W	4737.44	91.471	1.17	0.39	1.11
9813.00	89.380	153.090	6972.93	3616.83	-206.09	4779.27	1741724.43	14462298.49	39°49'20.9472"N	80°38'21.0674"W	4783.71	92.469	0.58	0.11	0.57
9908.00	88.640	153.100	6974.57	3706.23	-290.79	4822.25	1741767.40	14462213.81	39°49'20.1084"N	80°38'20.5209"W	4831.01	93.451	0.78	-0.78	0.01
10003.00	88.730	153.000	6976.75	3795.65	-375.45	4865.30	1741810.42	14462129.19	39°49'19.2700"N	80°38'19.9736"W	4879.76	94.413	0.14	0.09	-0.11
10096.00	89.280	153.100	6978.36	3883.19	-458.34	4907.44	1741852.55	14462046.33	39°49'18.4492"N	80°38'19.4378"W	4928.80	95.336	0.60	0.59	0.11
10191.00	90.080	150.900	6978.90	3973.19	-542.21	4952.04	1741897.13	14461962.49	39°49'17.6185"N	80°38'18.8706"W	4981.63	96.249	2.46	0.84	-2.32
10286.00	88.170	149.630	6980.35	4064.07	-624.69	4999.15	1741944.22	14461880.05	39°49'16.8015"N	80°38'18.2711"W	5038.02	97.123	2.41	-2.01	-1.34
10381.00	89.650	150.050	6982.15	4155.14	-706.81	5046.86	1741991.92	14461797.96	39°49'15.9881"N	80°38'17.6638"W	5096.12	97.972	1.62	1.56	0.44
10476.00	89.960	149.880	6982.48	4246.17	-789.05	5094.41	1742039.45	14461715.75	39°49'15.1734"N	80°38'17.0586"W	5155.16	98.804	0.37	0.33	-0.18
10571.00	87.680	147.500	6984.43	4337.76	-870.19	5143.77	1742088.78	14461634.64	39°49'14.3696"N	80°38'16.4304"W	5216.85	99.602	3.47	-2.40	-2.51
10666.00	87.280	147.930	6988.61	4429.70	-950.42	5194.46	1742139.46	14461554.44	39°49'13.5746"N	80°38'15.7848"W	5280.69	100.369	0.62	-0.42	0.45
10760.00	87.370	149.570	6993.00	4520.22	-1030.70	5243.17	1742188.15	14461474.20	39°49'12.7794"N	80°38'15.1647"W	5343.51	101.121	1.75	0.10	1.74
10855.00	87.490	150.600	6997.26	4611.10	-1112.95	5290.50	1742235.46	14461391.97	39°49'11.9646"N	80°38'14.5624"W	5406.30	101.880	1.09	0.13	1.08
10950.00	87.710	150.220	7001.24	4701.84	-1195.49	5337.37	1742282.31	14461309.47	39°49'11.1470"N	80°38'13.9661"W	5469.61	102.625	0.46	0.23	-0.40
11045.00	88.420	150.490	7004.44	4792.64	-1278.01	5384.33	1742329.25	14461226.98	39°49'10.3297"N	80°38'13.3685"W	5533.92	103.352	0.80	0.75	0.28
11139.00	88.290	150.440	7007.14	4882.44	-1359.76	5430.65	1742375.55	14461145.26	39°49'9.5199"N	80°38'12.7791"W	5598.29	104.057	0.15	-0.14	-0.05
11234.00	88.660	152.440	7009.67	4972.70	-1443.17	5476.08	1742420.93	14461061.89	39°49'8.6938"N	80°38'12.2016"W	5663.02	104.764	2.14	0.39	2.11

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Slot	Slot 08		

WELLPATH DATA (214 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]
11329.00	88.910	152.300	7011.68	5062.50	-1527.31	5520.09	1742464.96	14460977.77	39°49'7.8604"N	80°38'11.6415"W	5727.49	105.466	0.30	0.26	-0.15
11424.00	89.210	152.540	7013.24	5152.27	-1611.51	5564.07	1742508.92	14460893.61	39°49'7.0266"N	80°38'11.0823"W	5792.74	106.152	0.40	0.32	0.25
11518.00	88.690	149.560	7014.97	5241.80	-1693.74	5609.56	1742554.39	14460811.41	39°49'6.2122"N	80°38'10.5036"W	5859.68	106.801	3.22	-0.55	-3.17
11611.00	88.940	150.550	7016.89	5330.85	-1774.30	5655.97	1742600.79	14460730.88	39°49'5.4141"N	80°38'9.9130"W	5927.75	107.417	1.10	0.27	1.06
11801.00	88.540	150.060	7021.07	5512.55	-1939.31	5750.07	1742694.85	14460565.94	39°49'3.7796"N	80°38'8.7157"W	6068.30	108.638	0.33	-0.21	-0.26
11895.00	89.460	150.920	7022.71	5602.36	-2021.10	5796.36	1742741.13	14460484.18	39°49'2.9694"N	80°38'8.1267"W	6138.62	109.223	1.34	0.98	0.91
11989.00	88.720	150.370	7024.20	5692.10	-2103.02	5842.44	1742787.17	14460402.29	39°49'2.1580"N	80°38'7.5405"W	6209.41	109.797	0.98	-0.79	-0.59
12084.00	88.970	150.380	7026.12	5782.91	-2185.59	5889.39	1742834.11	14460319.76	39°49'1.3402"N	80°38'6.9431"W	6281.85	110.360	0.26	0.26	0.01
12272.00	89.120	150.380	7029.25	5962.65	-2349.00	5982.29	1742926.98	14460156.41	39°48'59.7215"N	80°38'5.7611"W	6426.95	111.438	0.08	0.08	0.00
12366.00	88.690	149.450	7031.05	6052.73	-2430.32	6029.41	1742974.08	14460075.12	39°48'58.9160"N	80°38'5.1616"W	6500.78	111.953	1.09	-0.46	-0.99
12460.00	89.550	151.720	7032.49	6142.49	-2512.18	6075.56	1743020.22	14459993.29	39°48'58.1051"N	80°38'4.5743"W	6574.46	112.465	2.58	0.91	2.41
12554.00	89.610	152.740	7033.18	6231.43	-2595.35	6119.36	1743063.99	14459910.15	39°48'57.2814"N	80°38'4.0174"W	6646.99	112.983	1.09	0.06	1.09
12648.00	89.430	149.890	7033.97	6320.83	-2677.81	6164.47	1743109.09	14459827.73	39°48'56.4647"N	80°38'3.4436"W	6720.96	113.480	3.04	-0.19	-3.03
12742.00	89.120	149.130	7035.16	6411.11	-2758.80	6212.16	1743156.76	14459746.77	39°48'55.6624"N	80°38'2.8367"W	6797.20	113.946	0.87	-0.33	-0.81
12837.00	89.670	149.550	7036.16	6502.43	-2840.52	6260.60	1743205.18	14459665.09	39°48'54.8528"N	80°38'2.2202"W	6874.86	114.404	0.73	0.58	0.44
12932.00	89.340	149.690	7036.98	6593.62	-2922.47	6308.65	1743253.21	14459583.17	39°48'54.0410"N	80°38'1.6088"W	6952.69	114.856	0.38	-0.35	0.15
13027.00	89.490	150.450	7037.95	6684.60	-3004.79	6356.04	1743300.59	14459500.87	39°48'53.2255"N	80°38'1.0058"W	7030.51	115.302	0.82	0.16	0.80
13122.00	89.980	151.060	7038.39	6775.25	-3087.68	6402.45	1743346.98	14459418.02	39°48'52.4045"N	80°38'0.4154"W	7108.11	115.746	0.82	0.52	0.64
13217.00	89.180	149.590	7039.09	6866.10	-3170.22	6449.48	1743393.99	14459335.51	39°48'51.5869"N	80°37'59.8170"W	7186.52	116.176	1.76	-0.84	-1.55
13311.00	89.520	149.920	7040.15	6956.27	-3251.42	6496.83	1743441.32	14459254.34	39°48'50.7825"N	80°37'59.2146"W	7265.02	116.586	0.50	0.36	0.35
13406.00	89.490	150.740	7040.97	7047.12	-3333.96	6543.85	1743488.32	14459171.84	39°48'49.9649"N	80°37'58.6163"W	7344.20	116.998	0.86	-0.03	0.86
13501.00	90.100	148.480	7041.31	7138.32	-3415.90	6591.91	1743536.36	14459089.93	39°48'49.1532"N	80°37'58.0048"W	7424.39	117.393	2.46	0.64	-2.38
13596.00	89.400	148.480	7041.73	7230.02	-3496.88	6641.57	1743586.00	14459008.98	39°48'48.3509"N	80°37'57.3726"W	7505.91	117.767	0.74	-0.74	0.00
13691.00	88.530	148.730	7043.44	7321.66	-3577.96	6691.05	1743635.46	14458927.93	39°48'47.5476"N	80°37'56.7428"W	7587.62	118.135	0.95	-0.92	0.26
13785.00	88.720	149.010	7045.70	7412.21	-3658.40	6739.63	1743684.03	14458847.52	39°48'46.7507"N	80°37'56.1245"W	7668.54	118.494	0.36	0.20	0.30
13880.00	89.300	148.590	7047.34	7503.76	-3739.65	6788.84	1743733.21	14458766.31	39°48'45.9457"N	80°37'55.4982"W	7750.70	118.848	0.75	0.61	-0.44
13974.00	89.490	146.900	7048.33	7594.80	-3819.13	6839.00	1743783.35	14458686.85	39°48'45.1582"N	80°37'54.8596"W	7833.12	119.180	1.81	0.20	-1.80
14069.00	91.330	146.980	7047.65	7687.13	-3898.75	6890.82	1743835.15	14458607.27	39°48'44.3693"N	80°37'54.1998"W	7917.30	119.501	1.94	1.94	0.08
14165.00	90.230	147.930	7046.35	7780.23	-3979.66	6942.46	1743886.77	14458526.38	39°48'43.5675"N	80°37'53.5423"W	8002.22	119.823	1.51	-1.15	0.99
14258.00	90.100	149.470	7046.08	7869.91	-4059.12	6990.77	1743935.07	14458446.95	39°48'42.7803"N	80°37'52.9274"W	8083.77	120.141	1.66	-0.14	1.66

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14352.00	89.240	149.910	7046.62	7960.11	-4140.27	7038.21	1743982.49	14458365.84	39°48'41.9764"N	80°37'52.3238"W	8165.68	120.466	1.03	-0.91	0.47
14542.00	89.050	149.600	7049.45	8142.35	-4304.39	7133.90	1744078.14	14458201.78	39°48'40.3506"N	80°37'51.1062"W	8331.89	121.106	0.19	-0.10	-0.16
14637.00	89.300	149.260	7050.82	8233.63	-4386.18	7182.21	1744126.43	14458120.03	39°48'39.5403"N	80°37'50.4915"W	8415.63	121.412	0.44	0.26	-0.36
14732.00	89.330	148.640	7051.96	8325.12	-4467.56	7231.21	1744175.41	14458038.68	39°48'38.7341"N	80°37'49.8680"W	8499.97	121.708	0.65	0.03	-0.65
14826.00	89.080	149.780	7053.26	8415.53	-4548.30	7279.32	1744223.50	14457957.97	39°48'37.9342"N	80°37'49.2557"W	8583.45	121.998	1.24	-0.27	1.21
14920.00	89.670	150.150	7054.29	8505.60	-4629.67	7326.37	1744270.53	14457876.63	39°48'37.1281"N	80°37'48.6572"W	8666.58	122.290	0.74	0.63	0.39
15014.00	89.450	149.340	7055.01	8595.77	-4710.87	7373.73	1744317.87	14457795.47	39°48'36.3238"N	80°37'48.0546"W	8750.09	122.573	0.89	-0.23	-0.86
15109.00	89.820	149.400	7055.61	8687.08	-4792.61	7422.13	1744366.26	14457713.75	39°48'35.5140"N	80°37'47.4387"W	8834.99	122.851	0.39	0.39	0.06
15203.00	90.070	149.980	7055.71	8777.29	-4873.76	7469.57	1744413.68	14457632.64	39°48'34.7100"N	80°37'46.8351"W	8918.97	123.124	0.67	0.27	0.62
15298.00	90.160	149.710	7055.51	8868.38	-4955.90	7517.29	1744461.38	14457550.52	39°48'33.8963"N	80°37'46.2280"W	9003.92	123.396	0.30	0.09	-0.28
15393.00	89.790	150.140	7055.56	8959.43	-5038.11	7564.90	1744508.97	14457468.35	39°48'33.0819"N	80°37'45.6223"W	9089.02	123.663	0.60	-0.39	0.45
15486.00	90.010	150.120	7055.72	9048.47	-5118.76	7611.22	1744555.27	14457387.73	39°48'32.2830"N	80°37'45.0331"W	9172.37	123.922	0.24	0.24	-0.02
15581.00	89.760	149.990	7055.91	9139.46	-5201.08	7658.64	1744602.67	14457305.45	39°48'31.4676"N	80°37'44.4298"W	9257.75	124.181	0.30	-0.26	-0.14
15675.00	89.610	150.310	7056.43	9229.44	-5282.61	7705.42	1744649.44	14457223.95	39°48'30.6600"N	80°37'43.8346"W	9342.35	124.433	0.38	-0.16	0.34
15770.00	89.270	149.820	7057.35	9320.43	-5364.93	7752.83	1744696.82	14457141.66	39°48'29.8445"N	80°37'43.2316"W	9428.08	124.683	0.63	-0.36	-0.52
15959.00	89.110	149.920	7060.03	9501.61	-5528.38	7847.69	1744791.65	14456978.28	39°48'28.2253"N	80°37'42.0247"W	9599.43	125.163	0.10	-0.08	0.05
16053.00	89.570	149.190	7061.11	9591.86	-5609.41	7895.32	1744839.26	14456897.28	39°48'27.4225"N	80°37'41.4188"W	9685.12	125.393	0.92	0.49	-0.78
16149.00	89.510	149.640	7061.88	9684.11	-5692.05	7944.16	1744888.08	14456814.67	39°48'26.6038"N	80°37'40.7973"W	9772.88	125.622	0.47	-0.06	0.47
16242.00	89.330	149.760	7062.82	9773.35	-5772.34	7991.08	1744934.98	14456734.41	39°48'25.8084"N	80°37'40.2004"W	9857.85	125.842	0.23	-0.19	0.13
16336.00	89.700	149.240	7063.62	9863.63	-5853.33	8038.79	1744982.67	14456653.45	39°48'25.0061"N	80°37'39.5934"W	9944.02	126.060	0.68	0.39	-0.55
16525.00	89.540	149.930	7064.87	10045.09	-6016.32	8134.47	1745078.31	14456490.53	39°48'23.3914"N	80°37'38.3761"W	10117.59	126.487	0.37	-0.08	0.37
16620.00	89.850	149.470	7065.38	10136.25	-6098.34	8182.40	1745126.22	14456408.54	39°48'22.5789"N	80°37'37.7663"W	10204.96	126.697	0.58	0.33	-0.48
16714.00	90.190	150.970	7065.34	10226.20	-6179.92	8229.08	1745172.89	14456326.99	39°48'21.7707"N	80°37'37.1725"W	10291.22	126.906	1.64	0.36	1.60
16809.00	89.910	150.280	7065.26	10316.91	-6262.71	8275.68	1745219.47	14456244.23	39°48'20.9506"N	80°37'36.5798"W	10378.26	127.117	0.78	-0.29	-0.73
16904.00	90.040	149.660	7065.30	10407.94	-6344.95	8323.22	1745267.00	14456162.02	39°48'20.1359"N	80°37'35.9750"W	10465.87	127.319	0.67	0.14	-0.65
16998.00	89.910	149.920	7065.34	10498.10	-6426.19	8370.52	1745314.28	14456080.82	39°48'19.3311"N	80°37'35.3733"W	10552.80	127.514	0.31	-0.14	0.28
17092.00	89.730	149.230	7065.64	10588.36	-6507.24	8418.12	1745361.86	14455999.80	39°48'18.5281"N	80°37'34.7677"W	10639.97	127.704	0.76	-0.19	-0.73
17187.00	89.850	151.210	7065.99	10679.26	-6589.69	8465.30	1745409.02	14455917.38	39°48'17.7114"N	80°37'34.1676"W	10727.79	127.898	2.09	0.13	2.08
17282.00	89.970	152.090	7066.14	10769.46	-6673.30	8510.42	1745454.11	14455833.81	39°48'16.8833"N	80°37'33.5941"W	10814.81	128.101	0.93	0.13	0.93
17377.00	90.530	151.370	7065.72	10859.61	-6756.96	8555.41	1745499.09	14455750.17	39°48'16.0546"N	80°37'33.0221"W	10901.91	128.301	0.96	0.59	-0.76

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Willett S-8HM AWB Proj:20714'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EQT (TUG HILL OPERATING, LLC)	Well	Willett S-8HM
Field	Marshall	API	47-051-02422-0000
Facility	Willett	Wellbore	Willett S-8HM AWB
Slot	Slot 08		

WELLPATH DATA (214 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]
17471.00	90.250	148.760	7065.08	10949.63	-6838.41	8602.31	1745545.97	14455668.75	39°48'15.2477"N	80°37'32.4255"W	10989.25	128.483	2.79	-0.30	-2.78
17566.00	90.190	147.310	7064.72	11041.52	-6919.01	8652.60	1745596.25	14455588.19	39°48'14.4492"N	80°37'31.7854"W	11078.82	128.647	1.53	-0.06	-1.53
17756.00	92.250	151.610	7060.67	11223.97	-7082.56	8749.10	1745692.71	14455424.70	39°48'12.8288"N	80°37'30.5577"W	11256.53	128.991	2.51	1.08	2.26
17849.00	91.360	147.580	7057.74	11313.19	-7162.71	8796.14	1745739.72	14455344.58	39°48'12.0348"N	80°37'29.9594"W	11343.57	129.156	4.44	-0.96	-4.33
17944.00	92.310	149.590	7054.70	11404.80	-7243.74	8845.63	1745789.19	14455263.58	39°48'11.2320"N	80°37'29.3296"W	11433.15	129.314	2.34	1.00	2.12
18039.00	92.010	149.700	7051.12	11495.92	-7325.66	8893.60	1745837.15	14455181.70	39°48'10.4204"N	80°37'28.7194"W	11522.21	129.478	0.34	-0.32	0.12
18134.00	90.770	149.130	7048.81	11587.18	-7407.42	8941.92	1745885.45	14455099.97	39°48'9.6104"N	80°37'28.1046"W	11611.54	129.638	1.44	-1.31	-0.60
18229.00	88.800	149.540	7049.17	11678.50	-7489.13	8990.37	1745933.88	14455018.29	39°48'8.8009"N	80°37'27.4882"W	11701.02	129.795	2.12	-2.07	0.43
18324.00	88.860	149.990	7051.11	11769.61	-7571.19	9038.20	1745981.69	14454936.27	39°48'7.9880"N	80°37'26.8799"W	11790.33	129.952	0.48	0.06	0.47
18418.00	88.960	149.720	7052.90	11859.72	-7652.46	9085.40	1746028.87	14454855.02	39°48'7.1828"N	80°37'26.2795"W	11878.74	130.107	0.31	0.11	-0.29
18513.00	88.460	149.890	7055.03	11950.81	-7734.55	9133.16	1746076.62	14454772.97	39°48'6.3696"N	80°37'25.6719"W	11968.20	130.260	0.56	-0.53	0.18
18607.00	87.660	150.060	7058.22	12040.82	-7815.89	9180.17	1746123.61	14454691.66	39°48'5.5638"N	80°37'25.0740"W	12056.69	130.411	0.87	-0.85	0.18
18702.00	87.760	149.590	7062.01	12131.85	-7897.95	9227.88	1746171.30	14454609.63	39°48'4.7509"N	80°37'24.4671"W	12146.25	130.560	0.51	0.11	-0.49
18795.00	87.570	149.660	7065.80	12221.05	-7978.12	9274.87	1746218.27	14454529.50	39°48'3.9566"N	80°37'23.8694"W	12234.12	130.702	0.22	-0.20	0.08
18890.00	87.820	149.860	7069.62	12312.11	-8060.12	9322.68	1746266.06	14454447.52	39°48'3.1442"N	80°37'23.2613"W	12323.87	130.846	0.34	0.26	0.21
18984.00	88.590	150.370	7072.57	12402.06	-8141.58	9369.49	1746312.85	14454366.09	39°48'2.3372"N	80°37'22.6660"W	12412.60	130.989	0.98	0.82	0.54
19079.00	88.310	149.610	7075.14	12493.05	-8223.82	9416.99	1746360.33	14454283.89	39°48'1.5226"N	80°37'22.0619"W	12502.43	131.131	0.85	-0.29	-0.80
19173.00	89.110	150.600	7077.25	12583.04	-8305.29	9463.82	1746407.15	14454202.45	39°48'0.7155"N	80°37'21.4662"W	12591.34	131.270	1.35	0.85	1.05
19267.00	89.110	151.370	7078.71	12672.61	-8387.48	9509.41	1746452.72	14454120.29	39°47'59.9013"N	80°37'20.8865"W	12679.85	131.413	0.82	0.00	0.82
19361.00	89.570	149.820	7079.80	12762.37	-8469.36	9555.56	1746498.85	14454038.44	39°47'59.0902"N	80°37'20.2997"W	12768.66	131.551	1.72	0.49	-1.65
19549.00	89.480	149.390	7081.35	12942.85	-8631.51	9650.68	1746593.93	14453876.35	39°47'57.4837"N	80°37'19.0898"W	12947.53	131.809	0.23	-0.05	-0.23
19643.00	89.510	149.190	7082.18	13033.23	-8712.33	9698.68	1746641.91	14453795.57	39°47'56.6831"N	80°37'18.4792"W	13037.22	131.933	0.22	0.03	-0.21
19738.00	88.740	149.640	7083.63	13124.51	-8794.10	9747.01	1746690.23	14453713.83	39°47'55.8729"N	80°37'17.8644"W	13127.85	132.058	0.94	-0.81	0.47
19832.00	88.890	150.350	7085.58	13214.55	-8875.49	9794.01	1746737.20	14453632.48	39°47'55.0667"N	80°37'17.2667"W	13217.29	132.183	0.77	0.16	0.76
19926.00	88.680	148.880	7087.57	13304.77	-8956.55	9841.54	1746784.72	14453551.44	39°47'54.2635"N	80°37'16.6621"W	13306.98	132.305	1.58	-0.22	-1.56
20114.00	88.950	151.290	7091.46	13484.75	-9119.46	9935.27	1746878.41	14453388.60	39°47'52.6497"N	80°37'15.4700"W	13486.07	132.548	1.29	0.14	1.28
20209.00	89.350	151.430	7092.87	13575.09	-9202.83	9980.80	1746923.93	14453305.26	39°47'51.8239"N	80°37'14.8912"W	13576.02	132.678	0.45	0.42	0.15
20303.00	89.390	150.730	7093.90	13664.62	-9285.10	10026.26	1746969.36	14453223.02	39°47'51.0090"N	80°37'14.3134"W	13665.24	132.802	0.75	0.04	-0.74
20397.00	89.350	150.820	7094.94	13754.30	-9367.13	10072.15	1747015.24	14453141.03	39°47'50.1964"N	80°37'13.7299"W	13754.68	132.923	0.10	-0.04	0.10
20492.00	89.170	150.210	7096.16	13845.06	-9449.82	10118.90	1747061.97	14453058.37	39°47'49.3772"N	80°37'13.1354"W	13845.26	133.042	0.67	-0.19	-0.64

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Willett S-8HM AWB Proj:20714'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EQT (TUG HILL OPERATING, LLC)	Well	Willett S-8HM
Field	Marshall	API	47-051-02422-0000
Facility	Willett	Wellbore	Willett S-8HM AWB
Slot	Slot 08		

WELLPATH DATA (214 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]
20586.00	89.450	149.010	7097.29	13935.29	-9530.89	10166.45	1747109.50	14452977.33	39°47'48.5740"N	80°37'12.5306"W	13935.37	133.152	1.31	0.30	-1.28
20680.00	89.380	149.250	7098.25	14025.74	-9611.57	10214.68	1747157.71	14452896.68	39°47'47.7747"N	80°37'11.9171"W	14025.76	133.258	0.27	-0.07	0.26
20689.00	89.450	149.080	7098.35	14034.40	-9619.30	10219.29	1747162.32	14452888.95	39°47'47.6981"N	80°37'11.8584"W	14034.42	133.268	2.04	0.78	-1.89
20714.00‡	89.450	149.080	7098.59	14058.47	-9640.75	10232.14	1747175.16	14452867.52	39°47'47.4856"N	80°37'11.6950"W	14058.47	133.295	0.00	0.00	0.00

HOLE & CASING SECTIONS - Ref Wellbore: Willett S-8HM AWB Ref Wellpath: Willett S-8HM AWB Proj:20714'									
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]
30in Conductor	32.50	153.00	120.50	32.50	153.00	0.00	0.00	0.09	-0.09
17.5in Open Hole	153.00	1122.00	969.00	153.00	1122.00	0.09	-0.09	1.53	1.46
13.375in Casing Surface	32.50	1122.00	1089.50	32.50	1122.00	0.00	0.00	1.53	1.46
12.25in Open Hole	1122.00	3021.00	1899.00	1122.00	2963.75	1.53	1.46	88.22	416.93
9.625in Casing Intermediate	32.50	3021.00	2988.50	32.50	2963.75	0.00	0.00	88.22	416.93
8.75in Open Hole	3021.00	7000.00	3979.00	2963.75	5878.94	88.22	416.93	622.42	2889.77
8.5in Open Hole	7000.00	20714.00	13714.00	5878.94	7098.59	622.42	2889.77	-9640.75	10232.14
5.5in Casing Production	32.50	20714.00	20681.50	32.50	7098.59	0.00	0.00	-9640.75	10232.14

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Willett S-8HM AWB Proj:20714'

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Operator	EQT (TUG HILL OPERATING, LLC)	Well	Willett S-8HM
Field	Marshall	API	47-051-02422-0000
Facility	Willett	Wellbore	Willett S-8HM AWB
Slot	Slot 08		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Willett S-8HM LP Rev-1	6931.99	484.03	4371.45	1741316.77	14462988.34	39°49'27.7835"N	80°38'26.2587"W	point
606H	7056.55	-10858.93	9942.87	1746886.01	14451649.81	39°47'35.4590"N	80°37'15.4670"W	point
206H	7062.20	-10613.75	11484.65	1748427.18	14451894.89	39°47'37.8170"N	80°36'55.7020"W	point
406H	7094.89	-10389.91	10472.75	1747415.68	14452118.65	39°47'40.0719"N	80°37'8.6532"W	rectangle
	2D Rectangle 2400 x 600.							
6H	7108.50	-10251.43	12132.68	1749074.96	14452257.07	39°47'41.3700"N	80°36'47.3800"W	point
Willett S-8HM BHL Rev-1	7136.19	-9650.91	10222.71	1747165.74	14452857.36	39°47'47.3856"N	80°37'11.8164"W	point

WELLPATH COMPOSITION - Ref Wellbore: Willett S-8HM AWB				Ref Wellpath: Willett S-8HM AWB Proj:20714'	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
32.50	2977.00	Gyrodata 2015 - CT+WIR+DPIPE	03 Gyrodata<12-1/4">(100'-2977')	Willett S-8HM AWB	8/30/2023
2977.00	6923.00	OWSG MWD rev2 + HRGM	04 SDI MWD <8-3/4">(2977')(3115'-6923')	Willett S-8HM AWB	8/30/2023
6923.00	20714.00	OWSG MWD rev2 + IFR1 + Sag + Multi-Station Correction	05 BH Lucida+SQC IFR1+SAG+FDIR <8-1/2">(6923')(6975'-20689')	Willett S-8HM AWB	8/30/2023

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Willett S-8HM AWB Proj:20714'

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REFERENCE WELLPATH IDENTIFICATION

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Field	Marshall	API	47-051-02422-0000
Facility	Willett	Wellbore	Willett S-8HM AWB
Slot	Slot 08		

COMMENTS

Wellpath general comments

API: 47-051-02422-0000

BH Job #: 111947690

Rig: Nabors X14

Duration: 8/31/2023-9/5/2023

01_NZone MWD<17-1/2">(180.50'-1131.50')

02_NZone MWD<12-1/4">(1131.50')(1161.50'-2071.50')

03_Gyrodata<12-1/4">(100'-2977')

04_SDI MWD <8-3/4">(2977')(3115'-6923')

05_BH Lucida+SQC IFR1+SAG+FDIR <8-1/2">(6923')(6975'-20689')

Landing Pt. @ 9062' MD

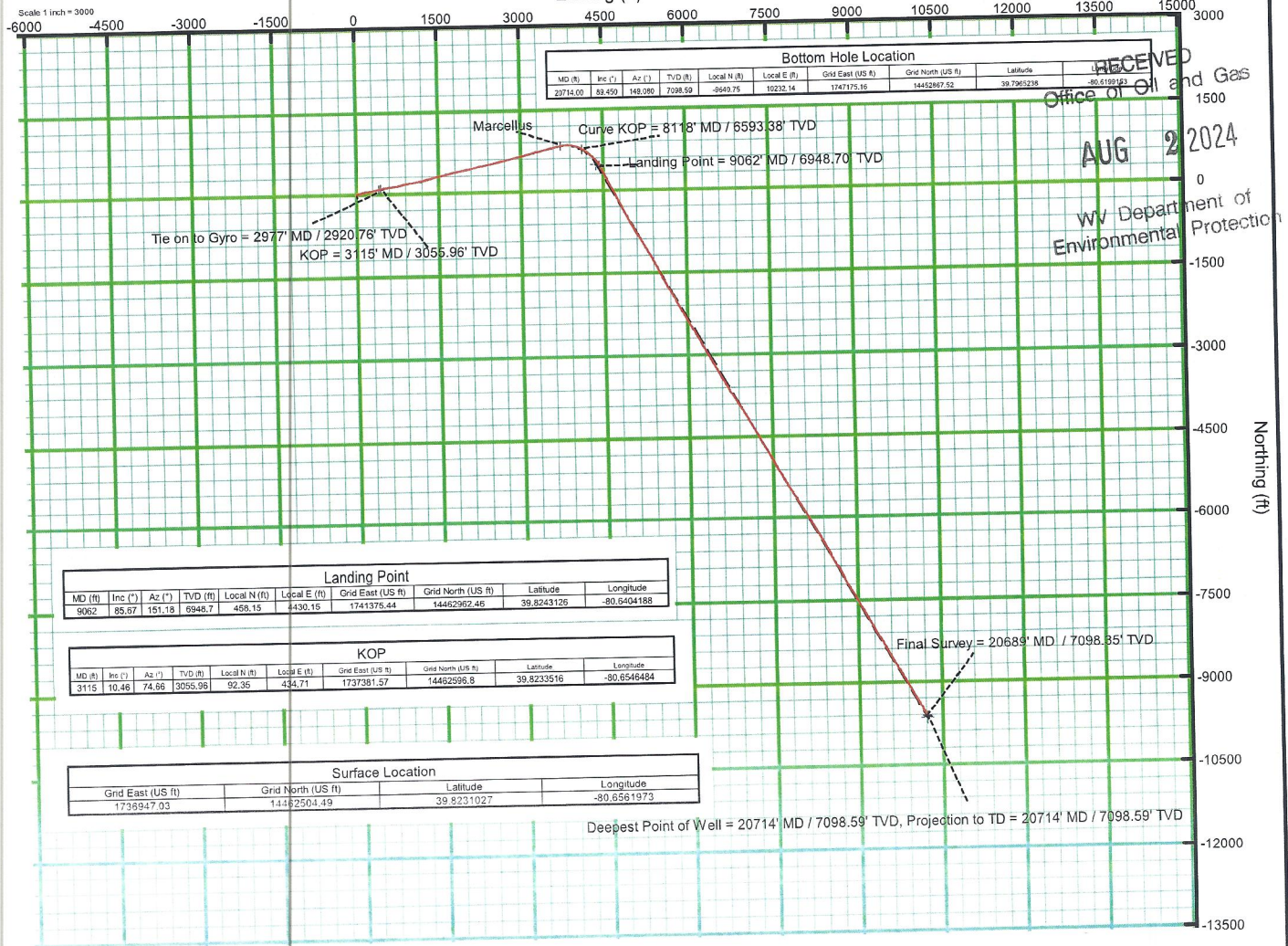
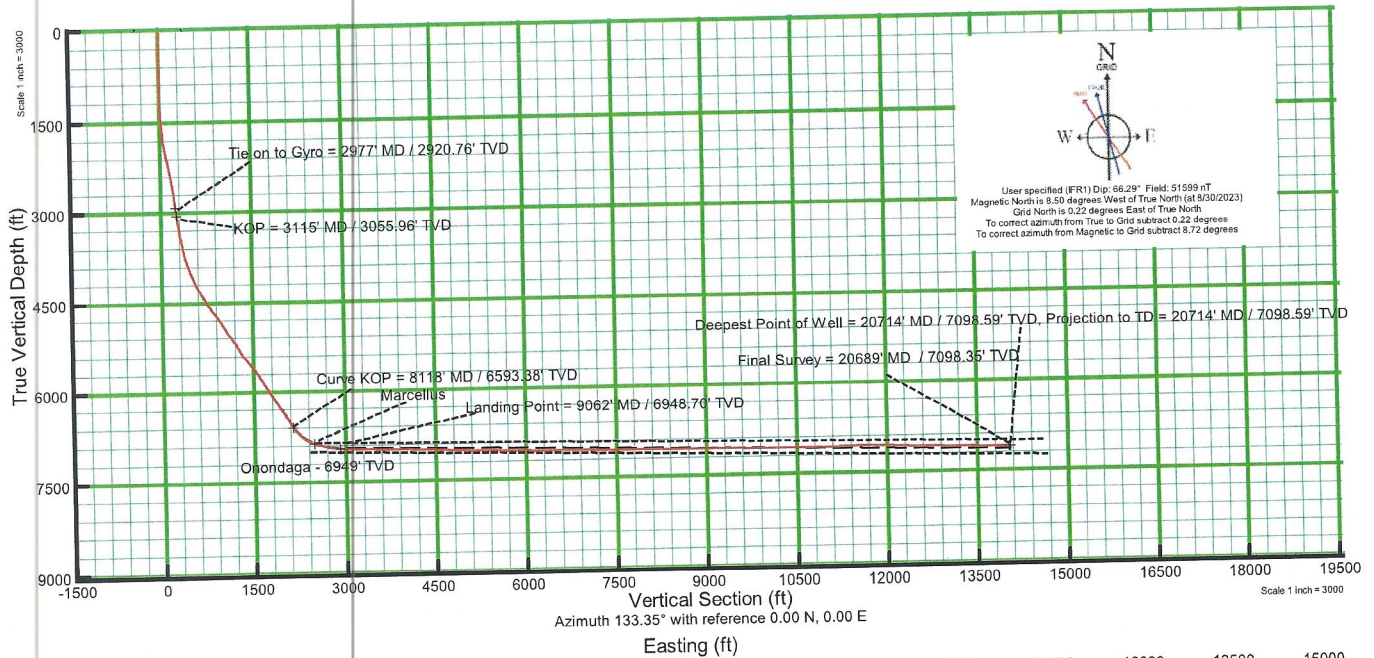
Final Survey @ 20689' MD

Projected MD at TD: 20714'

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KB Elevation=1342.50 FT
 Ground Elevation=1310 FT
 All Survey Measurements were taken from KB Elevation



11/08/2024