



Actual Wellpath Report

Willett S-3HM AWB Proj:18830'

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REFERENCE WELLPATH IDENTIFICATION

Operator	EQT (TUG HILL OPERATING, LLC)	Well	Willett S-3HM
Field	Marshall	API	47-051-02415-0000
Facility	Willett	Wellbore	Willett S-3HM AWB
Slot	Slot 03		

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	10/25/2023 at 10:54:44 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	22.79	-7.51	1736958.29	14462470.31	39°49'22.8315"N	80°39'22.1677"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 03)	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	142.54°

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WELLPATH DATA (201 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	119.270	0.00	0.00	0.00	0.00	1736958.29	14462470.31	39°49'22.8315"N	80°39'22.1677"W	0.00	0.000	0.00	0.00	0.00	
32.50	0.000	119.270	32.50	0.00	0.00	0.00	1736958.29	14462470.31	39°49'22.8315"N	80°39'22.1677"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.220	119.270	100.00	0.12	-0.06	0.11	1736958.40	14462470.25	39°49'22.8308"N	80°39'22.1662"W	0.13	119.270	0.33	0.33	0.00	
200.00	0.180	140.270	200.00	0.45	-0.28	0.38	1736958.67	14462470.03	39°49'22.8287"N	80°39'22.1628"W	0.47	126.126	0.08	-0.04	21.00	
300.00	0.360	78.610	300.00	0.75	-0.34	0.79	1736959.08	14462469.97	39°49'22.8281"N	80°39'22.1576"W	0.86	113.108	0.32	0.18	-61.66	
400.00	0.670	107.110	399.99	1.36	-0.45	1.66	1736959.95	14462469.86	39°49'22.8270"N	80°39'22.1465"W	1.72	105.098	0.39	0.31	28.50	
500.00	0.610	124.600	499.99	2.34	-0.92	2.65	1736960.94	14462469.39	39°49'22.8223"N	80°39'22.1337"W	2.81	109.146	0.20	-0.06	17.49	
600.00	0.520	133.410	599.98	3.30	-1.54	3.42	1736961.71	14462468.78	39°49'22.8162"N	80°39'22.1239"W	3.75	114.169	0.12	-0.09	8.81	
700.00	0.190	126.810	699.98	3.91	-1.95	3.88	1736962.17	14462468.36	39°49'22.8121"N	80°39'22.1180"W	4.34	116.621	0.33	-0.33	-6.60	
800.00	0.130	104.290	799.98	4.16	-2.07	4.13	1736962.41	14462468.24	39°49'22.8108"N	80°39'22.1149"W	4.62	116.684	0.09	-0.06	-22.52	
900.00	0.290	78.920	899.98	4.36	-2.05	4.48	1736962.77	14462468.26	39°49'22.8110"N	80°39'22.1103"W	4.93	114.600	0.18	0.16	-25.37	
1000.00	0.270	344.580	999.98	4.25	-1.78	4.67	1736962.96	14462468.53	39°49'22.8137"N	80°39'22.1079"W	5.00	110.836	0.41	-0.02	-94.34	
1100.00	0.400	331.020	1099.98	3.69	-1.24	4.44	1736962.73	14462469.07	39°49'22.8190"N	80°39'22.1108"W	4.61	105.668	0.15	0.13	-13.56	
1200.00	0.340	333.830	1199.98	3.05	-0.67	4.14	1736962.43	14462469.64	39°49'22.8247"N	80°39'22.1147"W	4.19	99.239	0.06	-0.06	2.81	
1300.00	0.420	340.040	1299.97	2.41	-0.06	3.88	1736962.17	14462470.25	39°49'22.8307"N	80°39'22.1179"W	3.88	90.920	0.09	0.08	6.21	
1400.00	0.420	337.930	1399.97	1.71	0.62	3.62	1736961.91	14462470.93	39°49'22.8375"N	80°39'22.1212"W	3.67	80.252	0.02	0.00	-2.11	
1500.00	0.440	333.520	1499.97	0.98	1.31	3.31	1736961.60	14462471.61	39°49'22.8442"N	80°39'22.1252"W	3.56	68.483	0.04	0.02	-4.41	
1600.00	0.290	345.440	1599.97	0.37	1.89	3.08	1736961.36	14462472.20	39°49'22.8501"N	80°39'22.1282"W	3.61	58.378	0.17	-0.15	11.92	
1700.00	2.940	95.310	1699.92	1.88	1.90	5.57	1736963.85	14462472.21	39°49'22.8500"N	80°39'22.0962"W	5.88	71.140	3.05	2.65	109.87	
1800.00	5.980	97.450	1799.61	7.30	0.99	13.29	1736971.57	14462471.30	39°49'22.8407"N	80°39'21.9973"W	13.32	85.745	3.04	3.04	2.14	
1900.00	6.480	102.010	1899.02	15.26	-0.86	23.97	1736982.25	14462469.45	39°49'22.8220"N	80°39'21.8605"W	23.99	92.058	0.70	0.50	4.56	
2000.00	7.500	109.320	1998.28	25.01	-4.19	35.65	1736993.93	14462466.12	39°49'22.7887"N	80°39'21.7110"W	35.90	96.711	1.35	1.02	7.31	
2100.00	9.210	118.520	2097.22	37.78	-10.18	48.84	1737007.11	14462460.14	39°49'22.7290"N	80°39'21.5422"W	49.89	101.769	2.17	1.71	9.20	
2200.00	9.950	119.460	2195.82	53.04	-18.25	63.40	1737021.66	14462452.07	39°49'22.6487"N	80°39'21.3561"W	65.97	106.056	0.76	0.74	0.94	
2300.00	12.940	117.390	2293.82	71.13	-27.65	80.86	1737039.12	14462442.67	39°49'22.5552"N	80°39'21.1326"W	85.46	108.876	3.02	2.99	-2.07	
2400.00	15.910	115.210	2390.66	93.44	-38.64	103.21	1737061.46	14462431.69	39°49'22.4457"N	80°39'20.8468"W	110.21	110.525	3.02	2.97	-2.18	
2500.00	17.530	119.220	2486.43	119.45	-51.83	128.76	1737087.00	14462418.50	39°49'22.3143"N	80°39'20.5200"W	138.80	111.927	1.99	1.62	4.01	
2600.00	19.810	119.480	2581.16	148.88	-67.52	156.66	1737114.89	14462402.81	39°49'22.1582"N	80°39'20.1632"W	170.59	113.317	2.28	2.28	0.26	
2700.00	18.510	118.290	2675.62	178.94	-83.39	185.39	1737143.60	14462386.96	39°49'22.0003"N	80°39'19.7958"W	203.28	114.218	1.36	-1.30	-1.19	
2800.00	17.050	117.080	2770.84	206.65	-97.58	212.42	1737170.63	14462372.76	39°49'21.8590"N	80°39'19.4500"W	233.76	114.674	1.51	-1.46	-1.21	

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Field	Marshall		API	47-051-02415-0000
Facility	Willett		Wellbore	Willett S-3HM AWB
Slot	Slot 03			

WELLPATH DATA (201 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]
2882.00	17.320	116.760	2849.18	228.50	-108.55	234.02	1737192.22	14462361.80	39°49'21.7498"N	80°39'19.1737"W	257.97	114.885	0.35	0.33	-0.39
2903.00	16.760	117.170	2869.26	234.05	-111.34	239.51	1737197.70	14462359.01	39°49'21.7220"N	80°39'19.1035"W	264.12	114.933	2.73	-2.67	1.95
3006.00	15.360	113.010	2968.24	259.34	-123.46	265.28	1737223.46	14462346.90	39°49'21.6013"N	80°39'18.7738"W	292.60	114.957	1.76	-1.36	-4.04
3100.00	16.370	116.170	3058.66	282.04	-134.17	288.63	1737246.80	14462336.20	39°49'21.4946"N	80°39'18.4751"W	318.28	114.931	1.41	1.07	3.36
3194.00	17.950	119.420	3148.48	307.23	-147.12	313.13	1737271.30	14462323.24	39°49'21.3656"N	80°39'18.1617"W	345.97	115.166	1.97	1.68	3.46
3288.00	22.130	123.320	3236.77	337.29	-163.97	340.56	1737298.71	14462306.40	39°49'21.1980"N	80°39'17.8110"W	377.98	115.710	4.67	4.45	4.15
3382.00	26.320	123.170	3322.47	373.68	-185.11	372.81	1737330.95	14462285.27	39°49'20.9879"N	80°39'17.3987"W	416.24	116.406	4.46	4.46	-0.16
3477.00	30.030	119.290	3406.21	415.41	-208.27	411.19	1737369.32	14462262.12	39°49'20.7575"N	80°39'16.9080"W	460.93	116.863	4.35	3.91	-4.08
3572.00	30.060	115.330	3488.45	458.42	-230.08	453.43	1737411.54	14462240.32	39°49'20.5404"N	80°39'16.3677"W	508.47	116.905	2.09	0.03	-4.17
3666.00	31.210	114.350	3569.33	500.82	-250.20	496.90	1737455.00	14462220.21	39°49'20.3399"N	80°39'15.8115"W	556.34	116.726	1.33	1.22	-1.04
3761.00	34.910	116.470	3648.94	546.95	-272.47	543.68	1737501.75	14462197.94	39°49'20.1180"N	80°39'15.2131"W	608.13	116.619	4.08	3.89	2.23
3854.00	36.960	118.340	3724.24	596.36	-297.61	592.11	1737550.17	14462172.82	39°49'19.8678"N	80°39'14.5936"W	662.70	116.685	2.50	2.20	2.01
3949.00	38.220	118.340	3799.51	649.22	-325.12	643.12	1737601.15	14462145.32	39°49'19.5940"N	80°39'13.9413"W	720.62	116.818	1.33	1.33	0.00
4043.00	39.350	118.450	3872.79	702.95	-353.12	694.91	1737652.93	14462117.33	39°49'19.3153"N	80°39'13.2788"W	779.48	116.937	1.20	1.20	0.12
4138.00	37.940	117.850	3946.98	756.98	-381.11	747.22	1737705.21	14462089.35	39°49'19.0366"N	80°39'12.6099"W	838.80	117.023	1.54	-1.48	-0.63
4232.00	37.770	117.540	4021.20	809.33	-407.92	798.29	1737756.27	14462062.55	39°49'18.7697"N	80°39'11.9566"W	896.48	117.067	0.27	-0.18	-0.33
4326.00	37.880	116.220	4095.45	861.28	-433.98	849.71	1737807.67	14462036.50	39°49'18.5102"N	80°39'11.2989"W	954.12	117.055	0.87	0.12	-1.40
4419.00	37.780	114.350	4168.91	911.99	-458.34	901.28	1737859.21	14462012.15	39°49'18.2675"N	80°39'10.6392"W	1011.13	116.956	1.24	-0.11	-2.01
4513.00	35.820	114.470	4244.17	961.64	-481.61	952.55	1737910.47	14461988.89	39°49'18.0356"N	80°39'9.9833"W	1067.38	116.821	2.09	-2.09	0.13
4607.00	34.930	116.090	4320.82	1010.01	-504.84	1001.76	1737959.65	14461965.67	39°49'17.8041"N	80°39'9.3538"W	1121.77	116.746	1.38	-0.95	1.72
4701.00	34.100	114.420	4398.28	1057.34	-527.57	1049.92	1738007.80	14461942.95	39°49'17.5776"N	80°39'8.7376"W	1175.02	116.679	1.34	-0.88	-1.78
4796.00	37.420	115.710	4475.36	1106.60	-551.11	1100.19	1738058.05	14461919.42	39°49'17.3431"N	80°39'8.0945"W	1230.50	116.607	3.58	3.49	1.36
4891.00	38.380	120.010	4550.33	1159.61	-578.39	1151.74	1738109.58	14461892.15	39°49'17.0715"N	80°39'7.4352"W	1288.81	116.665	2.96	1.01	4.53
4986.00	37.860	117.760	4625.07	1213.32	-606.72	1203.08	1738160.90	14461863.83	39°49'16.7896"N	80°39'6.7786"W	1347.41	116.762	1.56	-0.55	-2.37
5081.00	37.690	116.910	4700.16	1265.97	-633.44	1254.77	1738212.57	14461837.12	39°49'16.5235"N	80°39'6.1174"W	1405.60	116.786	0.58	-0.18	-0.89
5176.00	36.820	116.830	4775.78	1317.81	-659.43	1306.07	1738263.85	14461811.14	39°49'16.2647"N	80°39'5.4613"W	1463.11	116.789	0.92	-0.92	-0.08
5271.00	37.020	116.410	4851.73	1369.13	-685.00	1357.09	1738314.85	14461785.58	39°49'16.0100"N	80°39'4.8087"W	1520.17	116.783	0.34	0.21	-0.44
5366.00	36.730	116.240	4927.72	1420.27	-710.28	1408.19	1738365.92	14461760.31	39°49'15.7582"N	80°39'4.1551"W	1577.18	116.766	0.32	-0.31	-0.18
5461.00	34.950	116.820	5004.73	1470.26	-735.12	1457.95	1738415.67	14461735.48	39°49'15.5108"N	80°39'3.5185"W	1632.80	116.758	1.91	-1.87	0.61
5556.00	34.760	117.280	5082.69	1519.27	-759.81	1506.31	1738464.01	14461710.80	39°49'15.2650"N	80°39'2.9001"W	1687.09	116.767	0.34	-0.20	0.48



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5651.00	34.880	117.220	5160.68	1568.31	-784.65	1554.53	1738512.21	14461685.97	39°49'15.0176"N	80°39'2.2833"W	1741.33	116.782	0.13	0.13	-0.06
5745.00	34.530	114.910	5237.96	1616.21	-808.16	1602.60	1738560.26	14461662.46	39°49'14.7834"N	80°39'1.6684"W	1794.84	116.761	1.45	-0.37	-2.46
5839.00	38.730	115.440	5313.38	1666.02	-832.03	1653.34	1738610.98	14461638.61	39°49'14.5456"N	80°39'1.0193"W	1850.89	116.713	4.48	4.47	0.56
5934.00	39.130	115.360	5387.28	1719.14	-857.63	1707.26	1738664.88	14461613.01	39°49'14.2905"N	80°39'0.3295"W	1910.57	116.672	0.42	0.42	-0.08
6028.00	38.030	113.250	5460.77	1770.78	-881.77	1760.67	1738718.27	14461588.89	39°49'14.0499"N	80°38'59.6462"W	1969.13	116.602	1.82	-1.17	-2.24
6122.00	36.190	114.690	5535.73	1820.58	-904.79	1812.50	1738770.08	14461565.87	39°49'13.8203"N	80°38'58.9832"W	2025.78	116.528	2.16	-1.96	1.53
6217.00	36.650	119.060	5612.19	1871.39	-930.28	1862.77	1738820.33	14461540.39	39°49'13.5665"N	80°38'58.3401"W	2082.15	116.538	2.77	0.48	4.60
6312.00	37.620	117.970	5687.92	1923.77	-957.66	1913.17	1738870.71	14461513.03	39°49'13.2940"N	80°38'57.6956"W	2139.47	116.591	1.23	1.02	-1.15
6407.00	37.580	117.910	5763.19	1976.47	-984.81	1964.38	1738921.90	14461485.88	39°49'13.0236"N	80°38'57.0407"W	2197.41	116.626	0.06	-0.04	-0.06
6502.00	36.330	116.980	5839.10	2028.19	-1011.14	2015.06	1738972.56	14461459.56	39°49'12.7615"N	80°38'56.3925"W	2254.52	116.647	1.44	-1.32	-0.98
6596.00	35.790	115.860	5915.09	2077.87	-1035.76	2064.60	1739022.09	14461434.95	39°49'12.5162"N	80°38'55.7588"W	2309.85	116.642	0.91	-0.57	-1.19
6691.00	35.110	114.840	5992.48	2126.89	-1059.36	2114.39	1739071.86	14461411.37	39°49'12.2811"N	80°38'55.1218"W	2364.93	116.612	0.95	-0.72	-1.07
6786.00	34.780	115.890	6070.35	2175.29	-1082.67	2163.56	1739121.01	14461388.07	39°49'12.0489"N	80°38'54.4929"W	2419.33	116.584	0.72	-0.35	1.11
6881.00	35.510	117.150	6148.04	2224.43	-1107.09	2212.49	1739169.91	14461363.66	39°49'11.8056"N	80°38'53.8671"W	2474.02	116.582	1.08	0.77	1.33
6976.00	36.190	115.700	6225.04	2274.39	-1131.84	2262.31	1739219.72	14461338.91	39°49'11.5591"N	80°38'53.2298"W	2529.65	116.579	1.15	0.72	-1.53
7071.00	37.790	116.690	6300.92	2325.61	-1157.08	2313.60	1739270.98	14461313.68	39°49'11.3076"N	80°38'52.5738"W	2586.80	116.571	1.80	1.68	1.04
7166.00	38.580	116.170	6375.59	2378.34	-1183.22	2366.19	1739323.55	14461287.56	39°49'11.0473"N	80°38'51.9011"W	2645.53	116.567	0.90	0.83	-0.55
7260.00	37.730	114.960	6449.51	2430.10	-1208.28	2418.57	1739375.91	14461262.50	39°49'10.7976"N	80°38'51.2311"W	2703.59	116.546	1.20	-0.90	-1.29
7355.00	36.810	114.410	6525.11	2480.96	-1232.31	2470.84	1739428.16	14461238.48	39°49'10.5581"N	80°38'50.5624"W	2761.09	116.507	1.03	-0.97	-0.58
7457.00	35.170	114.980	6607.63	2533.96	-1257.35	2525.30	1739482.60	14461213.46	39°49'10.3085"N	80°38'49.8657"W	2821.00	116.469	1.64	-1.61	0.56
7551.00	38.640	117.380	6682.79	2584.54	-1282.28	2575.91	1739533.20	14461188.53	39°49'10.0601"N	80°38'49.2183"W	2877.43	116.464	4.00	3.69	2.55
7646.00	43.370	127.660	6754.55	2643.01	-1315.91	2628.16	1739585.43	14461154.91	39°49'9.7257"N	80°38'48.5504"W	2939.20	116.597	8.66	4.98	10.82
7741.00	50.540	135.320	6819.40	2711.06	-1362.01	2679.88	1739637.12	14461108.83	39°49'9.2681"N	80°38'47.8899"W	3006.14	116.941	9.57	7.55	8.06
7834.00	59.240	141.200	6872.87	2786.81	-1418.82	2730.29	1739687.51	14461052.04	39°49'8.7047"N	80°38'47.2467"W	3076.94	117.459	10.68	9.35	6.32
7928.00	67.830	141.780	6914.72	2870.87	-1484.62	2782.62	1739739.83	14460986.27	39°49'8.0524"N	80°38'46.5794"W	3153.90	118.081	9.15	9.14	0.62
8023.00	75.200	144.310	6944.82	2960.89	-1556.59	2836.71	1739793.89	14460914.33	39°49'7.3391"N	80°38'45.8898"W	3235.72	118.755	8.16	7.76	2.66
8117.00	83.630	147.150	6962.08	3053.06	-1632.89	2888.67	1739845.82	14460838.06	39°49'6.5830"N	80°38'45.2279"W	3318.24	119.478	9.45	8.97	3.02
8211.00	88.850	149.350	6968.24	3146.35	-1712.62	2938.00	1739895.14	14460758.36	39°49'5.7932"N	80°38'44.5997"W	3400.72	120.239	6.02	5.55	2.34
8306.00	88.450	149.730	6970.48	3240.62	-1794.48	2986.14	1739943.26	14460676.53	39°49'4.9822"N	80°38'43.9869"W	3483.85	121.003	0.58	-0.42	0.40
8401.00	88.940	147.980	6972.64	3335.01	-1875.76	3035.26	1739992.37	14460595.28	39°49'4.1770"N	80°38'43.3615"W	3568.10	121.716	1.91	0.52	-1.84



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Willett S-3HM AWB Proj:18830'

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Field	Marshall	API	47-051-02415-0000
Facility	Willett	Wellbore	Willett S-3HM AWB
Slot	Slot 03		

WELLPATH DATA (201 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]
8495.00	89.030	145.650	6974.31	3428.73	-1954.42	3086.70	1740043.78	14460516.66	39°49'3.3977"N	80°38'42.7063"W	3653.42	122.341	2.48	0.10	-2.48
8590.00	89.190	149.420	6975.79	3523.34	-2034.55	3137.68	1740094.74	14460436.56	39°49'2.6039"N	80°38'42.0570"W	3739.57	122.960	3.97	0.17	3.97
8683.00	89.590	150.230	6976.78	3615.58	-2114.94	3184.42	1740141.47	14460356.20	39°49'1.8075"N	80°38'41.4621"W	3822.76	123.590	0.97	0.43	0.87
8778.00	89.100	149.560	6977.86	3709.79	-2197.12	3232.07	1740189.10	14460274.05	39°49'0.9935"N	80°38'40.8557"W	3908.15	124.207	0.87	-0.52	-0.71
8873.00	89.340	148.410	6979.15	3804.18	-2278.53	3281.02	1740238.02	14460192.68	39°49'0.1871"N	80°38'40.2326"W	3994.59	124.778	1.24	0.25	-1.21
8966.00	89.620	149.610	6980.00	3896.58	-2358.25	3328.90	1740285.88	14460112.99	39°48'59.3974"N	80°38'39.6230"W	4079.57	125.314	1.32	0.30	1.29
9061.00	90.140	147.800	6980.20	3991.03	-2439.42	3378.24	1740335.21	14460031.84	39°48'58.5932"N	80°38'38.9948"W	4166.93	125.833	1.98	0.55	-1.91
9155.00	90.640	145.280	6979.56	4084.79	-2517.83	3430.06	1740387.01	14459953.46	39°48'57.8163"N	80°38'38.3347"W	4254.98	126.280	2.73	0.53	-2.68
9250.00	90.820	149.700	6978.35	4179.41	-2597.92	3481.10	1740438.03	14459873.41	39°48'57.0228"N	80°38'37.6846"W	4343.65	126.734	4.66	0.19	4.65
9342.00	90.020	149.240	6977.67	4270.73	-2677.16	3527.84	1740484.75	14459794.19	39°48'56.2378"N	80°38'37.0898"W	4428.64	127.194	1.00	-0.87	-0.50
9435.00	88.270	147.550	6979.06	4363.23	-2756.35	3576.57	1740533.46	14459715.03	39°48'55.4533"N	80°38'36.4694"W	4515.45	127.620	2.62	-1.88	-1.82
9528.00	88.270	148.400	6981.87	4455.77	-2835.17	3625.86	1740582.73	14459636.25	39°48'54.6725"N	80°38'35.8417"W	4602.72	128.023	0.91	0.00	0.91
9623.00	86.820	149.100	6985.94	4550.12	-2916.30	3675.10	1740631.95	14459555.15	39°48'53.8687"N	80°38'35.2149"W	4691.61	128.433	1.69	-1.53	0.74
9718.00	88.200	148.820	6990.06	4644.43	-2997.62	3724.03	1740680.87	14459473.86	39°48'53.0632"N	80°38'34.5919"W	4780.60	128.832	1.48	1.45	-0.29
9813.00	88.080	148.770	6993.15	4738.82	-3078.83	3773.23	1740730.04	14459392.68	39°48'52.2586"N	80°38'33.9656"W	4869.96	129.213	0.14	-0.13	-0.05
9907.00	88.420	149.940	6996.02	4832.11	-3159.67	3821.12	1740777.91	14459311.88	39°48'51.4579"N	80°38'33.3561"W	4958.27	129.587	1.30	0.36	1.24
10001.00	88.170	149.320	6998.82	4925.35	-3240.73	3868.62	1740825.40	14459230.85	39°48'50.6549"N	80°38'32.7515"W	5046.64	129.953	0.71	-0.27	-0.66
10096.00	89.800	150.320	7000.50	5019.56	-3322.84	3916.37	1740873.13	14459148.77	39°48'49.8416"N	80°38'32.1438"W	5136.07	130.313	2.01	1.72	1.05
10191.00	89.340	150.860	7001.21	5113.62	-3405.59	3963.02	1740919.76	14459066.05	39°48'49.0219"N	80°38'31.5502"W	5225.28	130.674	0.75	-0.48	0.57
10285.00	90.540	150.120	7001.31	5206.72	-3487.40	4009.32	1740966.04	14458984.28	39°48'48.2117"N	80°38'30.9611"W	5313.81	131.017	1.50	1.28	-0.79
10380.00	89.530	150.720	7001.25	5300.82	-3570.01	4056.21	1741012.92	14458901.69	39°48'47.3933"N	80°38'30.3644"W	5403.51	131.352	1.24	-1.06	0.63
10475.00	89.740	150.520	7001.86	5394.87	-3652.79	4102.82	1741059.51	14458818.95	39°48'46.5734"N	80°38'29.7714"W	5493.27	131.679	0.31	0.22	-0.21
10570.00	89.190	150.590	7002.74	5488.94	-3735.52	4149.52	1741106.19	14458736.25	39°48'45.7540"N	80°38'29.1772"W	5583.24	131.994	0.58	-0.58	0.07
10665.00	89.770	150.650	7003.61	5582.99	-3818.30	4196.12	1741152.77	14458653.51	39°48'44.9341"N	80°38'28.5842"W	5673.34	132.301	0.61	0.61	0.06
10760.00	89.590	150.210	7004.14	5677.09	-3900.92	4243.00	1741199.63	14458570.92	39°48'44.1157"N	80°38'27.9877"W	5763.70	132.595	0.50	-0.19	-0.46
10855.00	90.170	150.790	7004.34	5771.18	-3983.60	4289.78	1741246.40	14458488.27	39°48'43.2968"N	80°38'27.3925"W	5854.17	132.881	0.86	0.61	0.61
10950.00	89.220	150.630	7004.84	5865.21	-4066.46	4336.26	1741292.85	14458405.45	39°48'42.4761"N	80°38'26.8012"W	5944.68	133.161	1.01	-1.00	-0.17
11044.00	89.060	150.460	7006.25	5958.28	-4148.30	4382.48	1741339.05	14458323.64	39°48'41.6655"N	80°38'26.2132"W	6034.44	133.428	0.25	-0.17	-0.18
11139.00	89.370	150.890	7007.55	6052.32	-4231.11	4429.00	1741385.56	14458240.85	39°48'40.8452"N	80°38'25.6213"W	6125.23	133.691	0.56	0.33	0.45
11234.00	89.250	151.250	7008.70	6146.26	-4314.25	4474.95	1741431.49	14458157.74	39°48'40.0218"N	80°38'25.0367"W	6215.95	133.953	0.40	-0.13	0.38

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REFERENCE WELLPATH IDENTIFICATION

Operator	EQT (TUG HILL OPERATING, LLC)	Well	Willett S-3HM
Field	Marshall	API	47-051-02415-0000
Facility	Willett	Wellbore	Willett S-3HM AWB
Slot	Slot 03		

WELLPATH DATA (201 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	89.090	150.030	7010.07	6240.30	-4397.04	4521.53	1741478.05	14458074.99	39°48'39.2017"N	80°38'24.4442"W	6306.99	134.200	1.30	-0.17	-1.28
11422.00	89.560	150.280	7011.17	6332.47	-4477.70	4567.80	1741524.31	14457994.36	39°48'38.4028"N	80°38'23.8553"W	6396.46	134.429	0.57	0.51	0.27
11516.00	90.020	151.120	7011.51	6425.52	-4559.67	4613.81	1741570.29	14457912.42	39°48'37.5908"N	80°38'23.2701"W	6486.74	134.662	1.02	0.49	0.89
11611.00	89.590	151.170	7011.84	6519.45	-4642.88	4659.65	1741616.12	14457829.25	39°48'36.7668"N	80°38'22.6869"W	6577.89	134.897	0.46	-0.45	0.05
11705.00	89.620	150.930	7012.49	6612.41	-4725.13	4705.15	1741661.60	14457747.03	39°48'35.9521"N	80°38'22.1081"W	6668.23	135.121	0.26	0.03	-0.26
11800.00	89.460	150.500	7013.25	6706.44	-4807.99	4751.62	1741708.05	14457664.21	39°48'35.1314"N	80°38'21.5170"W	6759.78	135.338	0.48	-0.17	-0.45
11894.00	89.620	150.750	7014.00	6799.51	-4889.90	4797.73	1741754.14	14457582.33	39°48'34.3201"N	80°38'20.9304"W	6850.49	135.545	0.32	0.17	0.27
11988.00	89.560	150.390	7014.68	6892.58	-4971.77	4843.91	1741800.31	14457500.49	39°48'33.5092"N	80°38'20.3428"W	6941.32	135.746	0.39	-0.06	-0.38
12082.00	89.460	150.220	7015.48	6985.72	-5053.42	4890.48	1741846.85	14457418.87	39°48'32.7004"N	80°38'19.7503"W	7032.34	135.939	0.21	-0.11	-0.18
12177.00	89.680	150.110	7016.19	7079.87	-5135.82	4937.74	1741894.10	14457336.50	39°48'31.8841"N	80°38'19.1490"W	7124.46	136.127	0.26	0.23	-0.12
12271.00	89.310	149.060	7017.02	7173.16	-5216.88	4985.32	1741941.66	14457255.47	39°48'31.0811"N	80°38'18.5434"W	7215.91	136.300	1.18	-0.39	-1.12
12364.00	89.490	148.810	7017.99	7265.58	-5296.54	5033.31	1741989.63	14457175.84	39°48'30.2920"N	80°38'17.9327"W	7306.68	136.460	0.33	0.19	-0.27
12459.00	89.370	149.110	7018.94	7359.98	-5377.93	5082.29	1742038.59	14457094.48	39°48'29.4857"N	80°38'17.3092"W	7399.45	136.619	0.34	-0.13	0.32
12552.00	89.490	149.140	7019.87	7452.36	-5457.75	5130.02	1742086.30	14457014.69	39°48'28.6950"N	80°38'16.7019"W	7490.27	136.773	0.13	0.13	0.03
12647.00	89.430	148.920	7020.76	7546.74	-5539.20	5178.90	1742135.16	14456933.27	39°48'27.8880"N	80°38'16.0797"W	7583.12	136.925	0.24	-0.06	-0.23
12742.00	90.230	150.380	7021.04	7641.01	-5621.18	5226.90	1742183.14	14456851.33	39°48'27.0760"N	80°38'15.4689"W	7675.82	137.082	1.75	0.84	1.54
12836.00	89.430	149.330	7021.32	7734.24	-5702.47	5274.10	1742230.33	14456770.08	39°48'26.2708"N	80°38'14.8683"W	7767.52	137.235	1.40	-0.85	-1.12
12931.00	88.790	149.360	7022.80	7828.56	-5784.18	5322.54	1742278.74	14456688.39	39°48'25.4613"N	80°38'14.2519"W	7860.41	137.380	0.67	-0.67	0.03
13026.00	89.060	149.420	7024.58	7922.87	-5865.93	5370.90	1742327.09	14456606.68	39°48'24.6515"N	80°38'13.6364"W	7953.34	137.522	0.29	0.28	0.06
13121.00	89.620	149.370	7025.67	8017.18	-5947.69	5419.26	1742375.43	14456524.95	39°48'23.8416"N	80°38'13.0210"W	8046.33	137.662	0.59	0.59	-0.05
13216.00	89.520	149.730	7026.39	8111.47	-6029.58	5467.41	1742423.56	14456443.09	39°48'23.0303"N	80°38'12.4084"W	8139.31	137.799	0.39	-0.11	0.38
13311.00	89.770	149.290	7026.97	8205.76	-6111.44	5515.61	1742471.74	14456361.26	39°48'22.2194"N	80°38'11.7950"W	8232.35	137.934	0.53	0.26	-0.46
13406.00	89.740	149.380	7027.38	8300.10	-6193.16	5564.06	1742520.17	14456279.57	39°48'21.4099"N	80°38'11.1785"W	8325.50	138.063	0.10	-0.03	0.09
13501.00	89.830	149.480	7027.74	8394.41	-6274.95	5612.37	1742568.47	14456197.81	39°48'20.5996"N	80°38'10.5636"W	8418.66	138.190	0.14	0.09	0.11
13596.00	89.680	149.560	7028.14	8488.70	-6356.82	5660.56	1742616.64	14456115.97	39°48'19.7886"N	80°38'9.9505"W	8511.83	138.316	0.18	-0.16	0.08
13690.00	89.710	149.570	7028.64	8582.00	-6437.87	5708.18	1742664.23	14456034.96	39°48'18.9857"N	80°38'9.3446"W	8604.04	138.438	0.03	0.03	0.01
13785.00	89.490	149.280	7029.31	8676.31	-6519.66	5756.50	1742712.54	14455953.20	39°48'18.1755"N	80°38'8.7297"W	8697.31	138.557	0.38	-0.23	-0.31
13879.00	89.560	149.580	7030.09	8769.63	-6600.59	5804.30	1742760.32	14455872.30	39°48'17.3737"N	80°38'8.1214"W	8789.64	138.673	0.33	0.07	0.32
13974.00	89.620	149.660	7030.77	8863.90	-6682.55	5852.35	1742808.35	14455790.38	39°48'16.5619"N	80°38'7.5100"W	8882.93	138.789	0.11	0.06	0.08
14069.00	89.340	149.520	7031.63	8958.18	-6764.47	5900.43	1742856.41	14455708.48	39°48'15.7503"N	80°38'6.8982"W	8976.26	138.903	0.33	-0.29	-0.15

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Slot	Slot 03		

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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]	
14163.00	89.490	149.830	7032.59	9051.44	-6845.61	5947.89	1742903.85	14455627.38	39°48'14.9466"N	80°38'6.2944"W	9068.61	139.014	0.37	0.16	0.33	
14257.00	89.620	149.380	7033.32	9144.73	-6926.68	5995.45	1742951.39	14455546.34	39°48'14.1434"N	80°38'5.6892"W	9161.03	139.122	0.50	0.14	-0.48	
14352.00	89.370	149.150	7034.16	9239.07	-7008.34	6044.00	1742999.92	14455464.71	39°48'13.3345"N	80°38'5.0714"W	9254.55	139.225	0.36	-0.26	-0.24	
14447.00	89.520	149.770	7035.08	9333.37	-7090.15	6092.27	1743048.18	14455382.93	39°48'12.5240"N	80°38'4.4572"W	9348.05	139.329	0.67	0.16	0.65	
14542.00	89.280	149.300	7036.07	9427.66	-7172.03	6140.43	1743096.32	14455301.08	39°48'11.7129"N	80°38'3.8444"W	9441.56	139.431	0.56	-0.25	-0.49	
14637.00	89.280	149.230	7037.26	9522.00	-7253.68	6188.98	1743144.85	14455219.46	39°48'10.9040"N	80°38'3.2266"W	9535.17	139.529	0.07	0.00	-0.07	
14730.00	89.340	148.900	7038.38	9614.39	-7333.45	6236.79	1743192.64	14455139.73	39°48'10.1138"N	80°38'2.6183"W	9626.89	139.620	0.36	0.06	-0.35	
14825.00	89.000	149.450	7039.76	9708.74	-7415.02	6285.46	1743241.29	14455058.19	39°48'9.3057"N	80°38'1.9989"W	9720.57	139.713	0.68	-0.36	0.58	
14919.00	89.160	149.220	7041.27	9802.07	-7495.86	6333.40	1743289.21	14454977.38	39°48'8.5048"N	80°38'1.3890"W	9813.25	139.805	0.30	0.17	-0.24	
15014.00	89.990	149.870	7041.97	9896.36	-7577.75	6381.55	1743337.34	14454895.52	39°48'7.6936"N	80°38'0.7764"W	9906.89	139.898	1.11	0.87	0.68	
15108.00	89.590	149.010	7042.32	9989.68	-7658.70	6429.34	1743385.11	14454814.61	39°48'6.8917"N	80°38'0.1683"W	9999.60	139.987	1.01	-0.43	-0.91	
15203.00	90.080	149.680	7042.59	10084.01	-7740.42	6477.77	1743433.53	14454732.92	39°48'6.0821"N	80°37'59.5520"W	10093.35	140.075	0.87	0.52	0.71	
15298.00	89.710	148.880	7042.77	10178.35	-7822.09	6526.30	1743482.04	14454651.28	39°48'5.2731"N	80°37'58.9345"W	10187.13	140.160	0.93	-0.39	-0.84	
15391.00	89.930	149.450	7043.06	10270.73	-7901.94	6573.97	1743529.69	14454571.46	39°48'4.4820"N	80°37'58.3279"W	10279.00	140.241	0.66	0.24	0.61	
15486.00	89.740	149.330	7043.33	10365.05	-7983.70	6622.35	1743578.04	14454489.73	39°48'3.6720"N	80°37'57.7124"W	10372.80	140.325	0.24	-0.20	-0.13	
15580.00	89.770	149.430	7043.73	10458.38	-8064.59	6670.22	1743625.90	14454408.87	39°48'2.8707"N	80°37'57.1033"W	10465.64	140.406	0.11	0.03	0.11	
15674.00	89.770	149.240	7044.11	10551.72	-8145.45	6718.16	1743673.83	14454328.05	39°48'2.0697"N	80°37'56.4933"W	10558.51	140.485	0.20	0.00	-0.20	
15770.00	89.560	149.550	7044.67	10647.03	-8228.07	6767.04	1743722.68	14454245.46	39°48'1.2511"N	80°37'55.8714"W	10653.36	140.565	0.39	-0.22	0.32	
15864.00	89.530	149.600	7045.42	10740.32	-8309.13	6814.64	1743770.26	14454164.43	39°48'0.4482"N	80°37'55.2658"W	10746.20	140.643	0.06	-0.03	0.05	
15958.00	89.370	148.800	7046.32	10833.68	-8389.86	6862.77	1743818.37	14454083.73	39°47'59.6483"N	80°37'54.6534"W	10839.16	140.717	0.87	-0.17	-0.85	
16053.00	89.830	149.540	7046.99	10928.04	-8471.44	6911.45	1743867.04	14454002.19	39°47'58.8402"N	80°37'54.0340"W	10933.14	140.791	0.92	0.48	0.78	
16147.00	89.870	149.870	7047.23	11021.31	-8552.60	6958.87	1743914.44	14453921.06	39°47'58.0362"N	80°37'53.4307"W	11026.01	140.866	0.35	0.04	0.35	
16240.00	89.830	149.590	7047.47	11113.57	-8632.92	7005.75	1743961.30	14453840.77	39°47'57.2405"N	80°37'52.8343"W	11117.91	140.940	0.30	-0.04	-0.30	
16334.00	89.710	149.080	7047.85	11206.91	-8713.78	7053.69	1744009.22	14453759.94	39°47'56.4395"N	80°37'52.2244"W	11210.91	141.010	0.56	-0.13	-0.54	
16430.00	89.680	149.480	7048.36	11302.25	-8796.30	7102.73	1744058.24	14453677.45	39°47'55.6219"N	80°37'51.6004"W	11305.92	141.080	0.42	-0.03	0.42	
16524.00	89.770	149.330	7048.81	11395.57	-8877.22	7150.58	1744106.07	14453596.57	39°47'54.8203"N	80°37'50.9918"W	11398.93	141.149	0.19	0.10	-0.16	
16619.00	89.770	149.580	7049.20	11489.88	-8959.03	7198.86	1744154.33	14453514.78	39°47'54.0098"N	80°37'50.3775"W	11492.94	141.217	0.26	0.00	0.26	
16714.00	89.680	150.090	7049.65	11584.11	-9041.17	7246.59	1744202.05	14453432.68	39°47'53.1962"N	80°37'49.7703"W	11586.88	141.287	0.55	-0.09	0.54	
16808.00	89.710	149.360	7050.15	11677.37	-9122.34	7293.98	1744249.42	14453351.54	39°47'52.3920"N	80°37'49.1674"W	11679.87	141.355	0.78	0.03	-0.78	
16903.00	90.110	149.500	7050.30	11771.68	-9204.14	7342.30	1744297.71	14453269.77	39°47'51.5817"N	80°37'48.5528"W	11773.93	141.420	0.45	0.42	0.15	

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Willett S-3HM AWB Proj:18830'
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REFERENCE WELLPATH IDENTIFICATION

Operator	EQT (TUG HILL OPERATING, LLC)	Well	Willett S-3HM
Field	Marshall	API	47-051-02415-0000
Facility	Willett	Wellbore	Willett S-3HM AWB
Slot	Slot 03		

WELLPATH DATA (201 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]
16997.00	90.170	149.590	7050.07	11864.98	-9285.17	7389.94	1744345.34	14453188.77	39°47'50.7789"N	80°37'47.9466"W	11867.00	141.484	0.12	0.06	0.10
17092.00	90.080	149.580	7049.86	11959.26	-9367.10	7438.04	1744393.41	14453106.88	39°47'49.9673"N	80°37'47.3348"W	11961.06	141.548	0.10	-0.09	-0.01
17187.00	90.110	149.530	7049.71	12053.55	-9449.00	7486.17	1744441.53	14453025.01	39°47'49.1560"N	80°37'46.7224"W	12055.14	141.611	0.06	0.03	-0.05
17281.00	90.290	149.370	7049.38	12146.87	-9529.95	7533.95	1744489.29	14452944.09	39°47'48.3540"N	80°37'46.1146"W	12148.26	141.672	0.26	0.19	-0.17
17376.00	89.830	149.570	7049.28	12241.18	-9611.78	7582.21	1744537.53	14452862.29	39°47'47.5434"N	80°37'45.5006"W	12242.39	141.732	0.53	-0.48	0.21
17471.00	89.920	149.530	7049.49	12335.46	-9693.67	7630.36	1744585.66	14452780.43	39°47'46.7320"N	80°37'44.8882"W	12336.52	141.792	0.10	0.09	-0.04
17568.00	90.420	148.650	7049.20	12431.83	-9776.90	7680.18	1744635.47	14452697.24	39°47'45.9075"N	80°37'44.2542"W	12432.73	141.849	1.04	0.52	-0.91
17663.00	89.960	149.220	7048.88	12526.24	-9858.27	7729.20	1744684.47	14452615.90	39°47'45.1013"N	80°37'43.6305"W	12527.01	141.902	0.77	-0.48	0.60
17757.00	88.880	149.970	7049.84	12619.52	-9939.34	7776.77	1744732.02	14452534.86	39°47'44.2983"N	80°37'43.0254"W	12620.17	141.960	1.40	-1.15	0.80
17852.00	88.670	148.570	7051.87	12713.84	-10020.98	7825.31	1744780.53	14452453.26	39°47'43.4895"N	80°37'42.4080"W	12714.38	142.014	1.49	-0.22	-1.47
17946.00	88.420	148.260	7054.25	12807.32	-10101.03	7874.52	1744829.73	14452373.24	39°47'42.6963"N	80°37'41.7817"W	12807.76	142.061	0.42	-0.27	-0.33
18041.00	88.640	149.220	7056.69	12901.73	-10182.21	7923.80	1744878.99	14452292.09	39°47'41.8920"N	80°37'41.1547"W	12902.09	142.110	1.04	0.23	1.01
18136.00	88.270	148.380	7059.25	12996.13	-10263.43	7973.00	1744928.17	14452210.89	39°47'41.0873"N	80°37'40.5288"W	12996.41	142.159	0.97	-0.39	-0.88
18231.00	88.360	148.160	7062.05	13090.61	-10344.20	8022.94	1744978.09	14452130.16	39°47'40.2870"N	80°37'39.8933"W	13090.84	142.203	0.25	0.09	-0.23
18325.00	88.910	148.920	7064.28	13184.07	-10424.36	8071.98	1745027.11	14452050.03	39°47'39.4929"N	80°37'39.2692"W	13184.24	142.248	1.00	0.59	0.81
18420.00	89.070	148.450	7065.96	13278.51	-10505.51	8121.35	1745076.46	14451968.91	39°47'38.6889"N	80°37'38.6411"W	13278.63	142.294	0.52	0.17	-0.49
18515.00	89.140	147.010	7067.44	13373.10	-10585.82	8172.06	1745127.16	14451888.63	39°47'37.8931"N	80°37'37.9957"W	13373.19	142.333	1.52	0.07	-1.52
18609.00	89.310	148.970	7068.71	13466.67	-10665.52	8221.88	1745176.96	14451808.97	39°47'37.1034"N	80°37'37.3617"W	13466.72	142.372	2.09	0.18	2.09
18702.00	89.030	147.860	7070.06	13559.17	-10744.73	8270.59	1745225.64	14451729.78	39°47'36.3186"N	80°37'36.7420"W	13559.20	142.413	1.23	-0.30	-1.19
18797.00	89.130	148.520	7071.59	13653.69	-10825.45	8320.66	1745275.69	14451649.09	39°47'35.5188"N	80°37'36.1049"W	13653.71	142.453	0.70	0.11	0.69
18830.00‡	89.130	148.520	7072.09	13686.51	-10853.59	8337.89	1745292.91	14451620.97	39°47'35.2400"N	80°37'35.8856"W	13686.52	142.468	0.00	0.00	0.00

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Willett S-3HM AWB Proj:18830'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	EQT (TUG HILL OPERATING, LLC)	Well	Willett S-3HM
Field	Marshall	API	47-051-02415-0000
Facility	Willett	Wellbore	Willett S-3HM AWB
Slot	Slot 03		

HOLE & CASING SECTIONS - Ref Wellbore: Willett S-3HM AWB Ref Wellpath: Willett S-3HM AWB Proj:18830'									
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	-0.17	0.27
17.5in Open Hole	153.00	1094.00	941.00	153.00	1093.98	-0.17	0.27	-1.28	4.46
13.375in Casing Surface	32.50	1094.00	1061.50	32.50	1093.98	0.00	0.00	-1.28	4.46
12.25in Open Hole	1094.00	2922.00	1828.00	1093.98	2887.46	-1.28	4.46	-113.80	244.36
9.625in Casing Intermediate	32.50	2922.00	2889.50	32.50	2887.46	0.00	0.00	-113.80	244.36
8.75in Open Hole	2922.00	7432.00	4510.00	2887.46	6587.25	-113.80	244.36	-1251.25	2512.17
8.5in Open Hole	7432.00	18830.00	11398.00	6587.25	7072.09	-1251.25	2512.17	-10853.59	8337.89
5.5in Casing Production	32.50	18830.00	18797.50	32.50	7072.09	0.00	0.00	-10853.59	8337.89

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Willett S-3HM LP Rev-1	6969.00	-1672.93	2934.59	1739891.73	14460798.04	39°49'6.1855"N	80°38'44.6414"W	point
Willett S-3HM BHL Rev-2	7154.90	-10865.02	8324.14	1745279.17	14451609.54	39°47'35.1276"N	80°37'36.0624"W	point

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Willett S-3HM AWB Proj:18830'

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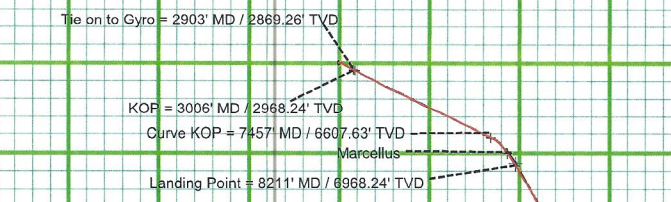
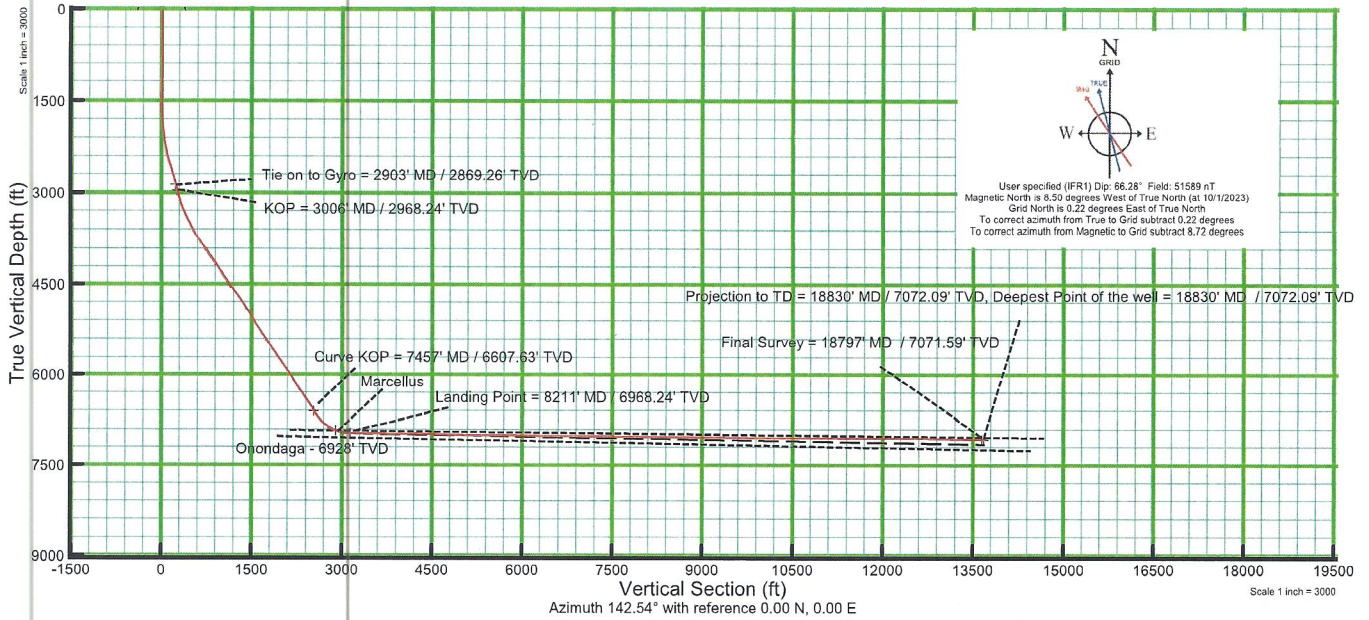
REFERENCE WELLPATH IDENTIFICATION			
Operator	EQT (TUG HILL OPERATING, LLC)	Well	Willett S-3HM
Field	Marshall	API	47-051-02415-0000
Facility	Willett	Wellbore	Willett S-3HM AWB
Slot	Slot 03		

WELLPATH COMPOSITION - Ref Wellbore: Willett S-3HM AWB Ref Wellpath: Willett S-3HM AWB Proj:18830'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
32.50	2903.00	Gyrodatta 2015 - CT+WIR+DPIPE	03 Gyrodatta Cont. Gyro<12-1/4">(100'-2903')	Willett S-3HM AWB	10/10/2023
2903.00	7355.00	OWSG MWD rev2 + HRGM	04 SDI MWD<8-3/4">(2903')(3006'-7355')	Willett S-3HM AWB	10/10/2023
7355.00	18420.00	OWSG MWD rev2 + IFR1 + Axial Corr + Sag Correction	05 BH Lucida+SQC IFR1+SAG+FDIR<8-1/2">(7355')(7457'-18420')	Willett S-3HM AWB	10/10/2023
18420.00	18515.00	BH AutoTrak Curve/eXpress (2019) (IFR1, Short spacing)	06 BH ATCurve+IFR1+Short(18420')(18515')	Willett S-3HM AWB	10/23/2023
18515.00	18830.00	OWSG MWD rev2 + IFR1 + Sag + Multi-Station Correction	07 BH Lucida+SQC IFR1+SAG+FDIR<8-1/2">(18515')(18609'-18797')	Willett S-3HM AWB	10/23/2023

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



Landing Point									
MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
8211	88.85	149.35	6968.24	-1712.62	2938	1739895.14	14460758.36	39.8162759	-80.6457221

KOP									
MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
2903	16.76	117.17	2869.26	-111.34	239.51	1737197.7	14462359.01	39.8227006	-80.6553065

Surface Location			
Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
1736958.29	14462470.31	39.8230087	-80.6561577

Projection to TD = 18830' MD / 7072.09' TVD, Deepest Point of the well = 18830' MD / 7072.09' TVD

11/08/2024