



Actual Wellpath Report

Hudson S-4HM AWP Proj: 18505'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EQT (TUG HILL OPERATING, LLC)	Well	Hudson S-4HM
Field	Marshall	API	47-051-02251-0000
Facility	Hudson	Wellbore	Hudson S-4HM AWB
Slot	Slot 04		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Meyedavr
Scale	0.999610	Report Generated	2/28/2024 at 5:37:47 PM
Convergence at slot	0.21° 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	35.83	2.76	1732306.41	14464584.97	39°49'43.9104"N	80°40'21.7128"W
Facility Reference Pt			1732303.65	14464549.15	39°49'43.5564"N	80°40'21.7498"W
Field Reference Pt			1920470.12	14528304.49	40°00'0.0000"N	80°00'0.0000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Patterson 294 (RKB) to Facility Vertical Datum	1374.00ft
Horizontal Reference Pt	Slot	Patterson 294 (RKB) to Mean Sea Level	1374.00ft
Vertical Reference Pt	Patterson 294 (RKB)	Patterson 294 (RKB) to Ground Level at Slot (Slot 04)	28.00ft
MD Reference Pt	Patterson 294 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	151.91°

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Slot	Slot 04		

WELLPATH DATA (236 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	79.890	0.00	0.00	0.00	0.00	1732306.41	14464584.97	39°49'43.9104"N	80°40'21.7128"W	0.00	0.000	0.00	0.00	0.00
28.00	0.000	79.890	28.00	0.00	0.00	0.00	1732306.41	14464584.97	39°49'43.9104"N	80°40'21.7128"W	0.00	0.000	0.00	0.00	0.00
115.00	0.080	79.890	115.00	0.02	0.01	0.06	1732306.47	14464584.98	39°49'43.9105"N	80°40'21.7120"W	0.06	79.890	0.09	0.09	0.00
165.00	0.060	65.860	165.00	0.03	0.03	0.12	1732306.53	14464585.00	39°49'43.9107"N	80°40'21.7112"W	0.12	76.888	0.05	-0.04	-28.06
215.00	0.050	57.470	215.00	0.03	0.05	0.16	1732306.57	14464585.02	39°49'43.9109"N	80°40'21.7107"W	0.17	72.701	0.03	-0.02	-16.78
265.00	0.070	101.390	265.00	0.05	0.06	0.21	1732306.62	14464585.03	39°49'43.9109"N	80°40'21.7101"W	0.22	75.071	0.10	0.04	87.84
315.00	0.140	92.180	315.00	0.10	0.05	0.30	1732306.71	14464585.02	39°49'43.9109"N	80°40'21.7089"W	0.30	81.034	0.14	0.14	-18.42
365.00	0.090	139.130	365.00	0.17	0.02	0.39	1732306.80	14464584.99	39°49'43.9105"N	80°40'21.7078"W	0.39	87.738	0.20	-0.10	93.90
415.00	0.020	82.020	415.00	0.21	-0.01	0.42	1732306.83	14464584.96	39°49'43.9103"N	80°40'21.7074"W	0.42	91.800	0.16	-0.14	-114.22
465.00	0.060	47.730	465.00	0.21	0.01	0.45	1732306.86	14464584.98	39°49'43.9104"N	80°40'21.7070"W	0.45	89.286	0.09	0.08	-68.58
515.00	0.080	50.180	515.00	0.19	0.05	0.49	1732306.90	14464585.02	39°49'43.9108"N	80°40'21.7064"W	0.50	84.741	0.04	0.04	4.90
565.00	0.150	72.730	565.00	0.20	0.09	0.58	1732306.99	14464585.06	39°49'43.9112"N	80°40'21.7053"W	0.59	81.497	0.16	0.14	45.10
615.00	0.070	33.760	615.00	0.20	0.13	0.66	1732307.07	14464585.10	39°49'43.9117"N	80°40'21.7042"W	0.68	78.738	0.21	-0.16	-77.94
665.00	0.180	21.870	665.00	0.13	0.23	0.71	1732307.12	14464585.20	39°49'43.9127"N	80°40'21.7036"W	0.75	72.017	0.22	0.22	-23.78
715.00	0.110	46.700	715.00	0.07	0.34	0.77	1732307.18	14464585.31	39°49'43.9137"N	80°40'21.7028"W	0.84	66.522	0.19	-0.14	49.66
765.00	0.220	37.550	765.00	0.02	0.45	0.87	1732307.28	14464585.42	39°49'43.9148"N	80°40'21.7016"W	0.98	62.831	0.23	0.22	-18.30
815.00	0.220	44.710	815.00	-0.05	0.59	0.99	1732307.40	14464585.56	39°49'43.9162"N	80°40'21.7000"W	1.16	59.315	0.05	0.00	14.32
865.00	0.290	52.280	865.00	-0.10	0.74	1.16	1732307.57	14464585.70	39°49'43.9176"N	80°40'21.6978"W	1.37	57.660	0.16	0.14	15.14
915.00	0.400	37.460	915.00	-0.20	0.95	1.37	1732307.78	14464585.92	39°49'43.9198"N	80°40'21.6952"W	1.67	55.178	0.28	0.22	-29.64
965.00	0.200	57.800	965.00	-0.27	1.14	1.55	1732307.96	14464586.11	39°49'43.9216"N	80°40'21.6929"W	1.92	53.712	0.45	-0.40	40.68
1015.00	0.170	29.450	1015.00	-0.32	1.25	1.66	1732308.07	14464586.22	39°49'43.9227"N	80°40'21.6915"W	2.07	53.042	0.19	-0.06	-56.70
1065.00	0.140	10.050	1065.00	-0.41	1.37	1.70	1732308.11	14464586.34	39°49'43.9239"N	80°40'21.6908"W	2.19	51.174	0.12	-0.06	-38.80
1115.00	0.190	8.720	1115.00	-0.52	1.51	1.73	1732308.14	14464586.48	39°49'43.9253"N	80°40'21.6905"W	2.30	48.776	0.10	0.10	-2.66
1165.00	0.150	345.120	1165.00	-0.65	1.66	1.72	1732308.13	14464586.63	39°49'43.9267"N	80°40'21.6906"W	2.39	46.093	0.16	-0.08	-47.20
1215.00	0.110	328.040	1215.00	-0.76	1.76	1.68	1732308.09	14464586.73	39°49'43.9278"N	80°40'21.6911"W	2.44	43.642	0.11	-0.08	-34.16
1265.00	0.320	296.570	1265.00	-0.93	1.87	1.53	1732307.94	14464586.84	39°49'43.9288"N	80°40'21.6930"W	2.41	39.367	0.47	0.42	-62.94
1315.00	0.540	296.770	1314.99	-1.23	2.04	1.20	1732307.61	14464587.00	39°49'43.9305"N	80°40'21.6930"W	2.36	30.445	0.44	0.44	0.40
1349.00	0.540	289.750	1348.99	-1.48	2.16	0.90	1732307.31	14464587.13	39°49'43.9317"N	80°40'21.7011"W	2.34	22.659	0.19	0.00	-20.65
1419.00	0.240	296.990	1418.99	-1.85	2.34	0.46	1732306.87	14464587.31	39°49'43.9335"N	80°40'21.7067"W	2.38	11.153	0.43	-0.43	10.34
1462.00	0.400	300.430	1461.99	-2.05	2.46	0.25	1732306.66	14464587.43	39°49'43.9347"N	80°40'21.7094"W	2.47	5.847	0.37	0.37	8.00
1504.00	0.340	283.520	1503.99	-2.26	2.56	0.00	1732306.41	14464587.53	39°49'43.9357"N	80°40'21.7126"W	2.56	0.089	0.30	-0.14	-40.26
1547.00	0.300	307.290	1546.99	-2.44	2.66	-0.21	1732306.20	14464587.63	39°49'43.9367"N	80°40'21.7153"W	2.67	355.490	0.32	-0.09	55.28

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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]
1589.00	0.420	307.240	1588.99	-2.68	2.82	-0.42	1732305.99	14464587.79	39°49'43.9383"N	80°40'21.7180"W	2.85	351.528	0.29	0.29	-0.12
1632.00	1.110	307.500	1631.98	-3.21	3.17	-0.88	1732305.53	14464588.14	39°49'43.9417"N	80°40'21.7238"W	3.29	344.543	1.60	1.60	0.60
1674.00	1.950	307.580	1673.97	-4.23	3.85	-1.76	1732304.65	14464588.82	39°49'43.9485"N	80°40'21.7352"W	4.24	335.375	2.00	2.00	0.19
1718.00	2.560	310.660	1717.93	-5.83	4.95	-3.10	1732303.31	14464589.91	39°49'43.9594"N	80°40'21.7523"W	5.84	327.898	1.41	1.39	7.00
1761.00	3.650	313.090	1760.87	-8.02	6.51	-4.83	1732301.58	14464591.47	39°49'43.9749"N	80°40'21.7744"W	8.10	323.408	2.55	2.53	5.65
1803.00	4.960	314.190	1802.75	-11.01	8.69	-7.11	1732299.30	14464593.65	39°49'43.9965"N	80°40'21.8035"W	11.23	320.700	3.13	3.12	2.62
1845.00	6.450	315.650	1844.54	-15.01	11.64	-10.06	1732296.35	14464596.60	39°49'44.0258"N	80°40'21.8412"W	15.38	319.160	3.56	3.55	3.48
1887.00	7.960	317.550	1886.21	-20.09	15.47	-13.67	1732292.74	14464600.44	39°49'44.0638"N	80°40'21.8873"W	20.65	318.532	3.64	3.60	4.52
1929.00	9.010	318.540	1927.75	-26.10	20.08	-17.81	1732288.60	14464605.04	39°49'44.1095"N	80°40'21.9401"W	26.84	318.427	2.52	2.50	2.36
1972.00	9.760	318.560	1970.17	-32.93	25.34	-22.45	1732283.96	14464610.30	39°49'44.1616"N	80°40'21.9994"W	33.86	318.452	1.74	1.74	0.05
2015.00	10.320	318.230	2012.51	-40.22	30.94	-27.43	1732278.99	14464615.90	39°49'44.2172"N	80°40'22.0629"W	41.35	318.441	1.31	1.30	-0.77
2059.00	10.550	319.050	2055.79	-47.97	36.93	-32.70	1732273.72	14464621.88	39°49'44.2765"N	80°40'22.1301"W	49.32	318.474	0.62	0.52	1.86
2102.00	10.850	320.560	2098.04	-55.78	43.02	-37.85	1732268.58	14464627.98	39°49'44.3370"N	80°40'22.1959"W	57.30	318.661	0.95	0.70	3.51

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Operator	EQT (TUG HILL OPERATING, LLC)	Well	Hudson S-4HM
Field	Marshall	API	47-051-02251-0000
Facility	Hudson	Wellbore	Hudson S-4HM AWB
Slot	Slot 04		

WELLPATH DATA (236 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]
2145.00	10.680	321.790	2140.28	-63.67	49.28	-42.88	1732263.54	14464634.23	39°49'44.3990"N	80°40'22.2601"W	65.33	318.969	0.66	-0.40	2.86
2188.00	10.450	322.150	2182.55	-71.43	55.49	-47.74	1732258.69	14464640.44	39°49'44.4605"N	80°40'22.3221"W	73.20	319.292	0.56	-0.53	0.84
2231.00	9.770	321.880	2224.88	-78.87	61.44	-52.39	1732254.04	14464646.39	39°49'44.5195"N	80°40'22.3814"W	80.74	319.547	1.59	-1.58	-0.63
2275.00	9.310	320.580	2268.28	-86.04	67.13	-56.95	1732249.48	14464652.07	39°49'44.5758"N	80°40'22.4396"W	88.03	319.688	1.15	-1.05	-2.95
2316.00	9.170	318.750	2308.74	-92.47	72.14	-61.21	1732245.22	14464657.09	39°49'44.6256"N	80°40'22.4940"W	94.61	319.687	0.79	-0.34	-4.46
2358.00	8.990	316.980	2350.22	-98.90	77.06	-65.66	1732240.78	14464662.00	39°49'44.6743"N	80°40'22.5507"W	101.24	319.568	0.79	-0.43	-4.21
2400.00	9.470	317.150	2391.67	-105.41	81.99	-70.25	1732236.19	14464666.93	39°49'44.7232"N	80°40'22.6093"W	107.97	319.412	1.14	1.14	0.40
2416.00	9.740	317.450	2407.45	-107.99	83.95	-72.06	1732234.38	14464668.89	39°49'44.7427"N	80°40'22.6324"W	110.64	319.361	1.72	1.69	1.88
2483.00	10.370	318.130	2473.42	-119.34	92.62	-79.91	1732226.53	14464677.55	39°49'44.8286"N	80°40'22.7327"W	122.33	319.212	0.96	0.94	1.01
2526.00	10.300	316.950	2515.72	-126.81	98.31	-85.12	1732221.32	14464683.24	39°49'44.8850"N	80°40'22.7992"W	130.04	319.113	0.52	-0.16	-2.74
2568.00	9.060	325.140	2557.13	-133.72	103.77	-89.57	1732216.87	14464688.70	39°49'44.9391"N	80°40'22.8560"W	137.08	319.199	4.41	-2.95	19.50
2610.00	8.750	334.780	2598.62	-140.20	109.37	-92.83	1732213.62	14464694.30	39°49'44.9946"N	80°40'22.8974"W	143.45	319.678	3.62	-0.74	22.95
2652.00	8.650	334.790	2640.14	-146.54	115.12	-95.53	1732210.91	14464700.04	39°49'45.0515"N	80°40'22.9319"W	149.60	320.312	0.24	-0.24	0.02
2695.00	8.730	327.660	2682.65	-153.03	120.80	-98.66	1732207.79	14464705.73	39°49'45.1078"N	80°40'22.9716"W	155.97	320.763	2.51	0.19	-16.58
2738.00	8.550	323.380	2725.16	-159.44	126.13	-102.31	1732204.14	14464711.05	39°49'45.1605"N	80°40'23.0182"W	162.40	320.952	1.55	-0.42	-9.95
2782.00	8.190	323.240	2768.69	-165.77	131.26	-106.13	1732200.32	14464716.18	39°49'45.2114"N	80°40'23.0670"W	168.80	321.042	0.82	-0.82	-0.32
2824.00	7.940	321.510	2810.27	-171.59	135.93	-109.73	1732196.72	14464720.85	39°49'45.2577"N	80°40'23.1129"W	174.69	321.087	0.83	-0.60	-4.12
2867.00	7.670	321.650	2852.88	-177.33	140.50	-113.36	1732193.09	14464725.42	39°49'45.3030"N	80°40'23.1592"W	180.53	321.103	0.63	-0.63	0.33
2909.00	8.640	322.290	2894.45	-183.20	145.20	-117.03	1732189.43	14464730.11	39°49'45.3496"N	80°40'23.2060"W	186.49	321.131	2.32	2.31	1.52
2951.00	10.420	323.660	2935.87	-190.07	150.75	-121.21	1732185.25	14464735.66	39°49'45.4046"N	80°40'23.2593"W	193.44	321.200	4.27	4.24	3.26
2995.00	12.240	324.360	2979.01	-198.63	157.75	-126.28	1732180.17	14464742.66	39°49'45.4739"N	80°40'23.3240"W	202.07	321.321	4.15	4.14	1.59
3037.00	12.750	323.990	3020.02	-207.63	165.12	-131.60	1732174.86	14464750.02	39°49'45.5469"N	80°40'23.3919"W	211.15	321.444	1.23	1.21	-0.88
3079.00	11.980	322.480	3061.04	-216.53	172.32	-136.98	1732169.48	14464757.23	39°49'45.6183"N	80°40'23.4605"W	220.14	321.518	1.99	-1.83	-3.60
3121.00	11.610	321.410	3102.15	-224.98	179.08	-142.27	1732164.19	14464763.98	39°49'45.6853"N	80°40'23.5280"W	228.72	321.534	1.02	-0.88	-2.55
3164.00	12.060	320.630	3144.24	-233.64	185.94	-147.82	1732158.65	14464770.84	39°49'45.7533"N	80°40'23.5988"W	237.54	321.515	1.11	1.05	-1.81
3206.00	13.670	320.900	3185.18	-242.82	193.18	-153.74	1732152.73	14464778.08	39°49'45.8251"N	80°40'23.6742"W	246.89	321.487	3.84	3.83	0.64
3248.00	15.630	321.370	3225.82	-253.25	201.45	-160.40	1732146.07	14464786.35	39°49'45.8971"N	80°40'23.7593"W	257.51	321.473	4.68	4.67	1.12
3290.00	17.230	320.900	3266.10	-264.92	210.70	-167.86	1732138.62	14464795.59	39°49'45.9987"N	80°40'23.8544"W	269.39	321.458	3.82	3.81	-1.12
3332.00	18.430	318.880	3306.08	-277.49	220.53	-176.14	1732130.33	14464805.42	39°49'46.0962"N	80°40'23.9602"W	282.24	321.385	3.21	2.86	-4.81
3417.00	19.290	314.770	3386.52	-304.00	240.54	-194.95	1732111.54	14464825.42	39°49'46.2946"N	80°40'24.2003"W	309.62	320.977	1.86	1.01	-4.84
3502.00	18.060	316.800	3467.05	-330.14	260.04	-213.94	1732092.56	14464844.90	39°49'46.4879"N	80°40'24.4428"W	336.73	320.555	1.64	-1.45	2.39
3589.00	18.150	320.000	3549.74	-356.42	280.25	-231.88	1732074.62	14464865.11	39°49'46.6883"N	80°40'24.6718"W	363.74	320.395	1.15	0.10	3.68

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3675.00	18.790	321.060	3631.31	-383.13	301.28	-249.19	1732057.31	14464886.13	39°49'46.8968"N	80°40'24.8927"W	390.98	320.405	0.84	0.74	1.23
3760.00	19.740	319.610	3711.55	-410.60	322.86	-267.10	1732039.41	14464907.71	39°49'47.1108"N	80°40'25.1212"W	419.03	320.399	1.25	1.12	-1.71
3845.00	20.260	317.700	3791.43	-438.89	344.68	-286.31	1732020.22	14464929.52	39°49'47.3271"N	80°40'25.3664"W	448.08	320.286	0.98	0.61	-2.25
3928.00	20.440	320.240	3869.25	-467.02	366.45	-305.25	1732001.28	14464951.28	39°49'47.5429"N	80°40'25.6082"W	476.93	320.206	1.09	0.22	3.06
4014.00	20.010	324.580	3949.95	-496.32	389.99	-323.38	1731983.16	14464974.81	39°49'47.7761"N	80°40'25.8395"W	506.62	320.334	1.81	-0.50	5.05
4101.00	18.740	323.780	4032.02	-524.92	413.39	-340.27	1731966.28	14464998.20	39°49'48.0081"N	80°40'26.0548"W	535.42	320.542	1.49	-1.46	-0.92
4188.00	18.700	321.520	4114.42	-552.47	435.59	-357.20	1731949.35	14465020.39	39°49'48.2280"N	80°40'26.2709"W	563.32	320.647	0.83	-0.05	-2.60
4274.00	19.370	319.920	4195.72	-579.98	457.29	-374.96	1731931.59	14465042.08	39°49'48.4431"N	80°40'26.4975"W	591.37	320.649	0.99	0.78	-1.86
4359.00	20.080	321.180	4275.73	-608.11	479.45	-393.19	1731913.38	14465064.23	39°49'48.6627"N	80°40'26.7301"W	620.05	320.645	0.97	0.84	1.48
4445.00	20.820	320.390	4356.31	-637.59	502.72	-412.19	1731894.39	14465087.50	39°49'48.8935"N	80°40'26.9725"W	650.10	320.651	0.92	0.86	-0.92
4531.00	21.500	320.860	4436.51	-668.03	526.72	-431.88	1731874.70	14465111.48	39°49'49.1313"N	80°40'27.2238"W	681.14	320.650	0.81	0.79	0.55
4616.00	22.460	321.480	4515.33	-699.29	551.51	-451.82	1731854.76	14465136.26	39°49'49.3770"N	80°40'27.4783"W	712.95	320.674	1.16	1.13	0.73
4700.00	22.110	320.090	4593.06	-730.54	576.19	-471.96	1731834.64	14465160.93	39°49'49.6216"N	80°40'27.7353"W	744.81	320.679	0.75	-0.42	-1.65

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Actual Wellpath Report

Hudson S-4HM AWP Proj: 18505'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	EQT (TUG HILL OPERATING, LLC)		Well	Hudson S-4HM
Field	Marshall		API	47-051-02251-0000
Facility	Hudson		Wellbore	Hudson S-4HM-AWB
Slot	Slot 04			

WELLPATH DATA (236 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]
4786.00	20.830	319.530	4673.09	-761.32	600.23	-492.27	1731814.34	14465184.97	39°49'49.8600"N	80°40'27.9945"W	776.28	320.644	1.51	-1.49	-0.65
4872.00	21.630	318.730	4753.25	-791.69	623.78	-512.65	1731793.96	14465208.51	39°49'50.0934"N	80°40'28.2546"W	807.41	320.585	0.99	0.93	-0.93
4958.00	21.680	317.340	4833.18	-822.50	647.38	-533.87	1731772.75	14465232.09	39°49'50.3274"N	80°40'28.5255"W	839.11	320.489	0.60	0.06	-1.62
5034.00	20.760	316.700	4904.03	-849.08	667.50	-552.62	1731754.01	14465252.21	39°49'50.5269"N	80°40'28.7649"W	866.57	320.379	1.25	-1.21	-0.84
5119.00	19.930	316.250	4983.72	-877.57	688.93	-572.97	1731733.67	14465273.63	39°49'50.7394"N	80°40'29.0247"W	896.06	320.250	0.99	-0.98	-0.53
5204.00	19.100	314.960	5063.84	-904.82	709.22	-592.83	1731713.82	14465293.91	39°49'50.9407"N	80°40'29.2783"W	924.36	320.108	1.10	-0.98	-1.52
5291.00	19.170	315.940	5146.03	-932.17	729.55	-612.83	1731693.82	14465314.23	39°49'51.1423"N	80°40'29.5338"W	952.78	319.969	0.38	0.08	1.13
5377.00	20.200	316.560	5227.01	-960.06	750.47	-632.86	1731673.80	14465335.15	39°49'51.3498"N	80°40'29.7896"W	981.69	319.860	1.22	1.20	0.72
5463.00	20.020	319.450	5307.77	-988.76	772.44	-652.64	1731654.03	14465357.11	39°49'51.5676"N	80°40'30.0421"W	1011.24	319.805	1.17	-0.21	3.36
5550.00	19.990	321.640	5389.52	-1017.93	795.42	-671.55	1731635.12	14465380.08	39°49'51.7953"N	80°40'30.2834"W	1040.99	319.826	0.86	-0.03	2.52
5638.00	19.450	320.260	5472.36	-1047.08	818.48	-690.25	1731616.43	14465403.13	39°49'52.0239"N	80°40'30.5221"W	1070.68	319.858	0.81	-0.61	-1.57
5731.00	19.100	314.960	5560.15	-1076.80	841.14	-710.92	1731595.77	14465425.78	39°49'52.2486"N	80°40'30.7859"W	1101.33	319.796	1.92	-0.38	-5.70
5826.00	22.240	294.110	5649.15	-1105.92	859.49	-738.37	1731568.33	14465444.13	39°49'52.4310"N	80°40'31.1369"W	1133.10	319.335	8.37	3.31	-21.95
5920.00	27.940	290.290	5734.25	-1136.47	874.41	-775.30	1731531.42	14465459.04	39°49'52.5797"N	80°40'31.6096"W	1168.62	318.438	6.30	6.06	-4.06
6015.00	28.120	290.020	5818.10	-1169.77	889.79	-817.21	1731489.52	14465474.41	39°49'52.7332"N	80°40'32.1460"W	1208.12	317.435	0.23	0.19	-0.28
6110.00	27.450	290.110	5902.15	-1202.76	904.99	-858.80	1731447.94	14465489.60	39°49'52.8849"N	80°40'32.6785"W	1247.62	316.500	0.71	-0.71	0.09
6204.00	27.400	289.330	5985.59	-1234.84	919.59	-899.56	1731407.20	14465504.20	39°49'53.0307"N	80°40'33.2003"W	1286.41	315.631	0.39	-0.05	-0.83
6299.00	18.820	266.050	6073.06	-1257.29	925.80	-935.61	1731371.16	14465510.41	39°49'53.0933"N	80°40'33.6621"W	1316.24	314.698	13.04	-9.03	-24.51
6394.00	19.370	252.830	6162.87	-1266.54	920.09	-965.97	1731340.82	14465504.70	39°49'53.0380"N	80°40'34.0515"W	1334.04	313.607	4.58	0.58	-13.92
6489.00	20.100	228.680	6252.44	-1265.79	904.63	-993.33	1731313.47	14465489.25	39°49'52.8862"N	80°40'34.4028"W	1343.52	312.325	8.56	0.77	-25.42
6584.00	22.480	207.810	6341.08	-1251.85	877.75	-1014.09	1731292.72	14465462.38	39°49'52.6213"N	80°40'34.6703"W	1341.20	310.878	8.31	2.51	-21.97
6679.00	27.980	190.200	6427.11	-1224.12	839.67	-1026.54	1731280.27	14465424.31	39°49'52.2454"N	80°40'34.8316"W	1326.21	309.282	9.74	5.79	-18.54
6774.00	34.530	180.260	6508.33	-1182.86	790.73	-1030.61	1731276.20	14465375.39	39°49'51.7618"N	80°40'34.8861"W	1299.00	307.497	8.76	6.89	-10.46
6869.00	43.210	172.410	6582.27	-1128.56	731.41	-1026.43	1731280.38	14465316.10	39°49'51.1756"N	80°40'34.8352"W	1260.37	305.473	10.49	9.14	-8.26
6965.00	52.310	165.290	6646.78	-1060.64	661.90	-1012.40	1731294.40	14465246.61	39°49'50.4881"N	80°40'34.6587"W	1209.58	303.176	10.94	9.48	-7.42
7060.00	56.650	156.290	6702.03	-984.37	589.09	-986.86	1731319.94	14465173.82	39°49'49.7676"N	80°40'34.3346"W	1149.31	300.834	8.96	4.57	-9.47
7155.00	65.200	149.720	6748.20	-901.49	515.32	-949.06	1731357.72	14465100.09	39°49'49.0372"N	80°40'33.8535"W	1079.94	298.501	10.83	9.00	-6.92
7251.00	73.810	149.580	6781.78	-811.72	437.80	-903.66	1731403.10	14465022.59	39°49'48.2695"N	80°40'33.2752"W	1004.13	295.849	8.97	8.97	-0.15
7346.00	82.340	150.050	6801.39	-718.92	357.52	-856.98	1731449.77	14464942.35	39°49'47.4745"N	80°40'32.6805"W	928.56	292.645	8.99	8.98	0.49
7441.00	88.000	146.220	6809.39	-624.52	277.18	-807.02	1731499.71	14464862.04	39°49'46.6787"N	80°40'32.0440"W	853.29	288.956	7.18	5.96	-4.03
7535.00	88.280	149.400	6812.44	-530.82	197.68	-756.98	1731549.73	14464782.57	39°49'45.8912"N	80°40'31.4062"W	782.36	284.636	3.39	0.30	3.38
7630.00	88.280	149.070	6815.29	-435.97	116.09	-708.41	1731598.28	14464701.01	39°49'45.0831"N	80°40'30.7874"W	717.85	279.306	0.35	0.00	-0.35

WELLPATH DATA (236 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]
7724.00	88.620	146.310	6817.83	-342.27	36.68	-658.19	1731648.48	14464621.63	39°49'44.2966"N	80°40'30.1474"W	659.21	273.190	2.96	0.36	-2.94
7819.00	88.710	143.820	6820.05	-247.98	-41.18	-603.80	1731702.84	14464543.81	39°49'43.5252"N	80°40'29.4540"W	605.21	266.099	2.62	0.09	-2.62
7914.00	88.680	140.310	6822.21	-154.42	-116.07	-545.42	1731761.20	14464468.94	39°49'42.7830"N	80°40'28.7092"W	557.64	257.986	3.69	-0.03	-3.69
8009.00	88.590	139.900	6824.47	-61.45	-188.94	-484.51	1731822.09	14464396.11	39°49'42.0607"N	80°40'27.9318"W	520.05	248.696	0.44	-0.09	-0.43
8104.00	88.710	140.080	6826.71	31.47	-261.68	-423.45	1731883.13	14464323.39	39°49'41.3396"N	80°40'27.1526"W	497.78	238.285	0.23	0.13	0.19
8199.00	88.740	140.130	6828.83	124.44	-334.55	-362.53	1731944.02	14464250.55	39°49'40.6173"N	80°40'26.3752"W	493.31	227.299	0.06	0.03	0.05
8294.00	88.650	140.490	6830.99	217.48	-407.63	-301.88	1732004.65	14464177.50	39°49'39.8928"N	80°40'25.6012"W	507.24	216.522	0.39	-0.09	0.38
8389.00	88.620	142.860	6833.25	310.93	-482.13	-242.99	1732063.52	14464103.02	39°49'39.1545"N	80°40'24.8498"W	539.91	206.747	2.49	-0.03	2.49
8484.00	88.680	143.810	6835.49	404.84	-558.32	-186.28	1732120.21	14464026.87	39°49'38.3995"N	80°40'24.1265"W	588.57	198.451	1.00	0.06	1.00
8579.00	88.710	149.850	6837.66	499.40	-637.78	-134.34	1732172.12	14463947.44	39°49'37.6124"N	80°40'23.4645"W	651.77	191.895	6.36	0.03	6.36
8674.00	88.640	148.860	6839.85	594.28	-719.49	-85.93	1732220.51	14463865.76	39°49'36.8031"N	80°40'22.8479"W	724.60	186.811	1.04	-0.07	-1.04
8768.00	88.610	148.990	6842.11	688.12	-799.98	-37.42	1732269.00	14463785.31	39°49'36.0060"N	80°40'22.2299"W	800.85	182.678	0.14	-0.03	0.14
8864.00	88.210	149.690	6844.77	783.99	-882.52	11.51	1732317.92	14463702.79	39°49'35.1884"N	80°40'21.6066"W	882.60	179.253	0.84	-0.42	0.73

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Actual Wellpath Report

Hudson S-4HM AWP Proj: 18505'

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REFERENCE WELLPATH IDENTIFICATION

Operator	EQT (TUG HILL OPERATING, LLC)	Well	Hudson S-4HM
Field	Marshall	API	47-051-02251-0000
Facility	Hudson	Wellbore	Hudson S-4HM AWB
Slot	Slot 04		

WELLPATH DATA (236 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]
8958.00	88.210	148.800	6847.71	877.84	-963.26	59.56	1732365.94	14463622.09	39°49'34.3888"N	80°40'20.9946"W	965.10	176.462	0.95	0.00	-0.95
9053.00	88.460	148.710	6850.47	972.66	-1044.45	108.81	1732415.18	14463540.93	39°49'33.5846"N	80°40'20.3671"W	1050.10	174.052	0.28	0.26	-0.09
9148.00	88.580	149.690	6852.92	1067.52	-1126.02	157.44	1732463.79	14463459.39	39°49'32.7767"N	80°40'19.7477"W	1136.98	172.041	1.04	0.13	1.03
9243.00	88.460	148.920	6855.38	1162.39	-1207.68	205.92	1732512.25	14463377.76	39°49'31.9679"N	80°40'19.1302"W	1225.11	170.324	0.82	-0.13	-0.81
9338.00	88.460	148.680	6857.93	1257.21	-1288.91	255.11	1732561.42	14463296.56	39°49'31.1634"N	80°40'18.5034"W	1313.92	168.804	0.25	0.00	-0.25
9433.00	88.490	148.060	6860.46	1352.00	-1369.77	304.91	1732611.21	14463215.73	39°49'30.3625"N	80°40'17.8689"W	1403.30	167.450	0.65	0.03	-0.65
9528.00	88.060	147.890	6863.32	1446.73	-1450.28	355.27	1732661.54	14463135.26	39°49'29.5651"N	80°40'17.2273"W	1493.16	166.236	0.49	-0.45	-0.18
9622.00	88.150	149.170	6866.43	1540.51	-1530.41	404.31	1732710.57	14463055.16	39°49'28.7714"N	80°40'16.6025"W	1582.91	165.201	1.36	0.10	1.36
9717.00	88.180	150.610	6869.47	1635.40	-1612.54	451.95	1732758.18	14462973.06	39°49'27.9580"N	80°40'15.9959"W	1674.68	164.343	1.52	0.03	1.52
9812.00	88.120	149.760	6872.54	1730.31	-1694.93	499.16	1732805.37	14462890.71	39°49'27.1421"N	80°40'15.3947"W	1766.90	163.590	0.90	-0.06	-0.89
9906.00	88.270	150.540	6875.50	1824.22	-1776.41	545.92	1732852.11	14462809.25	39°49'26.3351"N	80°40'14.7992"W	1858.41	162.917	0.84	0.16	0.83
10001.00	89.160	151.130	6877.63	1919.18	-1859.35	592.20	1732898.38	14462726.35	39°49'25.5138"N	80°40'14.2099"W	1951.38	162.333	1.12	0.94	0.62
10096.00	88.520	150.690	6879.55	2014.14	-1942.35	638.38	1732944.54	14462643.39	39°49'24.6919"N	80°40'13.6220"W	2044.56	161.806	0.82	-0.67	-0.46
10191.00	88.420	149.940	6882.09	2109.07	-2024.85	685.41	1732991.55	14462560.92	39°49'23.8748"N	80°40'13.0231"W	2137.71	161.299	0.80	-0.11	-0.79
10286.00	88.330	149.960	6884.78	2203.98	-2107.05	732.96	1733039.08	14462478.75	39°49'23.0608"N	80°40'12.4175"W	2230.89	160.819	0.10	-0.09	0.02
10381.00	88.330	145.150	6887.55	2298.63	-2187.16	783.89	1733089.99	14462398.67	39°49'22.2672"N	80°40'11.7686"W	2323.39	160.282	5.06	0.00	-5.06
10476.00	88.390	143.430	6890.27	2392.75	-2264.26	839.32	1733145.40	14462321.59	39°49'21.5032"N	80°40'11.0619"W	2414.82	159.661	1.81	0.06	-1.81
10571.00	88.180	150.720	6893.12	2487.31	-2343.92	890.90	1733196.96	14462241.97	39°49'20.7142"N	80°40'10.4046"W	2507.52	159.189	7.67	-0.22	7.67
10666.00	88.240	150.480	6896.08	2582.24	-2426.64	937.51	1733243.55	14462159.28	39°49'19.8949"N	80°40'9.8111"W	2601.44	158.876	0.26	0.06	-0.25
10761.00	88.150	149.450	6899.08	2677.13	-2508.84	985.03	1733291.06	14462077.11	39°49'19.0808"N	80°40'9.2059"W	2695.29	158.564	1.09	-0.09	-1.08
10856.00	88.150	150.020	6902.14	2772.02	-2590.85	1032.89	1733338.89	14461995.14	39°49'18.2686"N	80°40'8.5964"W	2789.15	158.264	0.60	0.00	0.60
10952.00	88.090	149.930	6905.29	2867.91	-2673.92	1080.90	1733386.89	14461912.10	39°49'17.4459"N	80°40'7.9851"W	2884.13	157.990	0.11	-0.06	-0.09
11047.00	88.120	147.430	6908.44	2962.70	-2755.03	1130.25	1733436.22	14461831.02	39°49'16.6426"N	80°40'7.3564"W	2977.86	157.694	2.63	0.03	-2.63
11142.00	88.020	149.700	6911.64	3057.48	-2836.03	1179.77	1733485.71	14461750.05	39°49'15.8402"N	80°40'6.7257"W	3071.63	157.413	2.39	-0.11	2.39
11237.00	87.810	149.240	6915.09	3152.33	-2917.81	1227.99	1733533.92	14461668.30	39°49'15.0303"N	80°40'6.1115"W	3165.69	157.176	0.53	-0.22	-0.48
11331.00	87.650	150.520	6918.81	3246.19	-2999.05	1275.13	1733581.03	14461587.09	39°49'14.2257"N	80°40'5.5113"W	3258.87	156.966	1.37	-0.17	1.36
11427.00	87.690	148.600	6922.72	3342.03	-3081.75	1323.72	1733629.61	14461504.43	39°49'13.4067"N	80°40'4.8924"W	3354.01	156.755	2.00	0.04	-2.00
11521.00	87.750	150.410	6926.46	3435.87	-3162.68	1371.38	1733677.25	14461423.53	39°49'12.6051"N	80°40'4.2854"W	3447.20	156.558	1.93	0.06	1.93
11616.00	87.690	150.200	6930.24	3530.76	-3245.14	1418.41	1733724.26	14461341.11	39°49'11.7885"N	80°40'3.6867"W	3541.58	156.391	0.23	-0.06	-0.22
11711.00	87.750	149.670	6934.02	3625.62	-3327.29	1465.96	1733771.80	14461258.99	39°49'10.9749"N	80°40'3.0811"W	3635.92	156.222	0.56	0.06	-0.56
11806.00	87.960	149.950	6937.57	3720.49	-3409.35	1513.70	1733819.52	14461176.96	39°49'10.1622"N	80°40'2.4732"W	3730.27	156.059	0.37	0.22	0.29
11900.00	87.930	150.200	6940.94	3814.38	-3490.76	1560.56	1733866.36	14461095.58	39°49'9.3559"N	80°40'1.8765"W	3823.71	155.913	0.27	-0.03	0.27

WELLPATH DATA (236 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]
12090.00	88.240	149.950	6947.29	4004.18	-3655.34	1655.29	1733961.06	14460931.07	39°49'7.7259"N	80°40'0.6703"W	4012.67	155.637	0.21	0.16	-0.13
12184.00	88.760	149.850	6949.75	4098.09	-3736.63	1702.42	1734008.16	14460849.80	39°49'6.9208"N	80°40'0.0702"W	4106.17	155.506	0.56	0.55	-0.11
12279.00	88.760	149.930	6951.81	4193.01	-3818.80	1750.07	1734055.79	14460767.67	39°49'6.1071"N	80°39'59.4635"W	4200.71	155.379	0.08	0.00	0.08
12374.00	88.390	150.210	6954.17	4287.93	-3901.10	1797.45	1734103.16	14460685.40	39°49'5.2919"N	80°39'58.8602"W	4295.28	155.262	0.49	-0.39	0.29
12469.00	88.390	150.260	6956.84	4382.85	-3983.53	1844.60	1734150.28	14460603.00	39°49'4.4756"N	80°39'58.2600"W	4389.88	155.153	0.05	0.00	0.05
12564.00	88.300	149.850	6959.58	4477.76	-4065.82	1892.00	1734197.66	14460520.75	39°49'3.6606"N	80°39'57.6564"W	4484.48	155.045	0.44	-0.09	-0.43
12659.00	88.300	149.810	6962.40	4572.66	-4147.91	1939.72	1734245.37	14460438.68	39°49'2.8476"N	80°39'57.0488"W	4579.05	154.937	0.04	0.00	-0.04
12754.00	88.330	150.070	6965.20	4667.56	-4230.10	1987.28	1734292.92	14460356.53	39°49'2.0336"N	80°39'56.4431"W	4673.65	154.836	0.28	0.03	0.27
12849.00	88.270	149.960	6968.01	4762.47	-4312.35	2034.74	1734340.35	14460274.31	39°49'1.2190"N	80°39'55.8389"W	4768.28	154.740	0.13	-0.06	-0.12
12943.00	88.270	150.100	6970.85	4856.37	-4393.74	2081.68	1734387.27	14460192.95	39°49'0.4129"N	80°39'55.2413"W	4861.93	154.649	0.15	0.00	0.15
13038.00	88.080	150.050	6973.88	4951.28	-4476.03	2129.05	1734434.62	14460110.69	39°48'59.5979"N	80°39'54.6382"W	4956.58	154.562	0.21	-0.20	-0.05
13133.00	88.330	149.980	6976.85	5046.18	-4558.28	2176.50	1734482.06	14460028.48	39°48'58.7833"N	80°39'54.0340"W	5051.24	154.476	0.27	0.26	-0.07
13227.00	88.050	150.020	6979.82	5140.08	-4639.64	2223.48	1734529.02	14459947.15	39°48'57.9775"N	80°39'53.4359"W	5144.92	154.395	0.30	-0.30	0.04

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Actual Wellpath Report

Hudson S-4HM AWP Proj: 18505'

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REFERENCE WELLPATH IDENTIFICATION

Operator	EQT (TUG HILL OPERATING, LLC)	Well	Hudson S-4HM
Field	Marshall	API	47-051-02251-0000
Facility	Hudson	Wellbore	Hudson S-4HM AWB
Slot	Slot 04		

WELLPATH DATA (236 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]
13322.00	88.150	150.320	6982.97	5234.98	-4722.01	2270.71	1734576.23	14459864.81	39°48'57.1617"N	80°39'52.8346"W	5239.61	154.318	0.33	0.11	0.32
13417.00	88.820	150.850	6985.48	5329.92	-4804.74	2317.35	1734622.85	14459782.12	39°48'56.3425"N	80°39'52.2408"W	5334.38	154.252	0.90	0.71	0.56
13512.00	88.790	150.170	6987.46	5424.87	-4887.41	2364.10	1734669.59	14459699.48	39°48'55.5237"N	80°39'51.6456"W	5429.16	154.186	0.72	-0.03	-0.72
13607.00	89.250	150.590	6989.09	5519.83	-4969.98	2411.05	1734716.51	14459616.94	39°48'54.7060"N	80°39'51.0480"W	5523.94	154.121	0.66	0.48	0.44
13702.00	89.130	150.070	6990.43	5614.78	-5052.52	2458.07	1734763.52	14459534.43	39°48'53.8886"N	80°39'50.4494"W	5618.72	154.057	0.56	-0.13	-0.55
13797.00	89.100	150.400	6991.90	5709.73	-5134.98	2505.23	1734810.65	14459452.01	39°48'53.0719"N	80°39'49.8491"W	5713.50	153.993	0.35	-0.03	0.35
13892.00	89.040	150.110	6993.44	5804.68	-5217.45	2552.35	1734857.76	14459369.57	39°48'52.2551"N	80°39'49.2491"W	5808.29	153.932	0.31	-0.06	-0.31
13987.00	89.010	150.030	6995.06	5899.61	-5299.77	2599.75	1734905.14	14459287.28	39°48'51.4399"N	80°39'48.6457"W	5903.07	153.870	0.09	-0.03	-0.08
14082.00	89.040	149.730	6996.68	5994.54	-5381.93	2647.41	1734952.78	14459205.15	39°48'50.6261"N	80°39'48.0389"W	5997.83	153.807	0.32	0.03	-0.32
14177.00	89.070	149.860	6998.24	6089.46	-5464.02	2695.20	1735000.55	14459123.10	39°48'49.8131"N	80°39'47.4304"W	6092.58	153.745	0.14	0.03	0.14
14273.00	89.070	149.890	6999.80	6185.39	-5547.04	2743.37	1735048.71	14459040.11	39°48'48.9908"N	80°39'46.8171"W	6188.36	153.685	0.03	0.00	0.03
14367.00	89.010	149.880	7001.37	6279.32	-5628.34	2790.53	1735095.85	14458958.84	39°48'48.1856"N	80°39'46.2167"W	6282.14	153.628	0.06	-0.06	-0.01
14462.00	89.100	149.820	7002.94	6374.24	-5710.48	2838.24	1735143.54	14458876.73	39°48'47.3721"N	80°39'45.6093"W	6376.92	153.572	0.11	0.09	-0.06
14557.00	89.040	149.840	7004.48	6469.17	-5792.60	2885.98	1735191.26	14458794.65	39°48'46.5588"N	80°39'45.0015"W	6471.71	153.517	0.07	-0.06	0.02
14652.00	89.070	149.720	7006.05	6564.09	-5874.68	2933.79	1735239.05	14458712.60	39°48'45.7458"N	80°39'44.3928"W	6566.50	153.463	0.13	0.03	-0.13
14747.00	89.010	149.810	7007.64	6659.01	-5956.74	2981.62	1735286.86	14458630.57	39°48'44.9330"N	80°39'43.7839"W	6661.29	153.410	0.11	-0.06	0.09
14843.00	89.070	150.020	7009.25	6754.94	-6039.80	3029.73	1735334.95	14458547.54	39°48'44.1104"N	80°39'43.1713"W	6757.10	153.360	0.23	0.06	0.22
14938.00	89.440	149.850	7010.49	6849.87	-6122.01	3077.32	1735382.53	14458465.36	39°48'43.2962"N	80°39'42.5655"W	6851.93	153.313	0.43	0.39	-0.18
15033.00	89.470	148.700	7011.39	6944.77	-6203.67	3125.86	1735431.04	14458383.74	39°48'42.4874"N	80°39'41.9475"W	6946.69	153.258	1.21	0.03	-1.21
15127.00	89.410	148.770	7012.31	7038.62	-6284.01	3174.64	1735479.80	14458303.42	39°48'41.6915"N	80°39'41.3262"W	7040.39	153.197	0.10	-0.06	0.07
15223.00	89.380	148.870	7013.32	7134.47	-6366.14	3224.34	1735529.48	14458221.33	39°48'40.8781"N	80°39'40.6934"W	7136.11	153.139	0.11	-0.03	0.10
15318.00	89.500	148.840	7014.25	7229.33	-6447.44	3273.47	1735578.60	14458140.06	39°48'40.0727"N	80°39'40.0677"W	7230.85	153.082	0.13	0.13	-0.03
15413.00	89.380	148.870	7015.18	7324.19	-6528.75	3322.60	1735627.71	14458058.79	39°48'39.2674"N	80°39'39.4421"W	7325.59	153.028	0.13	-0.13	0.03
15508.00	89.410	148.830	7016.18	7419.05	-6610.04	3371.74	1735676.83	14457977.52	39°48'38.4621"N	80°39'38.8163"W	7420.33	152.974	0.05	0.03	-0.04
15603.00	89.410	148.870	7017.16	7513.91	-6691.34	3420.88	1735725.95	14457896.25	39°48'37.6569"N	80°39'38.1906"W	7515.08	152.922	0.04	0.00	0.04
15698.00	89.370	149.060	7018.17	7608.78	-6772.74	3469.86	1735774.91	14457814.89	39°48'36.8506"N	80°39'37.5670"W	7609.86	152.873	0.20	-0.04	0.20
15793.00	89.400	148.850	7019.19	7703.65	-6854.13	3518.85	1735823.88	14457733.53	39°48'36.0445"N	80°39'36.9432"W	7704.63	152.824	0.22	0.03	-0.22
15888.00	89.440	148.850	7020.15	7798.51	-6935.42	3567.99	1735873.00	14457652.27	39°48'35.2392"N	80°39'36.3175"W	7799.40	152.776	0.04	0.04	0.00
15983.00	89.400	148.800	7021.11	7893.37	-7016.70	3617.16	1735922.15	14457571.02	39°48'34.4341"N	80°39'35.6913"W	7894.17	152.729	0.07	-0.04	-0.05
16077.00	89.370	148.960	7022.12	7987.23	-7097.17	3665.74	1735970.71	14457490.59	39°48'33.6371"N	80°39'35.0727"W	7987.96	152.683	0.17	-0.03	0.17
16172.00	89.400	148.930	7023.14	8082.10	-7178.55	3714.74	1736019.70	14457409.24	39°48'32.8310"N	80°39'34.4488"W	8082.75	152.639	0.04	0.03	-0.03
16268.00	89.370	148.860	7024.17	8177.96	-7260.74	3764.34	1736069.27	14457327.08	39°48'32.0168"N	80°39'33.8173"W	8178.54	152.595	0.08	-0.03	-0.07

WELLPATH DATA (236 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]
16362.00	89.460	148.660	7025.13	8271.81	-7341.11	3813.08	1736118.00	14457246.74	39°48'31.2208"N	80°39'33.1966"W	8272.33	152.552	0.23	0.10	-0.21
16458.00	89.400	148.980	7026.09	8367.67	-7423.23	3862.78	1736167.68	14457164.65	39°48'30.4073"N	80°39'32.5637"W	8368.12	152.509	0.34	-0.06	0.33
16553.00	90.200	149.100	7026.42	8462.55	-7504.70	3911.65	1736216.53	14457083.22	39°48'29.6004"N	80°39'31.9415"W	8462.95	152.470	0.85	0.84	0.13
16648.00	90.140	149.020	7026.14	8557.43	-7586.18	3960.50	1736265.35	14457001.77	39°48'28.7933"N	80°39'31.3196"W	8557.78	152.432	0.11	-0.06	-0.08
16743.00	90.110	148.930	7025.93	8652.30	-7667.59	4009.46	1736314.30	14456920.39	39°48'27.9869"N	80°39'30.6962"W	8652.61	152.394	0.10	-0.03	-0.09
16838.00	90.200	148.920	7025.67	8747.17	-7748.96	4058.50	1736363.31	14456839.05	39°48'27.1809"N	80°39'30.0718"W	8747.44	152.357	0.10	0.09	-0.01
16933.00	90.420	149.050	7025.16	8842.05	-7830.37	4107.45	1736412.24	14456757.67	39°48'26.3745"N	80°39'29.4486"W	8842.28	152.321	0.27	0.23	0.14
17028.00	90.820	149.030	7024.13	8936.92	-7911.83	4156.31	1736461.09	14456676.24	39°48'25.5676"N	80°39'28.8264"W	8937.12	152.286	0.42	0.42	-0.02
17123.00	91.090	149.230	7022.55	9031.80	-7993.36	4205.05	1736509.81	14456594.74	39°48'24.7600"N	80°39'28.2059"W	9031.96	152.253	0.35	0.28	0.21
17218.00	90.820	148.580	7020.97	9126.65	-8074.70	4254.11	1736558.85	14456513.44	39°48'23.9544"N	80°39'27.5813"W	9126.79	152.218	0.74	-0.28	-0.68
17313.00	89.370	148.880	7020.81	9221.51	-8155.90	4303.42	1736608.14	14456432.27	39°48'23.1501"N	80°39'26.9535"W	9221.61	152.182	1.56	-1.53	0.32
17408.00	89.560	149.240	7021.69	9316.38	-8237.38	4352.26	1736656.96	14456350.83	39°48'22.3430"N	80°39'26.3316"W	9316.47	152.150	0.43	0.20	0.38
17504.00	89.460	149.020	7022.52	9412.27	-8319.77	4401.51	1736706.20	14456268.46	39°48'21.5268"N	80°39'25.7046"W	9412.33	152.119	0.25	-0.10	-0.23

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Actual Wellpath Report

Hudson S-4HM AWP Proj: 18505'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EQT (TUG HILL OPERATING, LLC)	Well	Hudson S-4HM
Field	Marshall	API	47-051-02251-0000
Facility	Hudson	Wellbore	Hudson S-4HM AWB
Slot	Slot 04		

WELLPATH DATA (236 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]		
17599.00	89.560	148.980	7023.33	9507.14	-8401.20	4450.44	1736755.10	14456187.06	39°48'20.7203"N	80°39'25.0817"W	9507.19	152.088	0.11	0.11	-0.04		
17694.00	90.390	148.950	7023.37	9602.01	-8482.60	4499.42	1736804.06	14456105.70	39°48'19.9140"N	80°39'24.4581"W	9602.05	152.057	0.87	0.87	-0.03		
17788.00	90.820	146.140	7022.38	9695.73	-8561.91	4549.85	1736854.48	14456026.42	39°48'19.1283"N	80°39'23.8157"W	9695.74	152.014	3.02	0.46	-2.99		
17883.00	90.940	145.850	7020.92	9790.21	-8640.65	4602.98	1736907.58	14455947.71	39°48'18.3481"N	80°39'23.1389"W	9790.21	151.955	0.33	0.13	-0.31		
17978.00	90.390	150.870	7019.81	9884.99	-8721.50	4652.79	1736957.38	14455866.89	39°48'17.5472"N	80°39'22.5046"W	9884.99	151.921	5.32	-0.58	5.28		
18072.00	90.260	151.080	7019.28	9978.98	-8803.69	4698.40	1737002.97	14455784.73	39°48'16.7332"N	80°39'21.9243"W	9978.98	151.912	0.26	-0.14	0.22		
18167.00	89.030	150.170	7019.87	10073.95	-8886.47	4745.00	1737049.55	14455701.98	39°48'15.9133"N	80°39'21.3313"W	10073.95	151.900	1.61	-1.29	-0.96		
18262.00	87.400	148.430	7022.83	10168.80	-8968.12	4793.47	1737098.00	14455620.37	39°48'15.1047"N	80°39'20.7142"W	10168.80	151.875	2.51	-1.72	-1.83		
18357.00	87.830	151.050	7026.78	10263.64	-9050.09	4841.30	1737145.81	14455538.43	39°48'14.2927"N	80°39'20.1055"W	10263.64	151.856	2.79	0.45	2.76		
18452.00	88.140	151.070	7030.12	10358.57	-9133.18	4887.24	1737191.73	14455455.37	39°48'13.4699"N	80°39'19.5209"W	10358.57	151.848	0.33	0.33	0.02		
18505.00‡	88.140	151.070	7031.84	10411.54	-9179.54	4912.87	1737217.35	14455409.03	39°48'13.0107"N	80°39'19.1949"W	10411.54	151.844	0.00	0.00	0.00		

HOLE & CASING SECTIONS - Ref Wellbore: Hudson S-4HM AWB Ref Wellpath: Hudson S-4HM AWP Proj: 18505'									
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	28.00	148.00	120.00	28.00	148.00	0.00	0.00	0.02	0.10
17.5in Open Hole	148.00	1348.00	1200.00	148.00	1347.99	0.02	0.10	2.16	0.91
13.375in Casing Surface	28.00	1348.00	1320.00	28.00	1347.99	0.00	0.00	2.16	0.91
12.25in Open Hole	1348.00	2441.00	1093.00	1347.99	2432.08	2.16	0.91	87.11	-74.94
9.625in Casing Intermediate	28.00	2441.00	2413.00	28.00	2432.08	0.00	0.00	87.11	-74.94
8.75in Open Hole	2441.00	5715.00	3274.00	2432.08	5545.03	87.11	-74.94	837.40	-707.24
8.5in Open Hole	5715.00	18505.00	12790.00	5545.03	7031.84	837.40	-707.24	-9179.54	4912.87
5.5in Casing Production	28.00	18505.00	18477.00	28.00	7031.84	0.00	0.00	-9179.54	4912.87

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Hudson S-4HM LP Rev-1	6807.00	290.17	-827.82	1731478.91	14464875.03	39°49'46.8078"N	80°40'32.3100"W	point

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Hudson S-4HM BHL Rev-1	7048.76	-9187.14	4902.61	1737207.10	14455401.43	39°48'12.9360"N	80°39'19.3266"W	point

WELLPATH COMPOSITION - Ref Wellbore: Hudson S-4HM AWB					Ref Wellpath: Hudson S-4HM AWP Proj: 18505'		Wellbore	Survey Date
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment					
28.00	1349.00	Gyrodata 2015 - CT+WIR+DPIPE	01 Gyrodata Cont. Gyro <17-1/2"> (115'-1349')			Hudson S-4HM AWB	12/7/2023	
1349.00	2416.00	OWSG MWD rev2 + HRGM	02 SDI MWD <12-1/4"> (1349')(1419'-2416')			Hudson S-4HM AWB	12/7/2023	
2416.00	5638.00	OWSG MWD rev2 + HRGM	03 SDI MWD <8-3/4"> (2416')(2483'-5638')			Hudson S-4HM AWB	12/7/2023	
5638.00	18505.00	OWSG MWD rev2 + IFR1 + Sag + Multi-Station Correction	04 BH AT Curve+SuperiorQC IFR1+Sag+FDIR <8-1/2"> (5638')(5731'-18452')			Hudson S-4HM AWB	2/19/2024	

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 Office of Oil and Gas
 DEC 23 2024
 NY Department of
 Environmental Protection



EQT (TUG HILL OPERATING, LLC)

Location: Marshall County, WV
 Field: Marshall
 Facility: Hudson

Slot: Slot 04
 Well: Hudson S-4HM
 Wellbore: Hudson S-4HM AWB



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 Office of Oil and Gas

DEC 23 2024

WV Department of
 Environmental Protection



User specified Dip: 66.29° Field: 51969.0 FT
 Magnetic North is 8.54 degrees West of True North (at 2/17/2024)
 Grid North is 0.21 degrees East of True North
 To correct azimuth from True to Grid subtract 0.21 degrees
 To correct azimuth from Magnetic to Grid subtract 8.75 degrees

