



Actual Wellpath Report

Hudson S-9HM AWP Proj: 19743'
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REFERENCE WELLPATH IDENTIFICATION

Operator	EQT (TUG HLL OPERATING, LLC)	Well	Hudson S-9HM
Field	Marshall	API	47-051-02380-0000
Facility	Hudson	Wellbore	Hudson S-9HM AWB
Slot	Slot 09		

REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Edsaryar
Scale	0.999610	Report Generated	2/19/2024 at 2:58:13 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	47.86	3.55	1732307.20	14464596.99	39°49'44.0292"N	80°40'21.7021"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

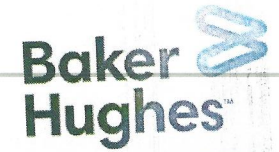
Calculation method	Minimum curvature	Patterson 294 (RKB) to Facility Vertical Datum	1374.00ft
Horizontal Reference Pt	Slot	Patterson 294 (RKB) to Mean Sea Level	1374.00ft
Vertical Reference Pt	Patterson 294 (RKB)	Patterson 294 (RKB) to Ground Level at Slot (Slot 09)	28.00ft
MD Reference Pt	Patterson 294 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	129.50°

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WELLPATH DATA (242 stations) † = interpolated, ‡ = extrapolated station										Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	[ft]	[°]	[°/100ft]	[°/100ft]	[°/100ft]
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]							
0.00	0.00	166.610	0.00	0.00	0.00	0.00	1732307.20	14464596.99	39°49'44.0292"N	80°40'21.7021"W	0.00	0.000	0.00	0.00	0.00
28.00	0.000	166.610	28.00	0.00	0.00	0.00	1732307.20	14464596.99	39°49'44.0292"N	80°40'21.7021"W	0.00	0.000	0.00	0.00	0.00
115.00	0.110	166.610	115.00	0.07	-0.08	0.02	1732307.22	14464596.91	39°49'44.0284"N	80°40'21.7018"W	0.08	166.610	0.13	0.13	0.00
215.00	0.070	187.750	215.00	0.18	-0.24	0.03	1732307.23	14464596.75	39°49'44.0269"N	80°40'21.7016"W	0.24	171.932	0.05	-0.04	21.14
315.00	0.020	231.620	315.00	0.20	-0.31	0.01	1732307.21	14464596.68	39°49'44.0262"N	80°40'21.7019"W	0.31	177.868	0.06	-0.05	43.87
415.00	0.130	177.030	415.00	0.28	-0.43	0.00	1732307.20	14464596.56	39°49'44.0250"N	80°40'21.7020"W	0.43	179.520	0.12	0.11	-54.59
515.00	0.090	271.420	515.00	0.29	-0.54	-0.07	1732307.13	14464596.45	39°49'44.0239"N	80°40'21.7030"W	0.55	187.258	0.16	-0.04	94.39
615.00	0.030	352.990	615.00	0.21	-0.51	-0.15	1732307.05	14464596.48	39°49'44.0241"N	80°40'21.7040"W	0.62	196.343	0.09	-0.06	81.57
715.00	0.130	222.150	715.00	0.19	-0.57	-0.23	1732306.97	14464596.42	39°49'44.0236"N	80°40'21.7050"W	0.85	210.545	0.06	0.04	16.48
815.00	0.170	238.630	815.00	0.13	-0.73	-0.43	1732306.77	14464596.26	39°49'44.0220"N	80°40'21.7076"W	1.01	219.460	0.14	-0.07	53.44
915.00	0.100	292.070	915.00	0.00	-0.78	-0.64	1732306.56	14464596.21	39°49'44.0215"N	80°40'21.7103"W	1.18	228.585	0.12	0.09	-33.96
1015.00	0.190	258.110	1015.00	-0.19	-0.78	-0.88	1732306.32	14464596.21	39°49'44.0215"N	80°40'21.7134"W	1.43	236.368	0.06	-0.02	19.67
1115.00	0.170	277.780	1115.00	-0.42	-0.79	-1.19	1732306.01	14464596.20	39°49'44.0214"N	80°40'21.7174"W	1.83	241.858	0.19	0.16	-25.92
1215.00	0.330	251.860	1215.00	-0.70	-0.86	-1.61	1732305.59	14464596.13	39°49'44.0207"N	80°40'21.7228"W	2.74	242.226	0.41	0.39	-12.96
1315.00	0.720	238.900	1314.99	-1.06	-1.28	-2.43	1732304.78	14464595.71	39°49'44.0167"N	80°40'21.7332"W	2.78	242.185	0.44	0.33	23.00
1318.00	0.730	239.590	1317.99	-1.07	-1.30	-2.46	1732304.74	14464595.69	39°49'44.0165"N	80°40'21.7336"W	3.66	240.987	0.46	-0.46	-8.79
1419.00	0.270	230.710	1418.99	-1.34	-1.77	-3.20	1732304.00	14464595.22	39°49'44.0118"N	80°40'21.7431"W	3.81	241.454	0.50	-0.22	125.83
1465.00	0.170	288.590	1464.99	-1.42	-1.82	-3.35	1732303.86	14464595.17	39°49'44.0113"N	80°40'21.7450"W	3.69	244.045	1.39	0.88	226.33
1508.00	0.550	25.910	1507.99	-1.53	-1.61	-3.32	1732303.89	14464595.38	39°49'44.0134"N	80°40'21.7446"W	3.18	249.682	1.56	1.51	27.05
1549.00	1.170	37.000	1548.98	-1.60	-1.10	-2.98	1732303.22	14464595.89	39°49'44.0184"N	80°40'21.7403"W	2.21	265.710	1.90	1.89	9.32
1593.00	2.000	41.100	1592.97	-1.59	-0.17	-2.20	1732305.00	14464596.82	39°49'44.0277"N	80°40'21.7303"W	1.68	315.791	1.79	1.64	-17.69
1635.00	2.690	33.670	1634.93	-1.67	1.21	-1.17	1732306.03	14464598.20	39°49'44.0412"N	80°40'21.7171"W	3.15	2.267	1.95	1.95	0.67
1678.00	3.530	33.960	1677.87	-1.90	3.15	0.12	1732307.32	14464600.13	39°49'44.0603"N	80°40'21.7003"W	5.78	17.209	1.79	1.79	-1.17
1720.00	4.280	33.470	1719.77	-2.19	5.52	1.71	1732308.91	14464602.51	39°49'44.0837"N	80°40'21.6799"W	9.31	23.595	2.03	2.02	1.45
1764.00	5.170	34.110	1763.62	-2.55	8.54	3.73	1732310.93	14464605.52	39°49'44.1134"N	80°40'21.6539"W	13.30	26.653	2.30	2.29	-1.68
1805.00	6.110	33.420	1804.42	-2.96	11.89	5.97	1732313.16	14464608.87	39°49'44.1465"N	80°40'21.6250"W	18.18	28.577	2.84	2.83	1.67
1847.00	7.300	34.120	1846.13	-3.44	15.96	8.69	1732315.89	14464612.95	39°49'44.1866"N	80°40'21.5899"W	23.97	29.871	3.10	3.10	-0.86
1889.00	8.600	33.760	1887.73	-4.01	20.78	11.94	1732319.13	14464617.76	39°49'44.2341"N	80°40'21.5481"W	30.88	30.623	3.14	3.12	-2.33
1932.00	9.940	32.760	1930.16	-4.77	26.58	15.73	1732322.92	14464623.56	39°49'44.2913"N	80°40'21.4992"W	38.68	30.815	2.58	2.40	-5.26
1975.00	10.970	30.500	1972.45	-5.84	33.22	19.82	1732327.01	14464630.20	39°49'44.3568"N	80°40'21.4465"W					

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Facility	Hudson	Wellbore	Hudson S-9HM AWB
Slot	Slot 09		

WELLPATH DATA (242 stations)

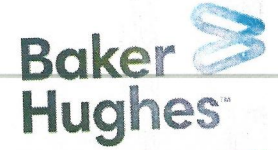
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
2062.00	10.840	28.450	2057.88	-8.70	47.55	27.91	1732335.10	14464644.52	39°49'44.4981"N	80°40'21.3420"W	55.14	30.417	0.47	-0.15	-2.36
2148.00	10.860	28.990	2142.34	-11.73	61.74	35.69	1732342.88	14464658.71	39°49'44.6381"N	80°40'21.2417"W	71.32	30.032	0.12	0.02	0.63
2231.00	10.990	29.490	2223.84	-14.53	75.47	43.38	1732350.56	14464672.43	39°49'44.7735"N	80°40'21.1425"W	87.05	29.889	0.19	0.16	0.60
2314.00	11.660	27.400	2305.22	-17.67	89.80	51.13	1732358.31	14464686.76	39°49'44.9148"N	80°40'21.0425"W	103.34	29.656	0.95	0.81	-2.52
2399.00	12.030	24.610	2388.41	-21.74	105.48	58.77	1732365.95	14464702.43	39°49'45.0695"N	80°40'20.9438"W	120.75	29.126	0.80	0.44	-3.28
2484.00	12.820	22.760	2471.42	-26.74	122.23	66.11	1732373.29	14464719.17	39°49'45.2348"N	80°40'20.8489"W	138.97	28.408	1.04	0.93	-2.18
2526.00	12.760	21.480	2512.38	-29.51	130.85	69.61	1732376.79	14464727.78	39°49'45.3198"N	80°40'20.8037"W	148.21	28.014	0.69	-0.14	-3.05
2570.00	12.760	20.070	2555.33	-32.58	139.77	73.00	1732380.17	14464736.70	39°49'45.4078"N	80°40'20.7598"W	157.68	27.578	1.26	-1.05	-3.20
2612.00	12.190	22.080	2596.38	-35.39	148.08	76.20	1732383.37	14464745.01	39°49'45.4899"N	80°40'20.7184"W	166.54	27.230	1.05	-0.26	4.79
2655.00	12.000	23.220	2638.42	-38.00	156.39	79.67	1732386.84	14464753.32	39°49'45.5719"N	80°40'20.6735"W	175.52	26.995	0.71	-0.44	2.65
2698.00	12.140	24.600	2680.47	-40.42	164.61	83.32	1732390.48	14464761.54	39°49'45.6530"N	80°40'20.6264"W	184.50	26.845	0.75	0.33	3.21
2740.00	12.940	28.800	2721.47	-42.43	172.75	87.42	1732394.59	14464769.67	39°49'45.7333"N	80°40'20.5734"W	193.61	26.842	2.89	1.90	10.00
2783.00	13.900	31.110	2763.30	-44.08	181.39	92.41	1732399.57	14464778.31	39°49'45.8185"N	80°40'20.5091"W	203.57	26.996	2.56	2.23	5.37
2825.00	15.160	31.670	2803.95	-45.56	190.39	97.90	1732405.06	14464787.30	39°49'45.9072"N	80°40'20.4383"W	214.08	27.213	3.02	3.00	1.33
2867.00	16.150	32.110	2844.39	-47.06	200.01	103.89	1732411.05	14464796.92	39°49'46.0020"N	80°40'20.3611"W	225.38	27.448	2.37	2.36	1.05
2911.00	17.020	32.510	2886.56	-48.63	210.62	110.60	1732417.76	14464807.53	39°49'46.1067"N	80°40'20.2745"W	237.89	27.705	1.99	1.98	0.91
2953.00	18.090	32.080	2926.60	-50.22	221.33	117.37	1732424.52	14464818.23	39°49'46.2123"N	80°40'20.1873"W	250.52	27.936	2.57	2.55	-1.02
2995.00	19.140	31.130	2966.41	-52.07	232.75	124.39	1732431.54	14464829.65	39°49'46.3249"N	80°40'20.0967"W	263.90	28.122	2.60	2.50	-2.26
3037.00	20.180	29.970	3005.96	-54.27	244.92	131.57	1732438.72	14464841.81	39°49'46.4449"N	80°40'20.0042"W	278.02	28.244	2.64	2.48	-2.76
3079.00	21.460	29.070	3045.22	-56.86	257.91	138.92	1732446.07	14464854.80	39°49'46.5730"N	80°40'19.9093"W	292.95	28.309	3.14	3.05	-2.14
3121.00	22.700	28.720	3084.13	-59.77	271.73	146.55	1732453.69	14464868.62	39°49'46.7093"N	80°40'19.8109"W	308.73	28.338	2.97	2.95	-0.83
3162.00	24.120	29.020	3121.76	-62.77	286.00	154.41	1732461.55	14464882.88	39°49'46.8500"N	80°40'19.7094"W	325.02	28.365	3.48	3.46	0.73
3204.00	25.330	29.090	3159.91	-65.95	301.35	162.95	1732470.08	14464896.23	39°49'47.0014"N	80°40'19.5993"W	342.59	28.401	2.88	2.88	0.17
3247.00	26.070	28.850	3198.65	-69.36	317.67	171.98	1732479.11	14464914.53	39°49'47.1623"N	80°40'19.5093"W	361.23	28.430	1.74	1.72	-0.56
3289.00	26.260	27.760	3236.35	-72.96	333.97	180.76	1732487.89	14464930.83	39°49'47.3232"N	80°40'19.3695"W	379.75	28.424	1.23	0.45	-2.60
3332.00	26.660	27.510	3274.85	-76.90	350.95	189.64	1732496.77	14464947.80	39°49'47.4906"N	80°40'19.2548"W	398.91	28.386	0.97	0.93	-0.58
3375.00	27.100	28.060	3313.20	-80.84	368.15	198.71	1732505.83	14464964.99	39°49'47.6602"N	80°40'19.1378"W	418.35	28.358	1.18	1.02	1.28
3418.00	27.460	28.600	3351.42	-84.66	385.49	208.06	1732515.18	14464982.33	39°49'47.8313"N	80°40'19.0171"W	438.06	28.357	1.02	0.84	1.26
3460.00	27.700	28.570	3388.64	-88.34	402.57	217.36	1732524.48	14464999.40	39°49'47.9997"N	80°40'18.8970"W	457.50	28.367	0.57	0.57	-0.07
3502.00	28.350	27.700	3425.72	-92.23	419.97	226.67	1732533.78	14465016.80	39°49'48.1714"N	80°40'18.7770"W	477.24	28.357	1.83	1.55	-2.07

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Field	Marshall		API	47-051-02380-0000
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Slot	Slot 09			

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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]
3544.00	28.840	26.690	3462.60	-96.52	437.85	235.85	1732542.96	14465034.67	39°49'48.3478"N	80°40'18.6584"W	497.33	28.310	1.64	1.17	-2.40
3586.00	30.040	25.950	3499.17	-101.23	456.36	245.00	1732552.11	14465053.17	39°49'48.5303"N	80°40'18.5402"W	517.96	28.230	2.99	2.86	-1.76
3630.00	30.840	26.400	3537.11	-106.37	476.36	254.84	1732561.94	14465073.16	39°49'48.7276"N	80°40'18.4132"W	540.24	28.145	1.89	1.82	1.02
3673.00	31.390	28.700	3573.92	-110.96	496.06	265.12	1732572.21	14465092.85	39°49'48.9219"N	80°40'18.2806"W	562.46	28.122	3.05	1.28	5.35
3716.00	32.530	30.450	3610.40	-114.88	515.85	276.36	1732583.45	14465112.63	39°49'49.1171"N	80°40'18.1356"W	585.21	28.179	3.42	2.65	4.07
3759.00	34.250	31.550	3646.31	-118.37	536.13	288.55	1732595.63	14465132.91	39°49'49.3171"N	80°40'17.9784"W	608.84	28.289	4.24	4.00	2.56
3803.00	35.670	31.370	3682.37	-121.90	557.63	301.70	1732608.79	14465154.40	39°49'49.5291"N	80°40'17.8087"W	634.02	28.415	3.24	3.23	-0.41
3846.00	36.830	31.350	3717.04	-125.50	579.34	314.94	1732622.01	14465176.11	39°49'49.7432"N	80°40'17.6381"W	659.41	28.529	2.70	2.70	-0.05
3888.00	38.030	31.490	3750.39	-129.09	601.13	328.24	1732635.31	14465197.88	39°49'49.9580"N	80°40'17.4665"W	684.91	28.637	2.86	2.86	0.33
3930.00	38.720	31.380	3783.32	-132.75	623.38	341.84	1732648.91	14465220.12	39°49'50.1774"N	80°40'17.2911"W	710.95	28.739	1.65	1.64	-0.26
3974.00	39.630	30.940	3817.43	-136.78	647.16	356.22	1732663.28	14465243.90	39°49'50.4119"N	80°40'17.1057"W	738.72	28.830	2.16	2.07	-1.00
4016.00	40.770	30.460	3849.51	-140.93	670.47	370.06	1732677.12	14465267.20	39°49'50.6417"N	80°40'16.9272"W	765.82	28.896	2.81	2.71	-1.14
4102.00	41.780	29.520	3914.14	-150.31	719.61	398.41	1732705.46	14465316.31	39°49'51.1263"N	80°40'16.5615"W	822.54	28.971	1.38	1.17	-1.09
4188.00	41.000	27.530	3978.66	-161.12	769.56	425.57	1732732.60	14465366.24	39°49'51.6190"N	80°40'16.2110"W	879.39	28.943	1.78	-0.91	-2.31
4275.00	40.680	26.400	4044.48	-173.47	820.26	451.37	1732758.39	14465416.93	39°49'52.1191"N	80°40'15.8779"W	936.25	28.823	0.93	-0.37	-1.30
4361.00	40.190	26.090	4109.94	-186.26	870.29	476.04	1732783.05	14465466.94	39°49'52.6126"N	80°40'15.5594"W	991.97	28.678	0.62	-0.57	-0.36
4446.00	40.220	26.120	4174.86	-198.97	919.56	500.18	1732807.18	14465516.19	39°49'53.0987"N	80°40'15.2476"W	1046.79	28.543	0.04	0.04	0.04
4533.00	40.150	25.970	4241.32	-212.03	970.00	524.83	1732831.82	14465566.61	39°49'53.5962"N	80°40'14.9293"W	1102.88	28.416	0.14	-0.08	-0.17
4618.00	39.550	26.110	4306.58	-224.71	1018.94	548.74	1732855.72	14465615.53	39°49'54.0790"N	80°40'14.6205"W	1157.30	28.304	0.71	-0.71	0.16
4705.00	39.460	26.060	4373.71	-237.55	1068.64	573.07	1732880.05	14465665.21	39°49'54.5693"N	80°40'14.3062"W	1212.61	28.203	0.11	-0.10	-0.06
4789.00	39.680	25.970	4438.46	-250.03	1116.73	596.54	1732903.51	14465713.28	39°49'55.0437"N	80°40'14.0031"W	1266.08	28.111	0.27	0.26	-0.11
4872.00	39.770	25.750	4502.29	-262.54	1164.46	619.68	1732926.64	14465761.00	39°49'55.5146"N	80°40'13.7043"W	1319.08	28.020	0.20	0.11	-0.27
4950.00	39.320	25.410	4562.44	-274.49	1209.26	641.12	1732948.07	14465805.77	39°49'55.9565"N	80°40'13.4273"W	1368.70	27.932	0.64	-0.58	-0.44
5035.00	39.260	25.970	4628.23	-287.33	1257.76	664.46	1732971.40	14465854.26	39°49'56.4350"N	80°40'13.1259"W	1422.49	27.847	0.42	-0.07	0.66
5120.00	39.010	27.280	4694.16	-299.29	1305.72	688.50	1732995.43	14465902.20	39°49'56.9081"N	80°40'12.8155"W	1476.12	27.802	1.02	-0.29	1.54
5207.00	39.360	29.020	4761.60	-310.10	1354.18	714.43	1733021.35	14465950.64	39°49'57.3860"N	80°40'12.4808"W	1531.08	27.815	1.33	0.40	2.00
5292.00	40.280	28.880	4826.88	-320.07	1401.81	740.78	1733047.69	14465998.25	39°49'57.8558"N	80°40'12.1408"W	1585.50	27.854	1.09	1.08	-0.16
5378.00	41.310	29.040	4891.99	-330.35	1450.97	767.98	1733074.88	14466047.39	39°49'58.3406"N	80°40'11.7897"W	1641.68	27.892	1.20	1.20	0.19
5464.00	42.670	28.380	4955.91	-341.12	1501.43	795.62	1733102.50	14466097.84	39°49'58.8383"N	80°40'11.4331"W	1699.21	27.919	1.66	1.58	-0.77
5551.00	43.030	26.950	5019.69	-353.26	1553.84	823.08	1733129.96	14466150.22	39°49'59.3552"N	80°40'11.0786"W	1758.37	27.911	1.19	0.41	-1.64

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Actual Wellpath Report

Hudson S-9HM AWP Proj: 19743'

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REFERENCE WELLPATH IDENTIFICATION

Operator	EQT (TUG HILL OPERATING, LLC)	Well	Hudson S-9HM
Field	Marshall	API	47-051-02380-0000
Facility	Hudson	Wellbore	Hudson S-9HM AWB
Slot	Slot 09		

WELLPATH DATA (242 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]
5637.00	41.770	26.040	5083.20	-366.31	1605.73	848.96	1733155.83	14466202.09	39°49'59.8671"N	80°40'10.7444"W	1816.34	27.866	1.63	-1.47	-1.06
5723.00	39.960	25.960	5148.23	-379.44	1656.30	873.62	1733180.48	14466252.64	39°50'0.3659"N	80°40'10.4259"W	1872.58	27.810	2.11	-2.10	-0.09
5809.00	38.290	25.610	5214.95	-392.30	1705.16	897.23	1733204.08	14466301.48	39°50'0.8479"N	80°40'10.1209"W	1926.81	27.753	1.96	-1.94	-0.41
5897.00	37.190	28.170	5284.54	-404.07	1753.20	921.58	1733228.41	14466349.50	39°50'1.3218"N	80°40'9.8066"W	1980.66	27.729	2.18	-1.25	2.91
5983.00	37.280	29.800	5353.01	-413.57	1798.71	946.79	1733253.62	14466395.00	39°50'1.7707"N	80°40'9.4812"W	2032.68	27.761	1.15	0.10	1.90
6070.00	37.780	28.880	5422.01	-422.92	1844.91	972.76	1733279.57	14466441.18	39°50'2.2263"N	80°40'9.1462"W	2085.66	27.801	0.86	0.57	-1.06
6156.00	39.130	28.880	5489.35	-432.78	1891.74	998.59	1733305.39	14466487.99	39°50'2.6881"N	80°40'8.8129"W	2139.13	27.828	1.57	1.57	0.00
6242.00	39.620	29.850	5555.83	-442.38	1939.29	1025.34	1733332.14	14466535.52	39°50'3.1570"N	80°40'8.4677"W	2193.67	27.866	0.91	0.57	1.13
6329.00	40.460	29.230	5622.44	-452.06	1987.98	1052.93	1733359.72	14466584.19	39°50'3.6372"N	80°40'8.1117"W	2249.61	27.908	1.07	0.97	-0.71
6413.00	41.060	29.510	5686.06	-461.70	2035.78	1079.83	1733386.61	14466631.97	39°50'4.1086"N	80°40'7.7646"W	2304.44	27.943	0.75	0.71	0.33
6497.00	41.170	29.790	5749.35	-471.15	2083.78	1107.16	1733413.92	14466679.95	39°50'4.5820"N	80°40'7.4120"W	2359.65	27.983	0.26	0.13	0.33
6583.00	40.220	29.790	5814.55	-480.61	2132.44	1135.02	1733441.77	14466728.60	39°50'5.0619"N	80°40'7.0526"W	2415.69	28.025	1.10	-1.10	0.00
6668.00	38.080	28.530	5880.46	-490.23	2179.30	1161.17	1733467.92	14466775.43	39°50'5.5239"N	80°40'6.7151"W	2469.34	28.050	2.69	-2.52	-1.48
6753.00	36.680	26.110	5948.01	-501.10	2225.13	1184.87	1733491.60	14466821.24	39°50'5.9760"N	80°40'6.4092"W	2520.93	28.035	2.39	-1.65	-2.85
6798.00	35.940	24.260	5984.27	-507.68	2249.24	1196.21	1733502.94	14466845.34	39°50'6.2138"N	80°40'6.2138"W	2547.54	28.005	2.94	-1.64	-4.11
6866.00	35.210	21.010	6039.59	-519.15	2285.74	1211.44	1733518.16	14466881.83	39°50'6.5740"N	80°40'6.0657"W	2586.92	27.924	2.98	-1.07	-4.78
6961.00	37.380	24.540	6116.16	-535.28	2337.55	1233.24	1733539.96	14466933.62	39°50'7.0852"N	80°40'5.7838"W	2642.92	27.815	3.17	2.28	3.72
7056.00	45.500	28.780	6187.33	-549.05	2393.58	1261.58	1733568.29	14466989.63	39°50'7.6379"N	80°40'5.4178"W	2705.70	27.792	9.04	8.55	4.46
7152.00	54.120	29.110	6249.22	-562.46	2457.68	1297.05	1733603.74	14467053.71	39°50'8.2701"N	80°40'4.9601"W	2778.95	27.823	8.98	8.98	0.34
7247.00	61.780	29.510	6299.60	-576.69	2527.84	1336.45	1733643.13	14467123.84	39°50'8.9620"N	80°40'4.4517"W	2859.38	27.865	8.07	8.06	0.42
7343.00	68.860	30.070	6339.66	-591.38	2603.49	1379.77	1733686.43	14467199.46	39°50'9.7080"N	80°40'3.8927"W	2946.51	27.922	7.39	7.37	0.58
7437.00	69.580	29.850	6373.01	-605.94	2679.63	1423.66	1733730.30	14467275.57	39°50'10.4589"N	80°40'3.3265"W	3034.34	27.981	0.80	0.77	-0.23
7532.00	69.680	29.710	6406.07	-620.98	2756.93	1467.89	1733774.52	14467352.84	39°50'11.2211"N	80°40'2.7558"W	3123.36	28.033	0.17	0.11	-0.15
7626.00	66.670	33.950	6441.03	-632.66	2831.05	1513.87	1733820.47	14467426.93	39°50'11.9520"N	80°40'2.1629"W	3210.40	28.135	5.27	-3.20	4.51
7721.00	66.700	44.010	6478.71	-633.45	2898.76	1568.66	1733875.24	14467494.61	39°50'12.6191"N	80°40'1.4574"W	3295.98	28.420	9.72	0.03	10.59
7816.00	66.530	52.530	6516.48	-620.17	2956.73	1633.65	1733940.21	14467552.56	39°50'13.1896"N	80°40'0.6215"W	3378.03	28.921	8.23	-0.18	8.97
7910.00	66.540	62.830	6553.99	-593.32	3002.75	1706.39	1734012.92	14467598.56	39°50'13.6417"N	80°39'59.6868"W	3453.73	29.608	10.05	0.01	10.96
8006.00	66.670	71.270	6592.17	-552.61	3037.06	1787.42	1734093.92	14467632.86	39°50'13.9778"N	80°39'58.6463"W	3524.01	30.478	8.07	0.14	8.79
8100.00	67.340	80.340	6628.95	-501.44	3058.24	1871.20	1734177.67	14467654.03	39°50'14.1840"N	80°39'57.5713"W	3585.28	31.461	8.91	0.71	9.65
8196.00	68.990	90.790	6664.74	-437.35	3065.07	1959.89	1734266.32	14467660.86	39°50'14.2482"N	80°39'56.4341"W	3638.11	32.596	10.25	1.72	10.89

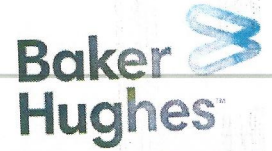
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Actual Wellpath Report

Hudson S-9HM AWP Proj: 19743'

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REFERENCE WELLPATH IDENTIFICATION

Operator	EQT (TUG HILL OPERATING, LLC)	Well	Hudson S-9HM
Field	Marshall	API	47-051-02380-0000
Facility	Hudson	Wellbore	Hudson S-9HM AWB
Slot	Slot 09		

WELLPATH DATA (242 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]
8290.00	69.920	99.920	6697.79	-364.58	3056.84	2047.41	1734353.81	14467652.63	39°50'14.1637"N	80°39'55.3126"W	3679.15	33.813	9.15	0.99	9.71
8386.00	71.910	108.580	6729.23	-282.61	3034.50	2135.23	1734441.59	14467630.30	39°50'13.9396"N	80°39'54.1879"W	3710.44	35.132	8.77	2.07	9.02
8480.00	74.920	113.460	6756.08	-197.20	3002.17	2219.27	1734525.60	14467597.98	39°50'13.6170"N	80°39'53.1121"W	3733.39	36.473	5.92	3.20	5.19
8575.00	77.800	121.530	6778.51	-106.98	2959.56	2301.06	1734607.36	14467555.39	39°50'13.1929"N	80°39'52.0657"W	3748.85	37.865	8.79	3.03	8.49
8670.00	80.660	132.290	6796.31	-13.90	2903.57	2375.53	1734681.80	14467499.42	39°50'12.6368"N	80°39'51.1137"W	3751.52	39.288	11.53	3.01	11.33
8765.00	84.570	142.170	6808.55	79.31	2834.49	2439.39	1734745.63	14467430.36	39°50'11.9517"N	80°39'50.2985"W	3739.64	40.716	11.10	4.12	10.40
8860.00	87.870	147.600	6814.82	170.66	2756.98	2493.88	1734800.10	14467352.89	39°50'11.1838"N	80°39'49.6037"W	3717.58	42.132	6.68	3.47	5.72
8955.00	88.150	148.620	6818.12	260.63	2676.37	2544.04	1734850.24	14467272.31	39°50'10.3853"N	80°39'48.9646"W	3692.57	43.548	1.11	0.29	1.07
9050.00	88.430	148.510	6820.90	350.39	2595.35	2593.56	1734899.74	14467191.32	39°50'9.5827"N	80°39'48.3337"W	3669.11	44.980	0.38	0.36	-0.12
9144.00	88.490	149.450	6823.38	438.97	2514.82	2641.98	1734948.15	14467110.82	39°50'8.7851"N	80°39'47.7168"W	3647.52	46.413	1.00	0.00	1.00
9239.00	88.400	149.190	6825.96	528.31	2433.15	2690.44	1734996.58	14467029.18	39°50'7.9762"N	80°39'47.0996"W	3627.49	47.875	0.29	-0.09	-0.27
9334.00	88.490	149.220	6828.54	617.72	2351.57	2739.06	1735045.18	14466947.64	39°50'7.1682"N	80°39'46.4803"W	3610.03	49.353	0.10	0.09	0.03
9429.00	88.520	148.980	6831.01	707.18	2270.08	2787.83	1735093.93	14466866.18	39°50'6.3610"N	80°39'46.4803"W	3595.17	50.845	0.25	0.03	-0.25
9524.00	88.430	149.490	6833.54	796.57	2188.48	2836.41	1735142.49	14466784.61	39°50'5.5528"N	80°39'45.2403"W	3582.55	52.347	0.54	-0.09	0.54
9619.00	88.710	149.310	6835.91	885.87	2106.74	2884.75	1735190.82	14466702.90	39°50'4.7432"N	80°39'44.6246"W	3572.13	53.859	0.35	0.29	-0.19
9713.00	88.800	149.050	6837.96	974.36	2026.03	2932.90	1735238.95	14466622.23	39°50'3.9438"N	80°39'44.0113"W	3564.64	55.363	0.29	0.10	-0.28
9808.00	88.740	149.100	6840.00	1063.85	1944.55	2981.71	1735287.74	14466540.78	39°50'3.1368"N	80°39'43.3895"W	3559.76	56.889	0.08	-0.06	0.05
9903.00	88.830	149.320	6842.01	1153.26	1862.96	3030.33	1735336.34	14466459.22	39°50'2.3286"N	80°39'42.7703"W	3557.18	58.418	0.25	0.09	0.23
9998.00	88.740	149.320	6844.02	1242.61	1781.28	3078.79	1735384.78	14466377.57	39°50'1.5196"N	80°39'42.1530"W	3556.95	59.948	0.09	-0.09	0.00
10093.00	88.770	149.770	6846.09	1331.84	1699.41	3126.93	1735432.90	14466295.73	39°50'0.7086"N	80°39'41.5399"W	3558.89	61.477	0.47	0.03	0.47
10188.00	88.620	149.740	6848.25	1420.94	1617.36	3174.77	1735480.72	14466213.71	39°49'59.8960"N	80°39'41.5399"W	3563.01	63.004	0.16	-0.16	-0.03
10283.00	88.560	149.830	6850.59	1510.02	1535.29	3222.56	1735528.50	14466131.68	39°49'59.0832"N	80°39'40.3220"W	3569.60	64.526	0.11	-0.06	0.09
10377.00	88.530	148.820	6852.98	1598.42	1454.47	3270.50	1735576.42	14466050.89	39°49'58.2827"N	80°39'39.7114"W	3579.34	66.024	1.07	-0.03	-1.07
10472.00	88.560	149.150	6855.39	1687.95	1373.08	3319.44	1735625.33	14465969.53	39°49'57.4765"N	80°39'39.0881"W	3592.21	67.528	0.35	0.03	0.35
10568.00	88.560	149.360	6857.80	1778.27	1290.60	3368.50	1735674.38	14465887.08	39°49'56.6595"N	80°39'38.4632"W	3607.27	69.036	0.22	0.00	0.22
10662.00	88.490	148.880	6860.22	1866.79	1209.95	3416.73	1735722.59	14465806.46	39°49'55.8607"N	80°39'37.8490"W	3624.64	70.500	0.52	-0.07	-0.51
10758.00	88.460	149.170	6862.78	1957.23	1127.67	3466.12	1735771.96	14465724.22	39°49'55.0457"N	80°39'37.2199"W	3644.94	71.978	0.30	-0.03	0.30
10853.00	88.520	149.020	6865.28	2046.70	1046.18	3514.89	1735820.71	14465642.76	39°49'54.2386"N	80°39'36.5986"W	3667.29	73.425	0.17	0.06	-0.16
10948.00	88.710	148.920	6867.58	2136.24	964.80	3563.85	1735869.65	14465561.41	39°49'53.4325"N	80°39'35.9750"W	3692.14	74.852	0.23	0.20	-0.11
11043.00	88.710	149.070	6869.71	2225.77	883.40	3612.77	1735918.56	14465480.04	39°49'52.6262"N	80°39'35.3519"W	3719.21	76.260	0.16	0.00	0.16

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Hudson S-9HM AWP Proj: 19743'
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Field	Marshall	API	47-051-02380-0000
Facility	Hudson	Wellbore	Hudson S-9HM AWB
Slot	Slot 09		

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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]
11138.00	88.770	148.750	6871.80	2315.35	802.06	3661.82	1735967.58	14465398.74	39°49'51.8206"N	80°39'34.7272"W	3748.63	77.645	0.34	0.06	-0.34
11233.00	88.920	149.130	6873.72	2404.92	720.70	3710.82	1736016.57	14465317.41	39°49'51.0147"N	80°39'34.1031"W	3780.16	79.009	0.43	0.16	0.40
11328.00	88.800	148.950	6875.61	2494.43	639.25	3759.68	1736065.41	14465235.99	39°49'50.2079"N	80°39'33.4807"W	3813.64	80.350	0.23	-0.13	-0.19
11423.00	88.680	148.440	6877.70	2584.13	558.10	3809.03	1736114.74	14465154.87	39°49'49.4041"N	80°39'32.8521"W	3849.70	81.664	0.55	-0.13	-0.54
11518.00	88.740	148.700	6879.84	2673.89	477.06	3858.56	1736164.25	14465073.86	39°49'48.6013"N	80°39'32.2213"W	3887.94	82.952	0.28	0.06	0.27
11612.00	88.680	149.310	6881.95	2762.47	396.50	3906.95	1736212.62	14464993.34	39°49'47.8034"N	80°39'31.6049"W	3927.02	84.205	0.65	-0.06	0.65
11707.00	88.090	149.090	6884.63	2851.88	314.94	3955.58	1736261.23	14464911.80	39°49'46.9955"N	80°39'30.9856"W	3968.10	85.448	0.66	-0.62	-0.23
11802.00	88.650	149.060	6887.33	2941.35	233.47	4004.38	1736310.01	14464830.37	39°49'46.1886"N	80°39'29.7502"W	4055.42	87.857	0.99	0.35	0.93
11897.00	88.980	149.940	6889.30	3030.60	151.64	4052.59	1736358.20	14464748.57	39°49'45.3780"N	80°39'29.7502"W	4055.42	87.857	0.99	0.35	0.93
11992.00	88.710	150.370	6891.21	3119.48	69.25	4099.85	1736405.44	14464666.22	39°49'44.5621"N	80°39'29.1484"W	4100.44	89.032	0.53	-0.28	0.45
12086.00	88.890	149.910	6893.18	3207.42	-12.25	4146.64	1736452.22	14464584.75	39°49'43.7548"N	80°39'28.5526"W	4146.66	90.169	0.53	0.19	-0.49
12181.00	88.680	152.140	6895.19	3295.77	-95.33	4192.65	1736498.21	14464501.69	39°49'42.9320"N	80°39'27.9670"W	4193.73	91.303	2.36	-0.22	2.35
12276.00	88.770	150.100	6897.31	3384.06	-178.49	4238.52	1736544.06	14464418.57	39°49'42.1084"N	80°39'27.3832"W	4242.28	92.411	2.15	0.09	-2.15
12371.00	88.710	149.300	6899.40	3473.20	-260.50	4286.44	1736591.96	14464336.60	39°49'41.2962"N	80°39'26.7730"W	4294.35	93.478	0.84	-0.06	-0.84
12466.00	88.740	150.030	6901.51	3562.35	-342.47	4334.41	1736639.91	14464254.66	39°49'40.4843"N	80°39'26.1622"W	4347.91	94.518	0.77	0.03	0.77
12561.00	88.680	149.900	6903.65	3651.34	-424.69	4381.94	1736687.42	14464172.47	39°49'39.6700"N	80°39'25.5569"W	4402.48	95.536	0.15	-0.06	-0.14
12656.00	88.830	151.040	6905.71	3740.02	-507.33	4428.76	1736734.22	14464089.86	39°49'38.8515"N	80°39'24.9610"W	4457.72	96.535	1.21	0.16	1.20
12750.00	88.240	150.510	6908.12	3827.59	-589.34	4474.63	1736780.08	14464007.88	39°49'38.0393"N	80°39'24.3770"W	4513.28	97.503	0.84	-0.63	-0.56
12845.00	88.150	149.590	6911.11	3916.50	-671.61	4522.04	1736827.46	14463925.65	39°49'37.2245"N	80°39'23.7734"W	4571.64	98.448	0.97	-0.09	-0.97
12940.00	88.240	149.160	6914.10	4005.79	-753.32	4570.41	1736875.82	14463843.97	39°49'36.4152"N	80°39'23.1575"W	4632.08	99.360	0.46	0.09	-0.45
13035.00	88.270	149.750	6917.00	4095.05	-835.10	4618.67	1736924.06	14463762.22	39°49'35.6051"N	80°39'22.5430"W	4693.56	100.249	0.62	0.03	0.62
13129.00	88.640	150.880	6919.53	4182.88	-916.73	4665.20	1736970.57	14463680.62	39°49'34.7966"N	80°39'21.9506"W	4754.42	101.117	1.26	0.39	1.20
13224.00	88.620	152.060	6921.80	4270.95	-1000.17	4710.56	1737015.91	14463597.22	39°49'33.9703"N	80°39'21.3733"W	4815.57	101.987	1.24	-0.02	1.24
13319.00	88.650	153.580	6924.06	4358.17	-1084.65	4753.94	1737059.28	14463512.77	39°49'33.1338"N	80°39'20.8214"W	4876.11	102.852	1.60	0.03	1.60
13413.00	88.620	151.730	6926.30	4444.57	-1168.12	4797.11	1737102.42	14463429.33	39°49'32.3072"N	80°39'20.2723"W	4937.28	103.685	1.97	-0.03	-1.97
13508.00	88.520	149.690	6928.67	4533.10	-1250.94	4843.57	1737148.87	14463346.54	39°49'31.4870"N	80°39'19.6809"W	5002.50	104.481	2.15	-0.11	-2.15
13603.00	88.520	149.950	6931.13	4622.16	-1333.04	4891.31	1737196.59	14463264.47	39°49'30.6738"N	80°39'19.0731"W	5069.70	105.245	0.27	0.00	0.27
13698.00	88.680	150.910	6933.45	4710.86	-1415.64	4938.18	1737243.44	14463181.91	39°49'29.8557"N	80°39'18.4765"W	5137.08	105.996	1.02	0.17	1.01
13794.00	86.610	148.870	6937.39	4800.76	-1498.61	4986.29	1737291.53	14463098.97	39°49'29.0340"N	80°39'17.8639"W	5206.62	106.728	3.03	-2.16	-2.13
13889.00	88.550	149.460	6941.41	4890.13	-1580.10	5034.94	1737340.16	14463017.51	39°49'28.2268"N	80°39'17.2444"W	5277.05	107.423	2.13	2.04	0.62

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Operator	EQT (TUG HILL OPERATING, LLC)	Well	Hudson S-9HM
Field	Marshall	API	47-051-02380-0000
Facility	Hudson	Wellbore	Hudson S-9HM AWB
Slot	Slot 09		

WELLPATH DATA (242 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]
13984.00	88.580	148.900	6943.78	4979.56	-1661.66	5083.59	1737388.80	14462935.98	39°49'27.4189"N	80°39'16.6248"W	5348.27	108.101	0.59	0.03	-0.59
14079.00	88.550	149.040	6946.16	5069.10	-1743.04	5132.55	1737437.74	14462854.63	39°49'26.6128"N	80°39'16.0014"W	5420.45	108.758	0.15	-0.03	0.15
14174.00	88.550	148.680	6948.57	5158.70	-1824.32	5181.66	1737486.83	14462773.38	39°49'25.8076"N	80°39'15.3760"W	5493.43	109.396	0.38	0.00	-0.38
14269.00	88.430	149.180	6951.07	5248.26	-1905.67	5230.67	1737535.82	14462692.07	39°49'25.0019"N	80°39'14.7519"W	5567.00	110.018	0.54	-0.13	0.53
14364.00	88.520	149.060	6953.60	5337.71	-1987.17	5279.41	1737584.54	14462610.60	39°49'24.1945"N	80°39'14.1312"W	5641.01	110.626	0.16	0.09	-0.13
14458.00	88.610	149.530	6955.95	5426.13	-2067.97	5327.39	1737632.50	14462529.83	39°49'23.3942"N	80°39'13.5202"W	5714.69	111.215	0.51	0.10	0.50
14553.00	88.550	149.680	6958.31	5515.31	-2149.89	5375.45	1737680.54	14462447.95	39°49'22.5828"N	80°39'12.9085"W	5789.42	111.799	0.17	-0.06	0.16
14648.00	88.240	149.170	6960.97	5604.59	-2231.64	5423.75	1737728.82	14462366.22	39°49'21.7730"N	80°39'12.2934"W	5864.92	112.365	0.63	-0.33	-0.54
14744.00	88.340	146.330	6963.83	5695.71	-2312.79	5474.95	1737780.00	14462285.11	39°49'20.9691"N	80°39'11.6413"W	5943.41	112.901	2.96	0.10	-2.96
14839.00	87.660	147.170	6967.15	5786.38	-2392.19	5527.00	1737832.04	14462205.74	39°49'20.1825"N	80°39'10.9781"W	6022.49	113.404	1.14	-0.72	0.88
14934.00	88.120	149.280	6970.65	5876.28	-2472.89	5576.99	1737882.01	14462125.07	39°49'19.3830"N	80°39'10.3414"W	6100.66	113.913	2.27	0.48	2.22
15029.00	88.180	149.120	6973.71	5965.68	-2554.45	5625.61	1737930.60	14462043.54	39°49'18.5751"N	80°39'9.7223"W	6178.41	114.422	0.18	0.06	-0.17
15124.00	88.180	149.770	6976.73	6054.93	-2636.22	5673.88	1737978.86	14461961.81	39°49'17.7652"N	80°39'9.1078"W	6256.40	114.921	0.68	0.00	0.68
15219.00	88.800	149.140	6979.23	6144.20	-2718.00	5722.15	1738027.10	14461880.05	39°49'16.9551"N	80°39'8.4933"W	6334.86	115.408	0.93	0.65	-0.66
15314.00	88.800	149.250	6981.22	6233.62	-2799.58	5770.79	1738075.72	14461798.51	39°49'16.1470"N	80°39'7.8740"W	6414.02	115.879	0.12	0.00	0.12
15409.00	88.770	149.680	6983.24	6322.89	-2881.39	5819.04	1738123.96	14461716.73	39°49'15.3367"N	80°39'7.2596"W	6493.35	116.343	0.45	-0.03	0.45
15504.00	88.830	149.190	6985.23	6412.18	-2963.17	5867.34	1738172.24	14461634.98	39°49'14.5266"N	80°39'6.6447"W	6573.13	116.795	0.52	0.06	-0.52
15599.00	88.740	148.770	6987.24	6501.72	-3044.57	5916.28	1738221.16	14461553.62	39°49'13.7204"N	80°39'6.0215"W	6653.71	117.231	0.45	-0.09	-0.44
15694.00	88.740	148.830	6989.33	6591.36	-3125.81	5965.49	1738270.35	14461472.41	39°49'12.9156"N	80°39'5.3950"W	6734.81	117.654	0.06	0.00	0.06
15789.00	88.550	148.410	6991.58	6681.10	-3206.89	6014.94	1738319.78	14461391.36	39°49'12.1124"N	80°39'4.7652"W	6816.42	118.064	0.49	-0.20	-0.44
15884.00	88.670	146.060	6993.88	6771.55	-3286.74	6066.33	1738371.15	14461311.54	39°49'11.3213"N	80°39'4.1105"W	6899.50	118.449	2.48	0.13	-2.47
15979.00	88.550	148.950	6996.19	6861.86	-3366.84	6117.35	1738422.15	14461231.47	39°49'10.5278"N	80°39'3.4607"W	6982.66	118.827	3.04	-0.13	3.04
16074.00	88.580	149.190	6998.57	6951.35	-3448.30	6166.16	1738470.94	14461150.04	39°49'9.7208"N	80°39'2.8392"W	7064.87	119.215	0.25	0.03	0.25
16169.00	88.580	149.530	7000.92	7040.67	-3530.01	6214.56	1738519.33	14461068.36	39°49'8.9114"N	80°39'2.2230"W	7147.15	119.598	0.36	0.00	0.36
16264.00	88.550	148.160	7003.30	7130.27	-3611.29	6263.70	1738568.44	14460987.12	39°49'8.1063"N	80°39'1.5974"W	7230.16	119.965	1.44	-0.03	-1.44
16359.00	88.490	149.260	7005.75	7219.95	-3692.44	6313.02	1738617.74	14460906.00	39°49'7.3024"N	80°39'0.9693"W	7313.57	120.323	1.16	-0.06	1.16
16454.00	88.520	149.580	7008.23	7309.24	-3774.20	6361.33	1738666.04	14460824.27	39°49'6.4926"N	80°39'0.3543"W	7396.70	120.681	0.34	0.03	0.34
16549.00	88.460	149.780	7010.74	7398.38	-3856.18	6409.28	1738713.96	14460742.33	39°49'5.6806"N	80°38'59.7440"W	7479.90	121.033	0.22	-0.06	0.21
16644.00	88.520	149.830	7013.24	7487.44	-3938.26	6457.04	1738761.71	14460660.28	39°49'4.8676"N	80°38'59.1360"W	7563.28	121.380	0.08	0.06	0.06
16739.00	88.580	150.660	7015.64	7576.25	-4020.71	6504.17	1738808.82	14460577.86	39°49'4.0509"N	80°38'58.5361"W	7646.59	121.723	0.88	0.06	0.87

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Field	Marshall	API	47-051-02380-0000
Facility	Hudson	Wellbore	Hudson S-9HM AWB
Slot	Slot 09		

WELLPATH DATA (242 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]
16834.00	88.860	150.590	7017.77	7664.85	-4103.47	6550.76	1738855.39	14460495.13	39°49'3.2312"N	80°38'57.9432"W	7729.87	122.063	0.30	0.29	-0.07
16929.00	88.920	150.490	7019.61	7753.50	-4186.17	6597.47	1738902.08	14460412.46	39°49'2.4121"N	80°38'57.3487"W	7813.49	122.396	0.12	0.06	-0.11
17024.00	89.440	150.350	7020.97	7842.23	-4268.78	6644.36	1738948.96	14460329.88	39°49'1.5939"N	80°38'56.7519"W	7897.47	122.719	0.57	0.55	-0.15
17120.00	89.350	150.090	7021.98	7932.01	-4352.10	6692.04	1738996.62	14460246.60	39°49'0.7687"N	80°38'56.1451"W	7982.74	123.038	0.29	-0.09	-0.27
17214.00	89.320	149.720	7023.07	8020.11	-4433.42	6739.17	1739043.73	14460165.31	39°48'59.9632"N	80°38'55.5452"W	8066.70	123.339	0.39	-0.03	-0.39
17310.00	89.140	149.750	7024.36	8110.18	-4516.33	6787.55	1739092.09	14460082.43	39°48'59.1419"N	80°38'54.9294"W	8152.80	123.639	0.19	-0.19	0.03
17405.00	89.230	149.500	7025.71	8199.37	-4598.28	6835.59	1739140.10	14460000.51	39°48'58.3302"N	80°38'54.3179"W	8238.29	123.929	0.28	0.09	-0.26
17500.00	89.440	150.280	7026.81	8288.41	-4680.46	6883.24	1739187.74	14459918.37	39°48'57.5162"N	80°38'53.7114"W	8323.80	124.215	0.85	0.22	0.82
17595.00	89.440	150.340	7027.74	8377.21	-4762.98	6930.29	1739234.77	14459835.88	39°48'56.6989"N	80°38'53.1125"W	8409.22	124.500	0.06	0.00	0.06
17690.00	89.410	150.170	7028.70	8466.04	-4845.46	6977.42	1739281.88	14459753.43	39°48'55.8819"N	80°38'52.5127"W	8494.87	124.778	0.18	-0.03	-0.18
17785.00	89.350	149.770	7029.72	8555.03	-4927.70	7024.96	1739329.41	14459671.22	39°48'55.0673"N	80°38'51.9076"W	8580.93	125.048	0.43	-0.06	-0.42
17880.00	89.350	150.330	7030.80	8643.98	-5010.01	7072.39	1739376.81	14459588.95	39°48'54.2521"N	80°38'51.3040"W	8667.11	125.313	0.59	0.00	0.59
17974.00	90.460	150.610	7030.96	8731.75	-5091.80	7118.72	1739423.12	14459507.19	39°48'53.4420"N	80°38'50.7144"W	8752.29	125.575	1.22	1.18	0.30
18069.00	90.890	150.330	7029.84	8820.46	-5174.45	7165.54	1739469.93	14459424.57	39°48'52.6233"N	80°38'50.1186"W	8838.54	125.834	0.54	0.45	-0.29
18164.00	90.920	150.300	7028.34	8909.24	-5256.97	7212.58	1739516.95	14459342.08	39°48'51.8060"N	80°38'49.5200"W	8925.08	126.087	0.04	0.03	-0.03
18259.00	90.580	149.740	7027.09	8998.21	-5339.25	7260.05	1739564.40	14459259.83	39°48'50.9910"N	80°38'48.9158"W	9011.99	126.332	0.69	-0.36	-0.59
18353.00	90.670	150.250	7026.07	9086.25	-5420.65	7307.05	1739611.38	14459178.47	39°48'50.1847"N	80°38'48.3176"W	9098.16	126.569	0.55	0.10	0.54
18448.00	90.610	149.210	7025.01	9175.39	-5502.69	7354.93	1739659.25	14459096.46	39°48'49.3721"N	80°38'47.7081"W	9185.57	126.802	1.10	-0.06	-1.09
18544.00	90.670	148.790	7023.94	9265.87	-5584.97	7404.37	1739708.67	14459014.21	39°48'48.5570"N	80°38'47.0787"W	9274.52	127.027	0.44	0.06	-0.44
18639.00	88.670	149.280	7024.48	9355.40	-5666.43	7453.25	1739757.53	14458932.78	39°48'47.7501"N	80°38'46.4565"W	9362.66	127.244	2.17	-2.11	0.52
18734.00	87.690	148.820	7027.50	9444.88	-5747.86	7502.08	1739806.34	14458851.38	39°48'46.9434"N	80°38'45.8349"W	9450.88	127.458	1.14	-1.03	-0.48
18829.00	87.810	148.560	7031.23	9534.53	-5828.96	7551.41	1739855.65	14458770.31	39°48'46.1400"N	80°38'45.2069"W	9539.43	127.665	0.30	0.13	-0.27
18924.00	87.870	148.940	7034.81	9624.15	-5910.12	7600.66	1739904.88	14458689.19	39°48'45.3360"N	80°38'44.5799"W	9628.06	127.868	0.40	0.06	0.40
19019.00	87.930	149.490	7038.29	9713.53	-5991.68	7649.25	1739953.45	14458607.66	39°48'44.5281"N	80°38'43.9614"W	9716.55	128.072	0.58	0.06	0.58
19114.00	88.000	149.660	7041.66	9802.70	-6073.55	7697.33	1740001.51	14458525.83	39°48'43.7172"N	80°38'43.3494"W	9804.94	128.275	0.19	0.07	0.18
19208.00	89.530	149.410	7043.69	9890.99	-6154.55	7744.98	1740049.14	14458444.86	39°48'42.9148"N	80°38'42.7430"W	9892.58	128.472	1.65	1.63	-0.27
19304.00	88.980	149.070	7044.94	9981.34	-6237.04	7794.07	1740098.21	14458362.40	39°48'42.0977"N	80°38'42.1181"W	9982.39	128.668	0.67	-0.57	-0.35
19399.00	88.830	149.550	7046.75	10070.70	-6318.71	7842.55	1740146.67	14458280.75	39°48'41.2886"N	80°38'41.5010"W	10071.33	128.858	0.53	-0.16	0.51
19494.00	89.500	149.320	7048.14	10160.00	-6400.51	7890.85	1740194.96	14458199.00	39°48'40.4784"N	80°38'40.8862"W	10160.31	129.047	0.75	0.71	-0.24
19589.00	89.500	149.100	7048.97	10249.43	-6482.11	7939.48	1740243.56	14458117.42	39°48'39.6700"N	80°38'40.2672"W	10249.54	129.230	0.23	0.00	-0.23

Office Record
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 Environmental Protection



Actual Wellpath Report

Hudson S-9HM AWP Proj: 19743'
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REFERENCE WELLPATH IDENTIFICATION

Operator	EQT (TUG HILL OPERATING, LLC)	Well	Hudson S-9HM
Field	Marshall	API	47-051-02380-0000
Facility	Hudson	Wellbore	Hudson S-9HM AWB
Slot	Slot 09		

WELLPATH DATA (242 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]
19684.00	89.440	149.290	7049.85	10338.87	-6563.71	7988.13	1740292.19	14458035.86	39°48'38.8618"N	80°38'39.6479"W	10338.88	129.409	0.21	-0.06	0.20
19743.00	89.440	149.290	7050.42	10394.38	-6614.43	8018.26	1740322.31	14457985.16	39°48'38.3593"N	80°38'39.2644"W	10394.38	129.520	0.00	0.00	0.00

HOLE & CASING SECTIONS - Ref Wellbore: Hudson S-9HM AWB Ref Wellpath: Hudson S-9HM AWP Proj: 19743'

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	-0.14	0.03
17.5in Open Hole	148.00	1345.00	1197.00	148.00	1344.99	-0.14	0.03	-1.46	-2.73
13.375in Casing Surface	28.00	1345.00	1317.00	28.00	1344.99	0.00	0.00	-1.46	-2.73
12.25in Open Hole	1345.00	2449.00	1104.00	1344.99	2437.27	-1.46	-2.73	115.18	63.10
9.625in Casing Intermediate	28.00	2449.00	2421.00	28.00	2437.27	0.00	0.00	115.18	63.10
8.75in Open Hole	2449.00	6869.00	4420.00	2437.27	6042.04	115.18	63.10	2287.35	1212.06
8.5in Open Hole	6869.00	19743.00	12874.00	6042.04	7050.42	2287.35	1212.06	-6614.43	8018.26
5.5in Casing Production	28.00	19743.00	19715.00	28.00	7050.42	0.00	0.00	-6614.43	8018.26

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Hudson S-9HM LP Rev-1	6814.00	2753.71	2500.00	1734806.22	14467349.62	39°50'11.1512"N	80°39'49.5254"W	point
Hudson S-9HM BHL Rev-1	7122.32	-6612.45	8021.44	1740325.49	14457987.13	39°48'38.3787"N	80°38'39.2236"W	point

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Actual Wellpath Report

Hudson S-9HM AWP Proj: 19743'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EQT (TUG HILL OPERATING, LLC)	Well	Hudson S-9HM
Field	Marshall	API	47-051-02380-0000
Facility	Hudson	Wellbore	Hudson S-9HM AWB
Slot	Slot 09		

WELLPATH COMPOSITION - Ref Wellbore: Hudson S-9HM AWB Ref Wellpath: Hudson S-9HM AWP Proj: 19743'				Wellbore	Survey Date
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment		
28.00	1318.00	Gyrodatta 2015 - CT+WIR+DPIPE	01 Gyrodatta Cont. Gyro <17-1/2"> (115'-1318')	Hudson S-9HM AWB	12/9/2023
1318.00	2399.00	OWSG MWD rev2 + HRGM	02 SDI MWD <12-1/4"> (1318')(1419'-2399')	Hudson S-9HM AWB	12/9/2023
2399.00	6798.00	OWSG MWD rev2 + HRGM	03 SDI MWD <8-3/4"> (2399')(2484'-6798')	Hudson S-9HM AWB	12/9/2023
6798.00	19743.00	OWSG MWD rev2 + IFR1 + Sag + Multi-Station Correction	04 BH AT Curve+SuperiorQC IFR1+Sag+FDIR <8-1/2"> (6798')(6866'-19684')	Hudson S-9HM AWB	2/12/2024

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Actual Wellpath Report

Hudson S-9HM AWP Proj: 19743'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	EQT (TUG HILL OPERATING, LLC)	Well	Hudson S-9HM
Field	Marshall	API	47-051-02380-0000
Facility	Hudson	Wellbore	Hudson S-9HM AWB
Slot	Slot 09		

COMMENTS
Wellpath general comments API: 47-051-02380-0000 BH Job #: 112078151 Rig: Patterson 294 Duration: 2/15/2024-2/17/2024 Gyrodatta Cont. Gyro <17-1/2"> (115'-1318') SDI MWD <12-1/4"> (1318')(1419'-2399') SDI MWD <8-3/4"> (2399')(2484'-6798') BH AT Curve+SuperiorQC IFR1+Sag+FDIR <8-1/2"> (6798')(6866'-19684') Projected MD at TD: 19743'

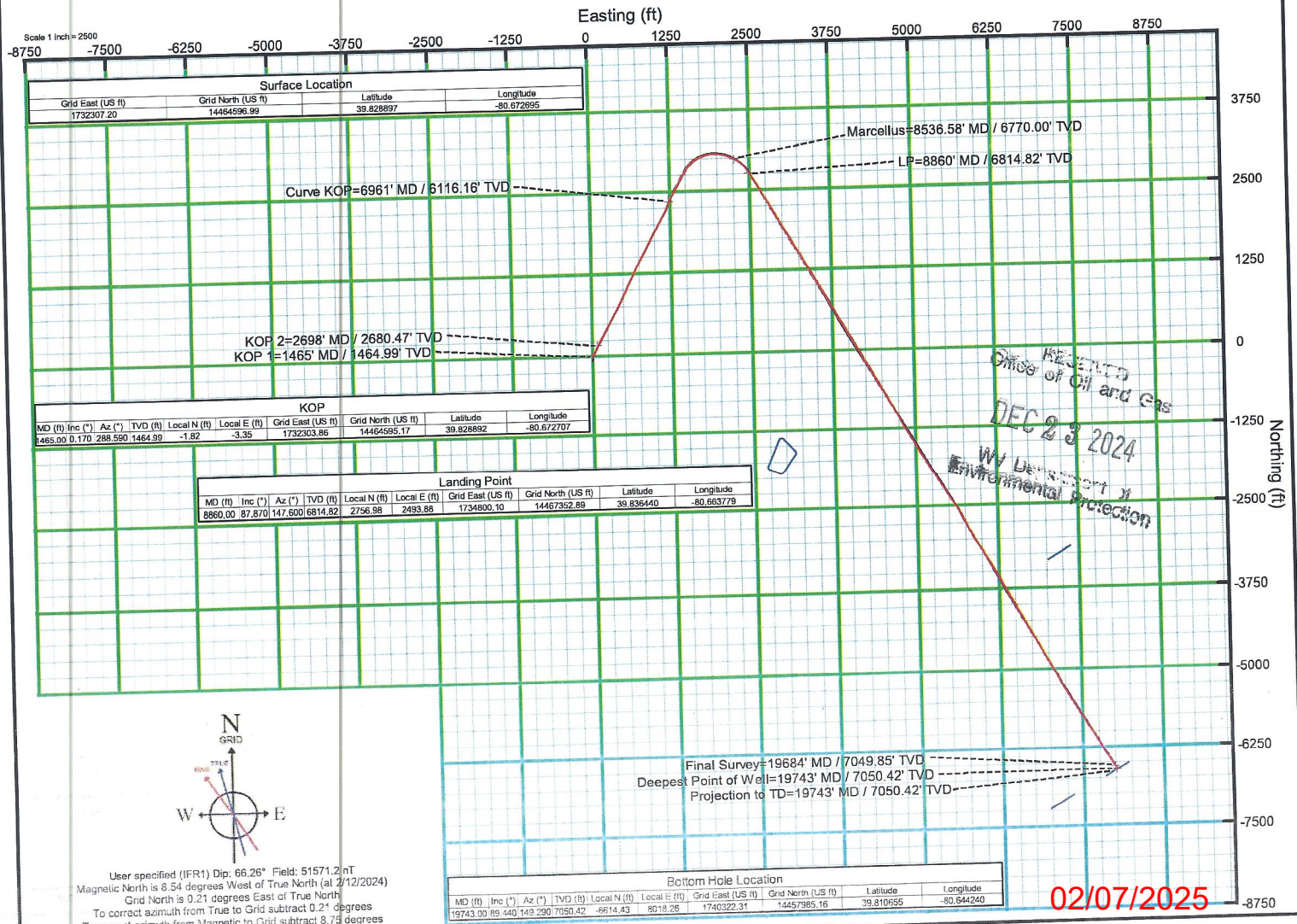
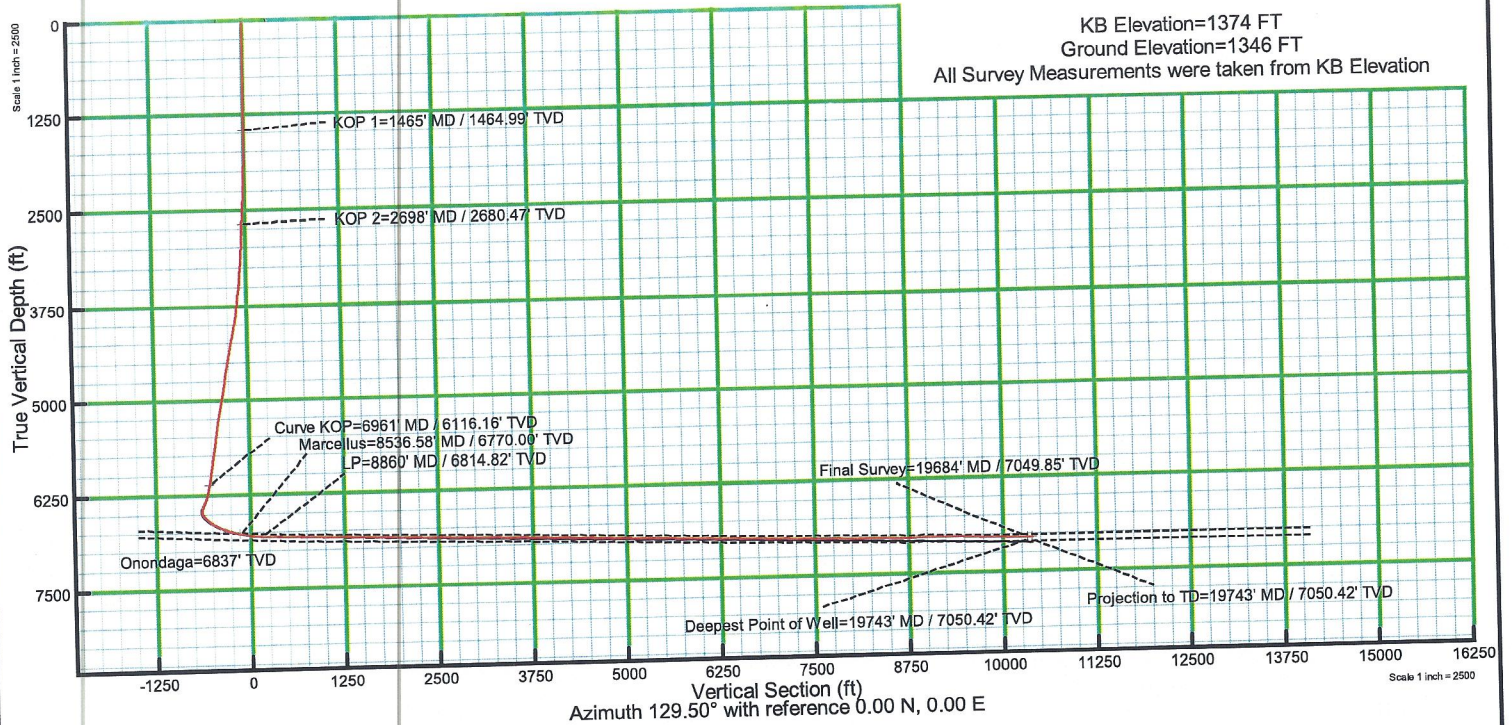
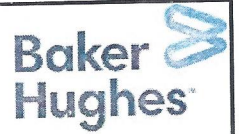
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EQT (TUG HILL OPERATING, LLC)

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

Slot: Slot 09
Well: Hudson S-9HM
Wellbore: Hudson S-9HM AWB



User specified (IFR1) Dip: 66.26° Field: 51571.2 nT
Magnetic North is 8.54 degrees West of True North (at 2/12/2024)
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