



# Actual Wellpath Report

Knob Creek N-5HM AWB Proj: 12373'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	EQT (TUG HILL OPERATING, LLC)	Well	Knob Creek N-5HM
Field	Marshall	API	47-051-02032-0000
Facility	Knob Creek	Wellbore	Knob Creek N-5HM AWB
Slot	Slot 05		

## REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Scurdan
Scale	0.999608	Report Generated	11/27/2023 at 12:25:37 PM
Convergence at slot	0.19° 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	-13.11	16.42	1723159.94	14443099.17	39°46'11.8053"N	80°42'19.9013"W
Facility Reference Pt			1723143.53	14443112.27	39°46'11.9353"N	80°42'20.1110"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	765.00ft
Horizontal Reference Pt	Slot	Patterson 294 (RKB) to Mean Sea Level	765.00ft
Vertical Reference Pt	Patterson 294 (RKB)	Patterson 294 (RKB) to Ground Level at Slot (Slot 05)	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	349.46°

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## WELLPATH DATA (200 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	101.590	0.00	0.00	0.00	0.00	1723159.94	14443099.17	39°46'11.8053"N	80°42'19.9013"W	0.00	0.000	0.00	0.00	0.00
28.00	0.000	101.590	28.00	0.00	0.00	0.00	1723159.94	14443099.17	39°46'11.8053"N	80°42'19.9013"W	0.00	0.000	0.00	0.00	0.00
203.00	0.280	101.590	203.00	-0.16	-0.09	0.42	1723160.36	14443099.08	39°46'11.8044"N	80°42'19.8959"W	0.43	101.590	0.16	0.16	0.00
232.00	0.270	91.940	232.00	-0.20	-0.10	0.56	1723160.50	14443099.07	39°46'11.8042"N	80°42'19.8942"W	0.57	100.430	0.16	-0.03	-33.28
260.00	0.330	137.470	260.00	-0.29	-0.16	0.68	1723160.62	14443099.01	39°46'11.8036"N	80°42'19.8926"W	0.70	103.626	0.85	0.21	162.61
287.00	0.190	140.150	287.00	-0.39	-0.26	0.76	1723160.70	14443098.91	39°46'11.8027"N	80°42'19.8916"W	0.80	108.640	0.52	-0.52	9.93
317.00	0.240	81.860	317.00	-0.44	-0.29	0.85	1723160.79	14443098.89	39°46'11.8024"N	80°42'19.8904"W	0.90	108.493	0.71	0.17	-194.30
349.00	0.190	94.310	349.00	-0.45	-0.28	0.97	1723160.91	14443098.89	39°46'11.8025"N	80°42'19.8889"W	1.01	106.053	0.21	-0.16	38.91
379.00	0.180	109.420	379.00	-0.49	-0.30	1.07	1723161.01	14443098.87	39°46'11.8023"N	80°42'19.8877"W	1.11	105.672	0.17	-0.03	50.37
411.00	0.170	124.920	411.00	-0.55	-0.34	1.15	1723161.09	14443098.83	39°46'11.8018"N	80°42'19.8865"W	1.20	106.575	0.15	-0.03	48.44
442.00	0.210	89.590	442.00	-0.59	-0.37	1.25	1723161.19	14443098.80	39°46'11.8016"N	80°42'19.8853"W	1.30	106.481	0.39	0.13	-113.97
474.00	0.270	107.850	474.00	-0.64	-0.39	1.38	1723161.32	14443098.78	39°46'11.8013"N	80°42'19.8837"W	1.43	105.871	0.30	0.19	57.06
506.00	0.260	115.480	506.00	-0.72	-0.45	1.51	1723161.45	14443098.72	39°46'11.8008"N	80°42'19.8819"W	1.58	106.406	0.11	-0.03	23.84
569.00	0.120	164.900	569.00	-0.87	-0.57	1.66	1723161.60	14443098.60	39°46'11.7996"N	80°42'19.8800"W	1.76	108.978	0.32	-0.22	78.44
601.00	0.070	209.840	601.00	-0.91	-0.62	1.66	1723161.60	14443098.55	39°46'11.7991"N	80°42'19.8801"W	1.77	110.496	0.27	-0.16	140.44
632.00	0.130	204.410	632.00	-0.96	-0.67	1.64	1723161.57	14443098.50	39°46'11.7986"N	80°42'19.8804"W	1.77	112.240	0.20	0.19	-17.52
663.00	0.130	215.830	663.00	-1.01	-0.73	1.60	1723161.54	14443098.44	39°46'11.7980"N	80°42'19.8808"W	1.76	114.499	0.08	0.00	36.84
695.00	0.190	263.060	695.00	-1.03	-0.77	1.53	1723161.47	14443098.41	39°46'11.7976"N	80°42'19.8818"W	1.71	116.623	0.44	0.19	147.59
727.00	0.050	195.790	727.00	-1.04	-0.78	1.47	1723161.41	14443098.39	39°46'11.7974"N	80°42'19.8825"W	1.67	118.103	0.55	-0.44	-210.22
758.00	0.150	293.310	758.00	-1.03	-0.78	1.43	1723161.37	14443098.39	39°46'11.7975"N	80°42'19.8830"W	1.63	118.687	0.53	0.32	314.58
790.00	0.150	346.370	790.00	-0.97	-0.72	1.38	1723161.32	14443098.45	39°46'11.7980"N	80°42'19.8836"W	1.56	117.693	0.42	0.00	165.81
821.00	0.160	324.910	821.00	-0.89	-0.65	1.35	1723161.29	14443098.52	39°46'11.7988"N	80°42'19.8841"W	1.49	115.766	0.19	0.03	-69.23
853.00	0.170	346.570	853.00	-0.80	-0.57	1.31	1723161.25	14443098.60	39°46'11.7996"N	80°42'19.8845"W	1.43	113.415	0.20	0.03	67.69
885.00	0.210	337.890	885.00	-0.69	-0.47	1.28	1723161.22	14443098.70	39°46'11.8006"N	80°42'19.8850"W	1.36	110.079	0.15	0.13	-27.13
916.00	0.280	325.770	916.00	-0.57	-0.35	1.21	1723161.15	14443098.82	39°46'11.8017"N	80°42'19.8858"W	1.26	106.160	0.28	0.23	-39.10
948.00	0.280	355.680	947.99	-0.42	-0.21	1.16	1723161.10	14443098.96	39°46'11.8032"N	80°42'19.8864"W	1.18	100.177	0.45	0.00	93.47
980.00	0.400	334.440	979.99	-0.23	-0.03	1.11	1723161.05	14443099.14	39°46'11.8049"N	80°42'19.8871"W	1.11	91.549	0.54	0.37	-66.37
1012.00	0.260	333.080	1011.99	-0.05	0.14	1.03	1723160.97	14443099.31	39°46'11.8066"N	80°42'19.8881"W	1.04	82.485	0.44	-0.44	-4.25
1044.00	0.400	325.840	1043.99	0.12	0.29	0.93	1723160.87	14443099.46	39°46'11.8081"N	80°42'19.8893"W	0.98	72.562	0.46	0.44	-22.62
1075.00	0.380	324.060	1074.99	0.31	0.47	0.81	1723160.75	14443099.64	39°46'11.8098"N	80°42'19.8909"W	0.93	60.138	0.08	-0.06	-5.74



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Slot	Slot 05		

### WELLPATH DATA (200 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]
1107.00	0.470	317.740	1106.99	0.52	0.65	0.66	1723160.60	14443099.82	39°46'11.8116"N	80°42'19.8928"W	0.93	45.511	0.32	0.28	-19.75
1139.00	0.410	310.070	1138.99	0.72	0.82	0.48	1723160.42	14443099.99	39°46'11.8133"N	80°42'19.8950"W	0.95	30.587	0.26	-0.19	-23.97
1170.00	0.530	308.350	1169.99	0.91	0.98	0.29	1723160.23	14443100.15	39°46'11.8149"N	80°42'19.8976"W	1.02	16.327	0.39	0.39	-5.55
1202.00	0.620	304.130	1201.99	1.14	1.17	0.03	1723159.97	14443100.34	39°46'11.8168"N	80°42'19.9009"W	1.17	1.353	0.31	0.28	-13.19
1232.00	0.270	301.370	1231.99	1.31	1.30	-0.17	1723159.77	14443100.47	39°46'11.8181"N	80°42'19.9034"W	1.31	352.656	1.17	-1.17	-9.20
1264.00	0.330	91.990	1263.99	1.34	1.33	-0.14	1723159.80	14443100.50	39°46'11.8184"N	80°42'19.9030"W	1.34	354.029	1.81	0.19	470.69
1296.00	0.940	99.970	1295.98	1.22	1.28	0.21	1723160.15	14443100.45	39°46'11.8179"N	80°42'19.8985"W	1.30	9.343	1.92	1.91	24.94
1327.00	1.600	97.940	1326.98	1.00	1.18	0.89	1723160.83	14443100.35	39°46'11.8169"N	80°42'19.8898"W	1.48	37.032	2.13	2.13	-6.55
1359.00	1.970	98.810	1358.96	0.67	1.03	1.88	1723161.82	14443100.20	39°46'11.8154"N	80°42'19.8772"W	2.14	61.137	1.16	1.16	2.72
1391.00	2.560	101.570	1390.94	0.22	0.81	3.12	1723163.06	14443099.98	39°46'11.8131"N	80°42'19.8613"W	3.22	75.505	1.87	1.84	8.62
1422.00	3.050	99.850	1421.90	-0.33	0.53	4.61	1723164.55	14443099.70	39°46'11.8103"N	80°42'19.8422"W	4.64	83.483	1.60	1.58	-5.55
1454.00	3.560	100.820	1453.85	-0.98	0.19	6.43	1723166.36	14443099.36	39°46'11.8070"N	80°42'19.8190"W	6.43	88.266	1.60	1.59	3.03
1486.00	4.110	100.980	1485.77	-1.77	-0.21	8.53	1723168.46	14443098.96	39°46'11.8029"N	80°42'19.7921"W	8.53	91.413	1.72	1.72	0.50
1518.00	4.530	105.530	1517.68	-2.74	-0.77	10.87	1723170.81	14443098.40	39°46'11.7973"N	80°42'19.7621"W	10.90	94.037	1.69	1.31	14.22
1550.00	4.790	106.750	1549.58	-3.91	-1.49	13.37	1723173.30	14443097.68	39°46'11.7901"N	80°42'19.7302"W	13.45	96.363	0.87	0.81	3.81
1581.00	4.980	110.160	1580.46	-5.19	-2.33	15.87	1723175.80	14443096.84	39°46'11.7817"N	80°42'19.6981"W	16.04	98.343	1.12	0.61	11.00
1613.00	5.360	111.030	1612.33	-6.68	-3.34	18.57	1723178.50	14443095.83	39°46'11.7716"N	80°42'19.6636"W	18.87	100.204	1.21	1.19	2.72
1645.00	5.510	110.410	1644.19	-8.26	-4.41	21.40	1723181.34	14443094.76	39°46'11.7609"N	80°42'19.6274"W	21.85	101.654	0.50	0.47	-1.94
1676.00	6.020	111.450	1675.03	-9.88	-5.53	24.31	1723184.24	14443093.64	39°46'11.7498"N	80°42'19.5902"W	24.93	102.810	1.68	1.65	3.35
1708.00	6.160	110.930	1706.85	-11.67	-6.75	27.48	1723187.41	14443092.42	39°46'11.7376"N	80°42'19.5497"W	28.30	103.812	0.47	0.44	-1.62
1739.00	6.160	112.820	1737.67	-13.45	-7.99	30.56	1723190.49	14443091.18	39°46'11.7253"N	80°42'19.5102"W	31.59	104.658	0.65	0.00	6.10
1771.00	5.880	109.920	1769.50	-15.22	-9.22	33.69	1723193.61	14443089.96	39°46'11.7131"N	80°42'19.4703"W	34.93	105.304	1.29	-0.87	-9.06
1803.00	4.940	111.300	1801.35	-16.78	-10.28	36.51	1723196.44	14443088.90	39°46'11.7025"N	80°42'19.4341"W	37.93	105.721	2.97	-2.94	4.31
1834.00	4.400	109.160	1832.25	-18.08	-11.15	38.88	1723198.80	14443088.02	39°46'11.6938"N	80°42'19.4038"W	40.45	106.006	1.83	-1.74	-6.90
1866.00	3.960	110.340	1864.17	-19.25	-11.94	41.07	1723201.00	14443087.24	39°46'11.6859"N	80°42'19.3758"W	42.77	106.208	1.40	-1.38	3.69
1898.00	3.890	106.920	1896.09	-20.32	-12.64	43.15	1723203.07	14443086.54	39°46'11.6789"N	80°42'19.3492"W	44.96	106.327	0.76	-0.22	-10.69
1929.00	3.930	108.150	1927.02	-21.31	-13.28	45.16	1723205.09	14443085.90	39°46'11.6726"N	80°42'19.3234"W	47.08	106.381	0.30	0.13	3.97
1961.00	3.980	107.690	1958.94	-22.37	-13.96	47.26	1723207.19	14443085.22	39°46'11.6658"N	80°42'19.2966"W	49.28	106.450	0.19	0.16	-1.44
1993.00	4.120	104.640	1990.86	-23.38	-14.58	49.43	1723209.36	14443084.59	39°46'11.6595"N	80°42'19.2688"W	51.54	106.436	0.80	0.44	-9.53
2024.00	4.130	106.060	2021.78	-24.35	-15.17	51.58	1723211.50	14443084.00	39°46'11.6536"N	80°42'19.2413"W	53.77	106.391	0.33	0.03	4.58



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2055.00	4.240	105.390	2052.70	-25.35	-15.79	53.76	1723213.68	14443083.39	39°46'11.6475"N	80°42'19.2134"W	56.03	106.364	0.39	0.35	-2.16
2086.00	4.280	101.790	2083.61	-26.30	-16.33	56.00	1723215.92	14443082.85	39°46'11.6421"N	80°42'19.1848"W	58.33	106.255	0.87	0.13	-11.61
2118.00	4.370	101.420	2115.52	-27.20	-16.81	58.36	1723218.28	14443082.36	39°46'11.6372"N	80°42'19.1545"W	60.74	106.070	0.29	0.28	-1.16
2150.00	4.730	103.030	2147.42	-28.19	-17.35	60.84	1723220.76	14443081.83	39°46'11.6318"N	80°42'19.1228"W	63.27	105.917	1.19	1.12	5.03
2181.00	4.890	101.510	2178.31	-29.20	-17.90	63.38	1723223.30	14443081.27	39°46'11.6263"N	80°42'19.0903"W	65.86	105.773	0.66	0.52	-4.90
2213.00	4.790	100.450	2210.20	-30.19	-18.42	66.03	1723225.95	14443080.76	39°46'11.6211"N	80°42'19.0564"W	68.55	105.584	0.42	-0.31	-3.31
2245.00	4.840	99.910	2242.09	-31.14	-18.89	68.68	1723228.59	14443080.29	39°46'11.6163"N	80°42'19.0225"W	71.23	105.381	0.21	0.16	-1.69
2276.00	5.100	99.430	2272.97	-32.06	-19.34	71.33	1723231.24	14443079.83	39°46'11.6118"N	80°42'18.9887"W	73.90	105.173	0.85	0.84	-1.55
2370.00	5.000	96.670	2366.61	-34.70	-20.50	79.52	1723239.42	14443078.67	39°46'11.6000"N	80°42'18.8838"W	82.12	104.459	0.28	-0.11	-2.94
2402.00	5.080	97.790	2398.48	-35.56	-20.86	82.30	1723242.21	14443078.32	39°46'11.5964"N	80°42'18.8481"W	84.91	104.220	0.40	0.25	3.50
2434.00	5.220	101.870	2430.35	-36.56	-21.35	85.13	1723245.04	14443077.83	39°46'11.5915"N	80°42'18.8119"W	87.77	104.078	1.22	0.44	12.75
2465.00	5.310	108.130	2461.22	-37.79	-22.09	87.88	1723247.78	14443077.09	39°46'11.5841"N	80°42'18.7768"W	90.61	104.108	1.87	0.29	20.19
2497.00	5.340	108.610	2493.08	-39.22	-23.02	90.69	1723250.60	14443076.16	39°46'11.5748"N	80°42'18.7408"W	93.57	104.243	0.17	0.09	1.50
2529.00	5.180	107.720	2524.95	-40.63	-23.94	93.48	1723253.38	14443075.24	39°46'11.5657"N	80°42'18.7051"W	96.50	104.362	0.56	-0.50	-2.78
2561.00	5.200	106.880	2556.82	-41.98	-24.80	96.25	1723256.15	14443074.38	39°46'11.5571"N	80°42'18.6697"W	99.39	104.448	0.25	0.06	-2.63
2592.00	5.140	108.050	2587.69	-43.30	-25.64	98.91	1723258.81	14443073.54	39°46'11.5487"N	80°42'18.6357"W	102.18	104.530	0.39	-0.19	3.77
2624.00	4.960	106.590	2619.57	-44.61	-26.47	101.60	1723261.50	14443072.71	39°46'11.5403"N	80°42'18.6013"W	104.99	104.605	0.69	-0.56	-4.56
2656.00	4.880	107.020	2651.45	-45.87	-27.27	104.23	1723264.12	14443071.91	39°46'11.5324"N	80°42'18.5676"W	107.73	104.661	0.28	-0.25	1.34
2688.00	4.870	105.160	2683.33	-47.09	-28.02	106.84	1723266.74	14443071.16	39°46'11.5249"N	80°42'18.5342"W	110.45	104.696	0.49	-0.03	-5.81
2720.00	4.800	106.310	2715.22	-48.29	-28.75	109.43	1723269.33	14443070.43	39°46'11.5175"N	80°42'18.5010"W	113.15	104.721	0.37	-0.22	3.59
2751.00	4.610	105.060	2746.12	-49.41	-29.44	111.88	1723271.78	14443069.74	39°46'11.5107"N	80°42'18.4697"W	115.69	104.743	0.70	-0.61	-4.03
2782.00	4.440	103.710	2777.02	-50.44	-30.05	114.25	1723274.15	14443069.13	39°46'11.5046"N	80°42'18.4394"W	118.14	104.735	0.65	-0.55	-4.35
2812.00	4.300	103.600	2806.93	-51.38	-30.59	116.47	1723276.37	14443068.59	39°46'11.4992"N	80°42'18.4110"W	120.42	104.715	0.47	-0.47	-0.37
2844.00	4.050	105.130	2838.85	-52.36	-31.17	118.73	1723278.62	14443068.02	39°46'11.4934"N	80°42'18.3821"W	122.75	104.708	0.86	-0.78	4.78
2876.00	4.410	104.720	2870.76	-53.37	-31.77	121.01	1723280.90	14443067.41	39°46'11.4873"N	80°42'18.3529"W	125.11	104.712	1.13	1.13	-1.28
2906.00	5.040	106.100	2900.66	-54.46	-32.43	123.39	1723283.28	14443066.75	39°46'11.4807"N	80°42'18.3224"W	127.58	104.726	2.13	2.10	4.60
2938.00	5.150	105.050	2932.53	-55.71	-33.19	126.13	1723286.02	14443065.99	39°46'11.4731"N	80°42'18.2874"W	130.42	104.745	0.45	0.34	-3.28
2970.00	4.830	104.600	2964.41	-56.90	-33.91	128.82	1723288.71	14443065.28	39°46'11.4660"N	80°42'18.2530"W	133.21	104.746	1.01	-1.00	-1.41
3001.00	4.690	103.140	2995.30	-57.96	-34.52	131.32	1723291.20	14443064.66	39°46'11.4598"N	80°42'18.2210"W	135.78	104.730	0.60	-0.45	-4.71
3033.00	4.570	104.350	3027.20	-59.02	-35.14	133.83	1723293.71	14443064.05	39°46'11.4537"N	80°42'18.1889"W	138.36	104.711	0.48	-0.38	3.78



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# Actual Wellpath Report

Knob Creek N-5HM AWB Proj: 12373'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	EQT (TUG HILL OPERATING, LLC)	Well	Knob Creek N-5HM
Field	Marshall	API	47-051-02032-0000
Facility	Knob Creek	Wellbore	Knob Creek N-5HM AWB
Slot	Slot 05		

## WELLPATH DATA (200 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]
3065.00	4.870	99.490	3059.09	-60.03	-35.68	136.40	1723296.29	14443063.51	39°46'11.4482"N	80°42'18.1560"W	140.99	104.658	1.56	0.94	-15.19
3096.00	5.850	98.220	3089.95	-60.98	-36.12	139.26	1723299.15	14443063.06	39°46'11.4438"N	80°42'18.1193"W	143.87	104.540	3.18	3.16	-4.10
3128.00	7.210	94.700	3121.75	-62.04	-36.52	142.88	1723302.76	14443062.67	39°46'11.4397"N	80°42'18.0730"W	147.47	104.337	4.43	4.25	-11.00
3160.00	8.570	90.460	3153.44	-63.02	-36.70	147.26	1723307.15	14443062.48	39°46'11.4378"N	80°42'18.0169"W	151.77	103.994	4.62	4.25	-13.25
3191.00	9.690	89.790	3184.05	-63.93	-36.71	152.18	1723312.06	14443062.47	39°46'11.4375"N	80°42'17.9539"W	156.55	103.562	3.63	3.61	-2.16
3223.00	11.060	88.270	3215.53	-64.88	-36.61	157.94	1723317.82	14443062.58	39°46'11.4383"N	80°42'17.8801"W	162.13	103.049	4.37	4.28	-4.75
3254.00	12.180	89.590	3245.89	-65.91	-36.49	164.19	1723324.06	14443062.69	39°46'11.4392"N	80°42'17.8001"W	168.19	102.532	3.71	3.61	4.26
3286.00	12.980	91.120	3277.12	-67.23	-36.54	171.15	1723331.03	14443062.64	39°46'11.4386"N	80°42'17.7109"W	175.01	102.051	2.71	2.50	4.78
3318.00	12.880	94.000	3308.31	-68.85	-36.86	178.31	1723338.18	14443062.32	39°46'11.4352"N	80°42'17.6193"W	182.08	101.680	2.04	-0.31	9.00
3351.00	12.580	98.270	3340.50	-70.94	-37.63	185.53	1723345.40	14443061.55	39°46'11.4273"N	80°42'17.5268"W	189.31	101.466	2.99	-0.91	12.94
3381.00	12.350	97.840	3369.79	-73.00	-38.54	191.94	1723351.81	14443060.64	39°46'11.4181"N	80°42'17.4448"W	195.77	101.354	0.83	-0.77	-1.43
3413.00	12.110	97.490	3401.07	-75.12	-39.45	198.66	1723358.52	14443059.74	39°46'11.4090"N	80°42'17.3588"W	202.54	101.230	0.78	-0.75	-1.09
3445.00	11.960	96.960	3432.36	-77.15	-40.28	205.28	1723365.14	14443058.90	39°46'11.4005"N	80°42'17.2740"W	209.20	101.103	0.58	-0.47	-1.66
3477.00	12.270	100.480	3463.65	-79.37	-41.30	211.92	1723371.77	14443057.88	39°46'11.3902"N	80°42'17.1891"W	215.90	101.029	2.50	0.97	11.00
3508.00	13.430	101.580	3493.87	-81.91	-42.63	218.68	1723378.53	14443056.56	39°46'11.3769"N	80°42'17.1025"W	222.80	101.030	3.82	3.74	3.55
3540.00	14.720	101.030	3524.91	-84.80	-44.15	226.31	1723386.16	14443055.04	39°46'11.3616"N	80°42'17.0048"W	230.58	101.039	4.05	4.03	-1.72
3554.00	15.010	99.280	3538.44	-86.07	-44.78	229.85	1723389.70	14443054.40	39°46'11.3552"N	80°42'16.9596"W	234.17	101.025	3.82	2.07	-12.50
3643.00	16.840	93.210	3624.03	-93.04	-47.36	254.10	1723413.94	14443051.82	39°46'11.3289"N	80°42'16.6491"W	258.47	100.559	2.78	2.06	-6.82
3738.00	17.820	92.490	3714.72	-99.59	-48.77	282.36	1723442.19	14443050.42	39°46'11.3141"N	80°42'16.2873"W	286.54	99.799	1.06	1.03	-0.76
3833.00	21.380	92.450	3804.20	-106.76	-50.14	314.19	1723474.01	14443049.05	39°46'11.2995"N	80°42'15.8796"W	318.17	99.067	3.75	3.75	-0.04
3928.00	24.050	93.000	3891.82	-115.19	-51.89	350.83	1723510.63	14443047.30	39°46'11.2810"N	80°42'15.4105"W	354.65	98.414	2.82	2.81	0.58
4023.00	27.030	93.310	3977.53	-124.89	-54.15	391.72	1723551.51	14443045.04	39°46'11.2573"N	80°42'14.8869"W	395.45	97.871	3.14	3.14	0.33
4118.00	29.840	93.720	4061.06	-135.88	-56.93	436.87	1723596.63	14443042.26	39°46'11.2284"N	80°42'14.3089"W	440.56	97.425	2.97	2.96	0.43
4213.00	33.150	94.120	4142.05	-148.28	-60.33	486.37	1723646.12	14443038.86	39°46'11.1932"N	80°42'13.6750"W	490.10	97.071	3.49	3.48	0.42
4308.00	35.870	94.270	4220.33	-161.97	-64.27	540.05	1723699.77	14443034.92	39°46'11.1525"N	80°42'12.9878"W	543.86	96.787	2.86	2.86	0.16
4403.00	37.700	94.090	4296.41	-176.43	-68.42	596.78	1723756.48	14443030.78	39°46'11.1097"N	80°42'12.2614"W	600.69	96.540	1.93	1.93	-0.19
4498.00	37.800	93.100	4371.53	-190.63	-72.06	654.82	1723814.51	14443027.14	39°46'11.0717"N	80°42'11.5182"W	658.78	96.280	0.65	0.11	-1.04
4593.00	37.950	92.890	4446.52	-204.28	-75.11	713.07	1723872.73	14443024.09	39°46'11.0397"N	80°42'10.7724"W	717.01	96.013	0.21	0.16	-0.22
4689.00	37.760	92.590	4522.31	-217.81	-77.93	771.91	1723931.55	14443021.27	39°46'11.0099"N	80°42'10.0189"W	775.84	95.765	0.28	-0.20	-0.31
4784.00	38.200	92.660	4597.19	-231.13	-80.60	830.31	1723989.93	14443018.60	39°46'10.9816"N	80°42'9.2711"W	834.22	95.545	0.47	0.46	0.07



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# Actual Wellpath Report

Knob Creek N-5HM AWB Proj: 12373'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	EQT (TUG HILL OPERATING, LLC)	Well	Knob Creek N-5HM
Field	Marshall	API	47-051-02032-0000
Facility	Knob Creek	Wellbore	Knob Creek N-5HM AWB
Slot	Slot 05		

WELLPATH DATA (200 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]
4878.00	38.260	92.590	4671.03	-244.37	-83.27	888.42	1724048.01	14443015.93	39°46'10.9533"N	80°42'8.5271"W	892.32	95.354	0.08	0.06	-0.07
4974.00	38.060	92.860	4746.52	-257.98	-86.09	947.67	1724107.24	14443013.12	39°46'10.9235"N	80°42'7.7684"W	951.57	95.191	0.27	-0.21	0.28
5069.00	38.200	92.550	4821.25	-271.42	-88.86	1006.26	1724165.80	14443010.35	39°46'10.8942"N	80°42'7.0182"W	1010.18	95.046	0.25	0.15	-0.33
5164.00	38.250	92.990	4895.88	-284.96	-91.70	1064.97	1724224.49	14443007.51	39°46'10.8642"N	80°42'6.2664"W	1068.91	94.921	0.29	0.05	0.46
5259.00	38.250	93.050	4970.48	-298.75	-94.80	1123.71	1724283.20	14443004.41	39°46'10.8317"N	80°42'5.5144"W	1127.70	94.822	0.04	0.00	0.06
5354.00	38.240	93.190	5045.09	-312.63	-98.00	1182.43	1724341.90	14443001.21	39°46'10.7981"N	80°42'4.7625"W	1186.48	94.738	0.09	-0.01	0.15
5449.00	38.260	92.950	5119.70	-326.47	-101.15	1241.16	1724400.61	14442998.06	39°46'10.7650"N	80°42'4.0105"W	1245.27	94.659	0.16	0.02	-0.25
5544.00	38.210	92.750	5194.32	-340.09	-104.07	1299.88	1724459.30	14442995.14	39°46'10.7342"N	80°42'3.2586"W	1304.04	94.577	0.14	-0.05	-0.21
5639.00	38.210	92.890	5268.96	-353.67	-106.96	1358.57	1724517.97	14442992.25	39°46'10.7037"N	80°42'2.5071"W	1362.77	94.502	0.09	0.00	0.15
5734.00	38.170	93.630	5343.63	-367.68	-110.30	1417.21	1724576.59	14442988.91	39°46'10.6688"N	80°42'1.7563"W	1421.49	94.450	0.48	-0.04	0.78
5829.00	38.260	93.730	5418.27	-382.11	-114.07	1475.85	1724635.21	14442985.14	39°46'10.6295"N	80°42'1.0054"W	1480.26	94.420	0.11	0.09	0.11
5924.00	38.220	93.710	5492.89	-396.60	-117.89	1534.53	1724693.87	14442981.33	39°46'10.5899"N	80°42'0.2541"W	1539.05	94.393	0.04	-0.04	-0.02
6018.00	38.500	91.010	5566.60	-409.61	-120.28	1592.81	1724752.12	14442978.93	39°46'10.5643"N	80°41'59.5079"W	1597.34	94.319	1.81	0.30	-2.87
6113.00	36.120	78.630	5642.26	-415.14	-115.28	1649.91	1724809.20	14442983.94	39°46'10.6119"N	80°41'58.7763"W	1653.93	93.997	8.27	-2.51	-13.03
6207.00	34.100	65.710	5719.26	-408.46	-98.95	1701.17	1724860.44	14443000.26	39°46'10.7715"N	80°41'58.1192"W	1704.04	93.329	8.18	-2.15	-13.74
6302.00	35.120	50.460	5797.60	-388.85	-70.55	1746.60	1724905.85	14443028.65	39°46'11.0507"N	80°41'57.5361"W	1748.03	92.313	9.16	1.07	-16.05
6397.00	35.090	32.980	5875.52	-355.71	-30.14	1782.63	1724941.87	14443069.04	39°46'11.4488"N	80°41'57.0730"W	1782.89	90.969	10.55	-0.03	-18.40
6492.00	40.270	21.930	5950.77	-309.93	21.34	1809.01	1724968.24	14443120.50	39°46'11.9567"N	80°41'56.7329"W	1809.14	89.324	8.94	5.45	-11.63
6587.00	46.010	4.680	6020.30	-250.79	84.16	1823.33	1724982.55	14443183.29	39°46'12.5770"N	80°41'56.5469"W	1825.27	87.357	13.76	6.04	-18.16
6682.00	52.100	0.380	6082.55	-180.93	155.78	1826.37	1724985.59	14443254.89	39°46'13.2848"N	80°41'56.5049"W	1833.00	85.125	7.26	6.41	-4.53
6776.00	58.710	357.890	6135.89	-104.69	233.10	1825.13	1724984.35	14443332.18	39°46'14.0490"N	80°41'56.5173"W	1839.96	82.722	7.36	7.03	-2.65
6872.00	65.470	349.670	6180.86	-20.24	317.26	1815.77	1724974.99	14443416.31	39°46'14.8810"N	80°41'56.6336"W	1843.28	80.089	10.33	7.04	-8.56
6966.00	72.290	339.850	6214.78	66.95	401.64	1792.60	1724951.84	14443500.65	39°46'15.7156"N	80°41'56.9267"W	1837.05	77.371	12.14	7.26	-10.45
7062.00	79.470	334.430	6238.21	157.80	487.31	1756.41	1724915.66	14443586.28	39°46'16.5635"N	80°41'57.3865"W	1822.76	74.494	9.27	7.48	-5.65
7157.00	87.070	330.730	6249.33	247.99	570.97	1712.98	1724872.25	14443669.91	39°46'17.3917"N	80°41'57.9391"W	1805.63	71.566	8.88	8.00	-3.89
7252.00	86.950	330.020	6254.29	337.64	653.43	1666.09	1724825.37	14443752.35	39°46'18.2082"N	80°41'58.5362"W	1789.64	68.585	0.76	-0.13	-0.75
7347.00	90.430	330.360	6256.46	427.29	735.83	1618.88	1724778.18	14443834.71	39°46'19.0241"N	80°41'59.1372"W	1778.26	65.557	3.68	3.66	0.36
7441.00	90.760	330.290	6255.49	516.09	817.50	1572.34	1724731.66	14443916.34	39°46'19.8327"N	80°41'59.7297"W	1772.16	62.529	0.36	0.35	-0.07
7536.00	90.760	330.360	6254.23	605.83	900.03	1525.32	1724684.65	14443998.84	39°46'20.6499"N	80°42'0.3285"W	1771.06	59.457	0.07	0.00	0.07
7631.00	90.020	327.850	6253.58	694.89	981.54	1476.54	1724635.90	14444080.32	39°46'21.4571"N	80°42'0.9496"W	1773.02	56.386	2.75	-0.78	-2.64



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# Actual Wellpath Report

Knob Creek N-5HM AWB Proj: 12373'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	EQT (TUG HILL OPERATING, LLC)	Well	Knob Creek N-5HM
Field	Marshall	API	47-051-02032-0000
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Slot	Slot 05		

## WELLPATH DATA (200 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]
7725.00	90.950	328.790	6252.78	782.56	1061.53	1427.18	1724586.55	14444160.28	39°46'22.2492"N	80°42'1.5784"W	1778.67	53.358	1.41	0.99	1.00
7820.00	90.450	329.430	6251.62	871.62	1143.05	1378.41	1724537.81	14444241.77	39°46'23.0564"N	80°42'2.1995"W	1790.69	50.333	0.85	-0.53	0.67
7915.00	90.180	329.330	6251.10	960.84	1224.80	1330.02	1724489.44	14444323.49	39°46'23.8660"N	80°42'2.8157"W	1808.06	47.358	0.30	-0.28	-0.11
8010.00	89.900	326.710	6251.03	1049.26	1305.37	1279.71	1724439.15	14444404.03	39°46'24.6639"N	80°42'3.4566"W	1828.02	44.431	2.77	-0.29	-2.76
8105.00	91.160	329.270	6250.15	1137.66	1385.92	1229.36	1724388.82	14444484.54	39°46'25.4616"N	80°42'4.0980"W	1852.59	41.574	3.00	1.33	2.69
8200.00	90.730	329.420	6248.59	1226.85	1467.63	1180.93	1724340.41	14444566.22	39°46'26.2707"N	80°42'4.7148"W	1883.76	38.822	0.48	-0.45	0.16
8295.00	90.540	328.850	6247.53	1315.93	1549.17	1132.20	1724291.69	14444647.73	39°46'27.0781"N	80°42'5.3354"W	1918.80	36.161	0.63	-0.20	-0.60
8485.00	89.740	326.790	6247.07	1492.53	1709.97	1031.02	1724190.55	14444808.47	39°46'28.6706"N	80°42'6.6245"W	1996.75	31.088	1.16	-0.42	-1.08
8579.00	90.730	328.570	6246.68	1579.81	1789.41	980.76	1724140.32	14444887.87	39°46'29.4573"N	80°42'7.2647"W	2040.56	28.727	2.17	1.05	1.89
8675.00	90.270	328.640	6245.85	1669.52	1871.35	930.75	1724090.33	14444969.78	39°46'30.2687"N	80°42'7.9017"W	2090.03	26.444	0.48	-0.48	0.07
8770.00	90.240	327.710	6245.42	1758.04	1952.06	880.66	1724040.25	14445050.46	39°46'31.0681"N	80°42'8.5399"W	2141.52	24.282	0.98	-0.03	-0.98
8864.00	90.570	329.060	6244.76	1845.74	2032.11	831.39	1723991.00	14445130.48	39°46'31.8607"N	80°42'9.1675"W	2195.60	22.251	1.48	0.35	1.44
8959.00	90.080	329.350	6244.22	1934.87	2113.71	782.75	1723942.38	14445212.05	39°46'32.6688"N	80°42'9.7870"W	2253.99	20.321	0.60	-0.52	0.31
9054.00	90.240	328.810	6243.96	2023.92	2195.21	733.94	1723893.59	14445293.52	39°46'33.4758"N	80°42'10.4087"W	2314.65	18.487	0.59	0.17	-0.57
9149.00	90.170	328.000	6243.62	2112.58	2276.13	684.16	1723843.83	14445374.40	39°46'34.2771"N	80°42'11.0428"W	2376.73	16.730	0.86	-0.07	-0.85
9244.00	90.700	329.810	6242.89	2201.52	2357.47	635.10	1723794.79	14445455.71	39°46'35.0826"N	80°42'11.6677"W	2441.52	15.078	1.99	0.56	1.91
9339.00	90.730	329.350	6241.71	2290.85	2439.39	587.01	1723746.72	14445537.60	39°46'35.8937"N	80°42'12.2802"W	2509.02	13.530	0.49	0.03	-0.48
9434.00	89.960	329.300	6241.14	2380.04	2521.09	538.54	1723698.27	14445619.27	39°46'36.7028"N	80°42'12.8975"W	2577.97	12.058	0.81	-0.81	-0.05
9529.00	90.080	329.220	6241.10	2469.20	2602.74	489.98	1723649.73	14445700.89	39°46'37.5113"N	80°42'13.5160"W	2648.46	10.662	0.15	0.13	-0.08
9624.00	89.340	327.290	6241.58	2557.76	2683.53	440.00	1723599.77	14445781.64	39°46'38.3113"N	80°42'14.1527"W	2719.36	9.312	2.18	-0.78	-2.03
9718.00	89.810	328.560	6242.28	2645.20	2763.17	390.09	1723549.88	14445861.26	39°46'39.1000"N	80°42'14.7886"W	2790.57	8.036	1.44	0.50	1.35
9813.00	90.300	329.440	6242.19	2734.20	2844.60	341.16	1723500.97	14445942.65	39°46'39.9064"N	80°42'15.4118"W	2864.99	6.839	1.06	0.52	0.93
9908.00	90.080	329.080	6241.88	2823.36	2926.26	292.60	1723452.43	14446024.27	39°46'40.7149"N	80°42'16.0303"W	2940.85	5.710	0.44	-0.23	-0.38
10003.00	89.870	330.240	6241.92	2912.74	3008.24	244.62	1723404.46	14446106.23	39°46'41.5267"N	80°42'16.6415"W	3018.17	4.649	1.24	-0.22	1.22
10098.00	89.960	330.030	6242.06	3002.39	3090.63	197.31	1723357.17	14446188.58	39°46'42.3424"N	80°42'17.2439"W	3096.92	3.653	0.24	0.09	-0.22
10194.00	89.620	328.780	6242.41	3092.56	3173.26	148.45	1723308.33	14446271.18	39°46'43.1607"N	80°42'17.8662"W	3176.73	2.678	1.35	-0.35	-1.30
10289.00	90.330	329.500	6242.45	3181.65	3254.81	99.72	1723259.62	14446352.70	39°46'43.9682"N	80°42'18.4869"W	3256.34	1.755	1.06	0.75	0.76
10384.00	90.880	330.080	6241.45	3271.10	3336.90	51.92	1723211.84	14446434.76	39°46'44.7810"N	80°42'19.0957"W	3337.31	0.891	0.84	0.58	0.61
10479.00	89.960	330.250	6240.75	3360.76	3419.31	4.66	1723164.60	14446517.13	39°46'45.5969"N	80°42'19.6975"W	3419.31	0.078	0.98	-0.97	0.18
10575.00	90.110	330.220	6240.69	3451.41	3502.64	-43.00	1723116.96	14446600.43	39°46'46.4221"N	80°42'20.3045"W	3502.91	359.297	0.16	0.16	-0.03



# Actual Wellpath Report

Knob Creek N-5HM AWB Proj: 12373'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	EQT (TUG HILL OPERATING, LLC)	Well	Knob Creek N-5HM
Field	Marshall	API	47-051-02032-0000
Facility	Knob Creek	Wellbore	Knob Creek N-5HM AWB
Slot	Slot 05		

## WELLPATH DATA (200 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]
10670.00	90.540	330.090	6240.15	3541.07	3585.04	-90.27	1723069.70	14446682.80	39°46'47.2379"N	80°42'20.9065"W	3586.18	358.558	0.47	0.45	-0.14
10765.00	91.280	329.990	6238.65	3630.65	3667.34	-137.71	1723022.29	14446765.06	39°46'48.0527"N	80°42'21.5107"W	3669.92	357.850	0.79	0.78	-0.11
10859.00	91.130	330.290	6236.67	3719.34	3748.84	-184.50	1722975.51	14446846.53	39°46'48.8597"N	80°42'22.1066"W	3753.38	357.182	0.36	-0.16	0.32
10954.00	89.770	327.740	6235.92	3808.34	3830.27	-233.40	1722926.63	14446927.93	39°46'49.6661"N	80°42'22.7295"W	3837.38	356.513	3.04	-1.43	-2.68
11049.00	88.170	330.760	6237.63	3897.46	3911.89	-281.96	1722878.09	14447009.52	39°46'50.4742"N	80°42'23.3480"W	3922.04	355.877	3.60	-1.68	3.18
11144.00	90.540	328.730	6238.70	3986.88	3993.93	-329.81	1722830.26	14447091.53	39°46'51.2866"N	80°42'23.9576"W	4007.53	355.279	3.28	2.49	-2.14
11238.00	89.830	331.290	6238.40	4075.50	4075.34	-376.80	1722783.29	14447172.90	39°46'52.0926"N	80°42'24.5559"W	4092.72	354.718	2.83	-0.76	2.72
11333.00	91.830	329.910	6237.02	4165.39	4158.09	-423.42	1722736.68	14447255.62	39°46'52.9120"N	80°42'25.1497"W	4179.59	354.186	2.56	2.11	-1.45
11429.00	89.990	328.670	6235.50	4255.48	4240.61	-472.44	1722687.69	14447338.11	39°46'53.7291"N	80°42'25.7741"W	4266.85	353.643	2.31	-1.92	-1.29
11524.00	90.270	330.140	6235.28	4344.72	4322.39	-520.79	1722639.35	14447419.85	39°46'54.5388"N	80°42'26.3900"W	4353.65	353.130	1.58	0.29	1.55
11619.00	90.050	330.010	6235.02	4434.33	4404.72	-568.18	1722591.98	14447502.15	39°46'55.3540"N	80°42'26.9936"W	4441.21	352.650	0.27	-0.23	-0.14
11714.00	89.460	329.540	6235.42	4523.78	4486.80	-616.00	1722544.18	14447584.20	39°46'56.1667"N	80°42'27.6027"W	4528.89	352.183	0.79	-0.62	-0.49
11808.00	91.560	330.260	6234.58	4612.35	4568.12	-663.14	1722497.06	14447665.49	39°46'56.9719"N	80°42'28.2031"W	4616.00	351.740	2.36	2.23	0.77
11903.00	88.600	329.670	6234.45	4701.89	4650.35	-710.69	1722449.53	14447747.69	39°46'57.7861"N	80°42'28.8086"W	4704.34	351.311	3.18	-3.12	-0.62
11998.00	91.090	332.110	6234.71	4791.93	4733.34	-756.90	1722403.34	14447830.64	39°46'58.6077"N	80°42'29.3971"W	4793.47	350.915	3.67	2.62	2.57
12093.00	89.430	329.070	6234.28	4881.81	4816.08	-803.54	1722356.72	14447913.36	39°46'59.4269"N	80°42'29.9911"W	4882.66	350.528	3.65	-1.75	-3.20
12188.00	89.520	329.870	6235.15	4971.08	4897.91	-851.80	1722308.48	14447995.15	39°47'0.2371"N	80°42'30.6058"W	4971.43	350.134	0.85	0.09	0.84
12283.00	90.020	331.140	6235.53	5060.93	4980.59	-898.57	1722261.73	14448077.80	39°47'1.0558"N	80°42'31.2014"W	5061.00	349.773	1.44	0.53	1.34
12348.00	89.430	329.320	6235.84	5122.30	5037.01	-930.84	1722229.47	14448134.20	39°47'1.6144"N	80°42'31.6125"W	5122.30	349.530	2.94	-0.91	-2.80
12373.00‡	89.430	329.320	6236.09	5145.77	5058.51	-943.59	1722216.72	14448155.69	39°47'1.8273"N	80°42'31.7750"W	5145.77	349.434	0.00	0.00	0.00

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# Actual Wellpath Report

Knob Creek N-5HM AWB Proj: 12373'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	EQT (TUG HILL OPERATING, LLC)	Well	Knob Creek N-5HM
Field	Marshall	API	47-051-02032-0000
Facility	Knob Creek	Wellbore	Knob Creek N-5HM AWB
Slot	Slot 05		

## HOLE & CASING SECTIONS - Ref Wellbore: Knob Creek N-5HM AWB Ref Wellpath: Knob Creek N-5HM AWB Proj: 12373'

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	-0.04	0.20
17.5in Open Hole	148.00	532.00	384.00	148.00	532.00	-0.04	0.20	-0.50	1.60
13.375in Casing Surface	28.00	532.00	504.00	28.00	532.00	0.00	0.00	-0.50	1.60
12.25in Open Hole	532.00	2312.00	1780.00	532.00	2308.83	-0.50	1.60	-19.84	74.47
9.625in Casing Intermediate	28.00	2312.00	2284.00	28.00	2308.83	0.00	0.00	-19.84	74.47
8.75in Open Hole	2312.00	3616.00	1304.00	2308.83	3598.15	-19.84	74.47	-46.82	246.42
8.5in Open Hole	3616.00	12373.00	8757.00	3598.15	6236.09	-46.82	246.42	5058.51	-943.59
5.5in Casing Production	28.00	12373.00	12345.00	28.00	6236.09	0.00	0.00	5058.51	-943.59

## TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Knob Creek N-5HM BHL Rev-1	6250.00	5060.23	-941.98	1722218.34	14448157.41	39°47'1.8442"N	80°42'31.7542"W	point
Knob Creek N-5HM LP Rev-1	6250.00	602.01	1683.84	1724843.11	14443700.94	39°46'17.6994"N	80°41'58.3110"W	point

## WELLPATH COMPOSITION - Ref Wellbore: Knob Creek N-5HM AWB Ref Wellpath: Knob Creek N-5HM AWB Proj: 12373'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
28.00	506.00	OWSG MWD rev2 - Standard	01 MWD<17-1/2">(203'-506')	Knob Creek N-5HM AWB	10/3/2023
506.00	2276.00	OWSG MWD rev2 - Standard	02 MWD<12-1/4">(506')(569'-2276')	Knob Creek N-5HM AWB	10/3/2023
2276.00	3554.00	OWSG MWD rev2 - Standard	03 MWD<8-3/4">(2276')(2370'-3554')	Knob Creek N-5HM AWB	10/3/2023
3554.00	12373.00	OWSG MWD rev2 + IFR1 + Sag + Multi-Station Correction	04 BH ATCurve +SQC IFR1+SAG+FDIR<8-1/2">(3554')(3643'-12348')	Knob Creek N-5HM AWB	11/18/2023

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# Actual Wellpath Report

Knob Creek N-5HM AWB Proj: 12373'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	EQT (TUG HILL OPERATING, LLC)	Well	Knob Creek N-5HM
Field	Marshall	API	47-051-02032-0000
Facility	Knob Creek	Wellbore	Knob Creek N-5HM AWB
Slot	Slot 05		

## COMMENTS

### Wellpath general comments

API: 47-051-02032-0000

BH Job #: 111995208

Rig: Patterson 294

Duration: 11/23/2023-11/25/2023

01\_MWD<17-1/2">(203'-506')

02\_MWD<12-1/4">(506')(569'-2276')

03\_MWD<8-3/4">(2276')(2370'-3554')

04\_BH ATCurve +SQC IFR1+SAG+FDIR<8-1/2">(3554')(3643'-12348')

Landing Pt. @ 7157' MD

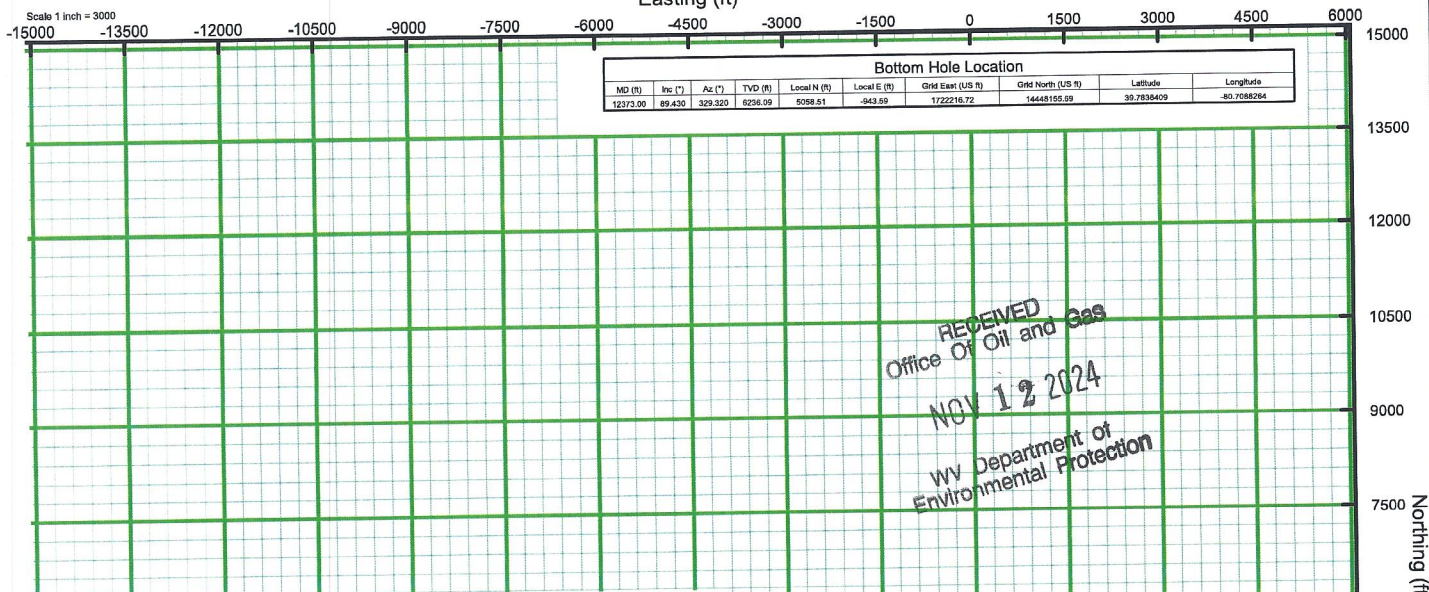
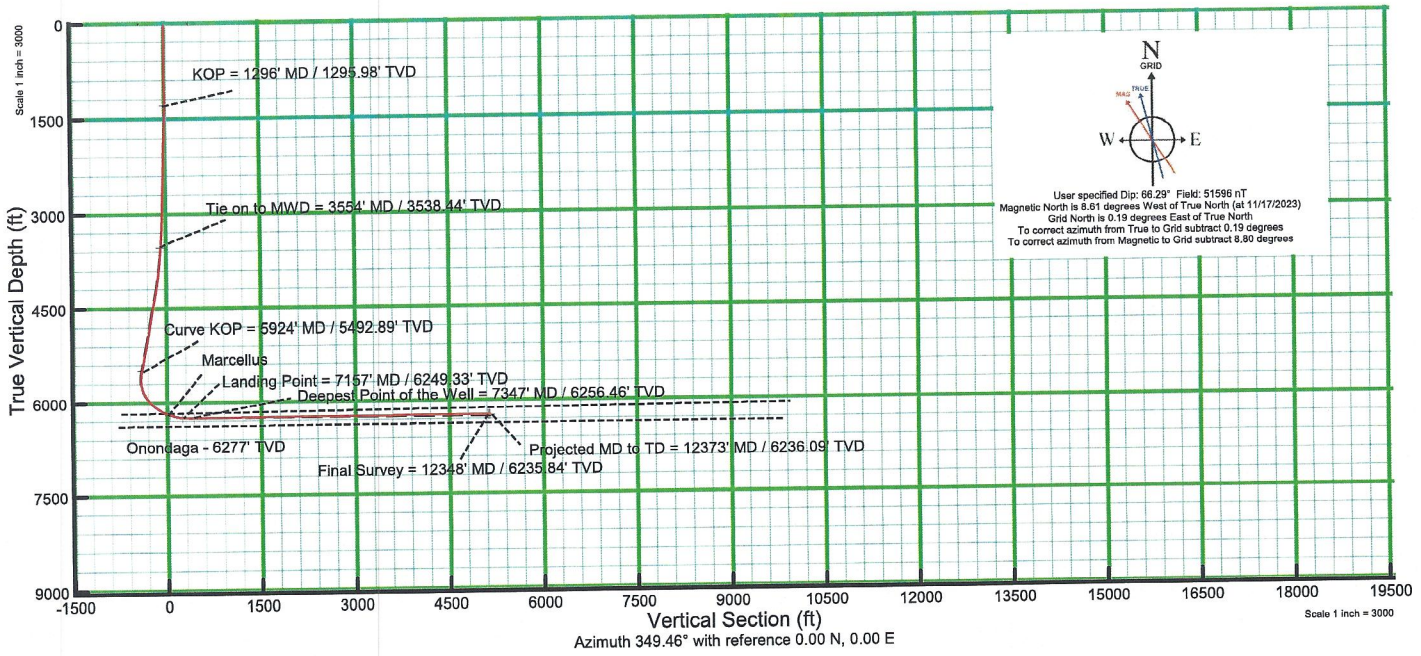
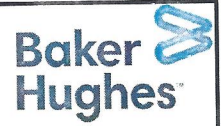
Final Survey @ 12348' MD

Projected MD at TD: 12373'

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KB Elevation=765 FT  
 Ground Elevation=737 FT  
 All Survey Measurements were taken from KB Elevation



Landing Point

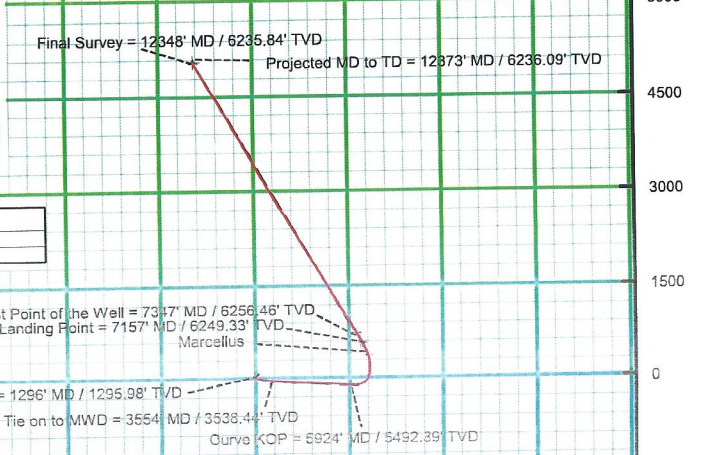
MD (ft)	Inc. (")	Az. (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
7157	87.07	330.73	6249.33	570.97	1712.98	1724872.25	14443689.91	39.7714977	-80.6994275

KOP

MD (ft)	Inc. (")	Az. (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
1296	0.94	99.97	1295.98	1.28	0.21	1723180.15	14443100.45	39.7699494	-80.7055274

Surface Location

Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
1723159.94	14443099.17	39.7699459	-80.7055281



02/07/2025