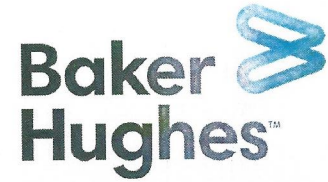




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Actual Wellpath Report

Knob Creek S-10HM AWB Proj:16436'
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REFERENCE WELLPATH IDENTIFICATION

Operator	EQT (TUG HILL OPERATING, LLC)	Well	Knob Creek S-10HM
Field	Marshall	API	47-051-02286-0000
Facility	Knob Creek	Wellbore	Knob Creek S-10HM AWB
Slot	Slot 10		

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	10/26/2023 at 2:02:31 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	65.66	52.40	1723195.91	14443177.90	39°46'12.5825"N	80°42'19.4371"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 10)	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	140.89°



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WELLPATH DATA (245 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	141.900	0.00	0.00	0.00	0.00	1723195.91	14443177.90	39°46'12.5825"N	80°42'19.4371"W	0.00	0.000	0.00	0.00	0.00
28.00	0.000	141.900	28.00	0.00	0.00	0.00	1723195.91	14443177.90	39°46'12.5825"N	80°42'19.4371"W	0.00	0.000	0.00	0.00	0.00
203.00	0.230	141.900	203.00	0.35	-0.28	0.22	1723196.13	14443177.62	39°46'12.5797"N	80°42'19.4344"W	0.35	141.900	0.13	0.13	0.00
232.00	0.140	163.640	232.00	0.44	-0.36	0.26	1723196.17	14443177.54	39°46'12.5789"N	80°42'19.4338"W	0.44	143.599	0.39	-0.31	74.97
262.00	0.260	173.460	262.00	0.53	-0.46	0.28	1723196.19	14443177.44	39°46'12.5779"N	80°42'19.4336"W	0.54	148.552	0.41	0.40	32.73
292.00	0.280	164.230	292.00	0.66	-0.60	0.31	1723196.22	14443177.30	39°46'12.5765"N	80°42'19.4332"W	0.67	152.688	0.16	0.07	-30.77
322.00	0.440	174.660	322.00	0.82	-0.78	0.34	1723196.25	14443177.12	39°46'12.5747"N	80°42'19.4328"W	0.85	156.573	0.57	0.53	34.77
353.00	0.420	211.220	353.00	0.96	-1.00	0.29	1723196.20	14443176.90	39°46'12.5726"N	80°42'19.4334"W	1.04	163.735	0.87	-0.06	117.94
385.00	0.500	192.740	385.00	1.08	-1.23	0.20	1723196.11	14443176.67	39°46'12.5702"N	80°42'19.4346"W	1.25	170.815	0.52	0.25	-57.75
416.00	0.380	173.770	416.00	1.25	-1.47	0.18	1723196.09	14443176.43	39°46'12.5679"N	80°42'19.4349"W	1.48	172.976	0.60	-0.39	-61.19
447.00	0.390	178.630	446.99	1.42	-1.68	0.19	1723196.10	14443176.22	39°46'12.5659"N	80°42'19.4347"W	1.69	173.378	0.11	0.03	15.68
478.00	0.370	208.530	477.99	1.55	-1.87	0.15	1723196.06	14443176.03	39°46'12.5640"N	80°42'19.4353"W	1.88	175.433	0.64	-0.06	96.45
510.00	0.330	229.870	509.99	1.59	-2.02	0.03	1723195.94	14443175.88	39°46'12.5625"N	80°42'19.4368"W	2.02	179.162	0.42	-0.12	66.69
541.00	0.150	257.330	540.99	1.57	-2.09	-0.08	1723195.83	14443175.81	39°46'12.5618"N	80°42'19.4382"W	2.09	182.150	0.67	-0.58	88.58
573.00	0.210	251.130	572.99	1.53	-2.11	-0.17	1723195.74	14443175.79	39°46'12.5616"N	80°42'19.4395"W	2.12	184.722	0.20	0.19	-19.37
605.00	0.170	308.260	604.99	1.46	-2.10	-0.27	1723195.64	14443175.80	39°46'12.5617"N	80°42'19.4406"W	2.12	187.244	0.58	-0.13	178.53
636.00	0.380	0.430	635.99	1.34	-1.97	-0.30	1723195.61	14443175.93	39°46'12.5630"N	80°42'19.4411"W	2.00	188.725	0.99	0.68	168.29
668.00	0.620	24.910	667.99	1.18	-1.71	-0.23	1723195.68	14443176.19	39°46'12.5656"N	80°42'19.4401"W	1.72	187.631	0.99	0.75	76.50
698.00	0.890	27.360	697.99	1.02	-1.36	-0.05	1723195.86	14443176.54	39°46'12.5691"N	80°42'19.4379"W	1.36	182.265	0.91	0.90	8.17
730.00	1.040	29.900	729.98	0.81	-0.88	0.21	1723196.12	14443177.02	39°46'12.5737"N	80°42'19.4345"W	0.91	166.908	0.49	0.47	7.94
762.00	1.140	25.160	761.98	0.57	-0.34	0.49	1723196.40	14443177.56	39°46'12.5790"N	80°42'19.4309"W	0.59	125.258	0.42	0.31	-14.81
794.00	1.210	24.360	793.97	0.28	0.25	0.76	1723196.67	14443178.15	39°46'12.5849"N	80°42'19.4274"W	0.80	71.611	0.22	0.22	-2.50
825.00	1.190	28.720	824.96	0.02	0.83	1.05	1723196.96	14443178.73	39°46'12.5907"N	80°42'19.4236"W	1.34	51.564	0.30	-0.06	14.06
857.00	1.270	27.870	856.96	-0.25	1.44	1.38	1723197.28	14443179.34	39°46'12.5966"N	80°42'19.4195"W	1.99	43.722	0.26	0.25	-2.66
888.00	1.050	41.100	887.95	-0.43	1.96	1.72	1723197.63	14443179.86	39°46'12.6017"N	80°42'19.4150"W	2.61	41.372	1.11	-0.71	42.68
920.00	0.540	77.900	919.95	-0.41	2.21	2.06	1723197.97	14443180.11	39°46'12.6042"N	80°42'19.4106"W	3.02	43.048	2.18	-1.59	115.00
952.00	0.520	104.660	951.95	-0.23	2.20	2.35	1723198.26	14443180.10	39°46'12.6041"N	80°42'19.4069"W	3.22	46.855	0.77	-0.06	83.62
984.00	0.700	120.300	983.95	0.07	2.07	2.66	1723198.57	14443179.97	39°46'12.6028"N	80°42'19.4030"W	3.37	52.139	0.76	0.56	48.87
1015.00	0.690	124.570	1014.94	0.43	1.87	2.98	1723198.89	14443179.77	39°46'12.6008"N	80°42'19.3989"W	3.51	57.916	0.17	-0.03	13.77
1047.00	0.850	129.890	1046.94	0.85	1.60	3.32	1723199.23	14443179.50	39°46'12.5982"N	80°42'19.3946"W	3.69	64.187	0.55	0.50	16.62



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Slot	Slot 10		

WELLPATH DATA (245 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]
1079.00	0.890	137.240	1078.94	1.33	1.27	3.67	1723199.58	14443179.17	39°46'12.5949"N	80°42'19.3901"W	3.88	70.904	0.37	0.12	22.97
1111.00	0.910	130.690	1110.93	1.83	0.92	4.03	1723199.94	14443178.82	39°46'12.5914"N	80°42'19.3855"W	4.13	77.114	0.33	0.06	-20.47
1143.00	0.970	136.080	1142.93	2.35	0.56	4.41	1723200.32	14443178.46	39°46'12.5879"N	80°42'19.3806"W	4.45	82.748	0.33	0.19	16.84
1174.00	0.930	133.640	1173.92	2.86	0.20	4.77	1723200.68	14443178.10	39°46'12.5843"N	80°42'19.3760"W	4.78	87.618	0.18	-0.13	-7.87
1206.00	0.890	134.000	1205.92	3.36	-0.15	5.14	1723201.05	14443177.75	39°46'12.5808"N	80°42'19.3713"W	5.14	91.707	0.13	-0.13	1.12
1237.00	0.770	133.940	1236.92	3.81	-0.47	5.46	1723201.37	14443177.44	39°46'12.5777"N	80°42'19.3672"W	5.48	94.864	0.39	-0.39	-0.19
1268.00	0.390	108.980	1267.91	4.10	-0.64	5.71	1723201.62	14443177.26	39°46'12.5759"N	80°42'19.3640"W	5.75	96.428	1.44	-1.23	-80.52
1300.00	0.400	71.210	1299.91	4.24	-0.64	5.92	1723201.83	14443177.26	39°46'12.5759"N	80°42'19.3613"W	5.96	96.198	0.80	0.03	-118.03
1331.00	0.410	67.600	1330.91	4.31	-0.57	6.13	1723202.04	14443177.33	39°46'12.5767"N	80°42'19.3587"W	6.15	95.279	0.09	0.03	-11.65
1363.00	0.400	59.820	1362.91	4.36	-0.47	6.33	1723202.24	14443177.43	39°46'12.5776"N	80°42'19.3561"W	6.35	94.214	0.17	-0.03	-24.31
1395.00	0.470	42.950	1394.91	4.35	-0.31	6.52	1723202.42	14443177.59	39°46'12.5791"N	80°42'19.3537"W	6.52	92.760	0.45	0.22	-52.72
1426.00	0.680	19.940	1425.91	4.24	-0.05	6.67	1723202.57	14443177.85	39°46'12.5818"N	80°42'19.3518"W	6.67	90.414	0.99	0.68	-74.23
1458.00	1.060	36.500	1457.91	4.07	0.37	6.91	1723202.81	14443178.27	39°46'12.5859"N	80°42'19.3487"W	6.92	86.948	1.41	1.19	51.75
1490.00	1.660	35.760	1489.90	3.88	0.98	7.35	1723203.26	14443178.88	39°46'12.5919"N	80°42'19.3429"W	7.42	82.392	1.88	1.87	-2.31
1522.00	2.090	35.880	1521.88	3.60	1.83	7.97	1723203.87	14443179.73	39°46'12.6003"N	80°42'19.3350"W	8.17	77.055	1.34	1.34	0.38
1553.00	2.630	37.280	1552.85	3.29	2.86	8.73	1723204.64	14443180.75	39°46'12.6104"N	80°42'19.3252"W	9.18	71.887	1.75	1.74	4.52
1585.00	2.910	39.510	1584.82	2.96	4.07	9.69	1723205.60	14443181.96	39°46'12.6223"N	80°42'19.3129"W	10.51	67.237	0.94	0.87	6.97
1617.00	3.220	44.710	1616.77	2.70	5.33	10.84	1723206.74	14443183.23	39°46'12.6348"N	80°42'19.2981"W	12.08	63.809	1.30	0.97	16.25
1648.00	3.500	53.360	1647.72	2.65	6.51	12.21	1723208.12	14443184.41	39°46'12.6464"N	80°42'19.2805"W	13.84	61.919	1.87	0.90	27.90
1680.00	3.750	68.210	1679.65	3.00	7.49	13.97	1723209.87	14443185.38	39°46'12.6560"N	80°42'19.2579"W	15.85	61.808	3.03	0.78	46.41
1712.00	4.300	76.460	1711.58	3.83	8.16	16.10	1723212.01	14443186.05	39°46'12.6625"N	80°42'19.2305"W	18.05	63.142	2.49	1.72	25.78
1743.00	4.660	80.940	1742.48	4.96	8.63	18.48	1723214.38	14443186.52	39°46'12.6671"N	80°42'19.2001"W	20.39	64.976	1.62	1.16	14.45
1775.00	4.830	81.700	1774.37	6.30	9.03	21.09	1723217.00	14443186.92	39°46'12.6710"N	80°42'19.1666"W	22.94	66.837	0.57	0.53	2.38
1806.00	4.980	82.000	1805.26	7.67	9.40	23.72	1723219.62	14443187.30	39°46'12.6746"N	80°42'19.1330"W	25.51	68.379	0.49	0.48	0.97
1838.00	5.130	82.160	1837.13	9.13	9.79	26.51	1723222.41	14443187.69	39°46'12.6783"N	80°42'19.0972"W	28.26	69.733	0.47	0.47	0.50
1870.00	5.200	82.190	1869.00	10.62	10.18	29.37	1723225.26	14443188.08	39°46'12.6821"N	80°42'19.0606"W	31.08	70.878	0.22	0.22	0.09
1901.00	4.320	80.170	1899.90	11.92	10.57	31.91	1723227.80	14443188.47	39°46'12.6859"N	80°42'19.0281"W	33.61	71.669	2.89	-2.84	-6.52
1933.00	3.890	74.600	1931.81	12.95	11.07	34.14	1723230.04	14443188.96	39°46'12.6907"N	80°42'18.9994"W	35.89	72.042	1.83	-1.34	-17.41
1965.00	3.900	73.150	1963.74	13.80	11.67	36.23	1723232.13	14443189.56	39°46'12.6966"N	80°42'18.9727"W	38.06	72.146	0.31	0.03	-4.53
1997.00	3.870	72.090	1995.67	14.60	12.32	38.30	1723234.19	14443190.21	39°46'12.7029"N	80°42'18.9461"W	40.23	72.172	0.24	-0.09	-3.31



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2028.00	3.870	71.330	2026.60	15.35	12.97	40.29	1723236.18	14443190.87	39°46'12.7094"N	80°42'18.9207"W	42.32	72.149	0.17	0.00	-2.45
2060.00	3.850	69.280	2058.52	16.06	13.70	42.31	1723238.21	14443191.59	39°46'12.7165"N	80°42'18.8947"W	44.48	72.060	0.44	-0.06	-6.41
2090.00	3.870	69.390	2088.46	16.70	14.41	44.20	1723240.10	14443192.31	39°46'12.7234"N	80°42'18.8704"W	46.49	71.942	0.07	0.07	0.37
2122.00	3.980	69.090	2120.38	17.39	15.19	46.25	1723242.14	14443193.08	39°46'12.7310"N	80°42'18.8442"W	48.68	71.820	0.35	0.34	-0.94
2153.00	4.120	68.840	2151.30	18.07	15.97	48.29	1723244.19	14443193.87	39°46'12.7388"N	80°42'18.8180"W	50.87	71.697	0.46	0.45	-0.81
2184.00	4.190	67.230	2182.22	18.73	16.81	50.38	1723246.27	14443194.71	39°46'12.7470"N	80°42'18.7913"W	53.11	71.542	0.44	0.23	-5.19
2216.00	4.240	65.530	2214.13	19.36	17.76	52.53	1723248.42	14443195.65	39°46'12.7562"N	80°42'18.7636"W	55.45	71.323	0.42	0.16	-5.31
2247.00	4.250	64.720	2245.05	19.92	18.72	54.61	1723250.50	14443196.62	39°46'12.7657"N	80°42'18.7369"W	57.73	71.077	0.20	0.03	-2.61
2279.00	4.220	64.830	2276.96	20.49	19.73	56.75	1723252.64	14443197.62	39°46'12.7756"N	80°42'18.7095"W	60.08	70.830	0.10	-0.09	0.34
2343.00	4.300	64.290	2340.79	21.61	21.77	61.04	1723256.93	14443199.66	39°46'12.7956"N	80°42'18.6544"W	64.81	70.371	0.14	0.12	-0.84
2374.00	4.200	59.850	2371.70	22.06	22.85	63.07	1723258.96	14443200.74	39°46'12.8062"N	80°42'18.6284"W	67.08	70.089	1.11	-0.32	-14.32
2406.00	4.280	59.870	2403.61	22.43	24.03	65.12	1723261.00	14443201.92	39°46'12.8179"N	80°42'18.6022"W	69.41	69.742	0.25	0.25	0.06
2438.00	4.270	66.020	2435.52	22.93	25.12	67.24	1723263.12	14443203.01	39°46'12.8285"N	80°42'18.5749"W	71.78	69.517	1.43	-0.03	19.22
2470.00	4.670	69.790	2467.43	23.66	26.05	69.55	1723265.43	14443203.94	39°46'12.8377"N	80°42'18.5453"W	74.27	69.465	1.55	1.25	11.78
2501.00	4.730	71.870	2498.32	24.53	26.89	71.95	1723267.83	14443204.78	39°46'12.8458"N	80°42'18.5145"W	76.81	69.511	0.58	0.19	6.71
2533.00	4.630	68.490	2530.22	25.39	27.77	74.41	1723270.29	14443205.66	39°46'12.8545"N	80°42'18.4831"W	79.42	69.533	0.92	-0.31	-10.56
2565.00	4.340	68.350	2562.12	26.14	28.69	76.73	1723272.61	14443206.58	39°46'12.8635"N	80°42'18.4532"W	81.92	69.499	0.91	-0.91	-0.44
2597.00	4.180	66.060	2594.03	26.81	29.61	78.92	1723274.80	14443207.50	39°46'12.8725"N	80°42'18.4251"W	84.30	69.435	0.73	-0.50	-7.16
2629.00	4.010	67.320	2625.95	27.43	30.51	81.02	1723276.90	14443208.40	39°46'12.8814"N	80°42'18.3982"W	86.58	69.363	0.60	-0.53	3.94
2660.00	4.640	62.870	2656.86	28.00	31.50	83.14	1723279.02	14443209.39	39°46'12.8911"N	80°42'18.3711"W	88.91	69.246	2.30	2.03	-14.35
2692.00	5.140	65.180	2688.74	28.62	32.70	85.59	1723281.47	14443210.58	39°46'12.9028"N	80°42'18.3396"W	91.62	69.093	1.68	1.56	7.22
2724.00	5.290	64.300	2720.61	29.32	33.94	88.22	1723284.10	14443211.82	39°46'12.9150"N	80°42'18.3059"W	94.52	68.959	0.53	0.47	-2.75
2756.00	5.240	64.640	2752.48	30.01	35.20	90.87	1723286.75	14443213.09	39°46'12.9274"N	80°42'18.2719"W	97.45	68.824	0.18	-0.16	1.06
2787.00	4.890	60.790	2783.35	30.57	36.45	93.30	1723289.18	14443214.34	39°46'12.9397"N	80°42'18.2407"W	100.17	68.659	1.57	-1.13	-12.42
2818.00	4.800	66.020	2814.24	31.14	37.63	95.64	1723291.51	14443215.51	39°46'12.9512"N	80°42'18.2107"W	102.78	68.525	1.45	-0.29	16.87
2848.00	4.570	74.680	2844.14	31.95	38.45	97.94	1723293.81	14443216.34	39°46'12.9593"N	80°42'18.1812"W	105.22	68.565	2.48	-0.77	28.87
2880.00	4.530	77.370	2876.04	33.02	39.07	100.40	1723296.27	14443216.95	39°46'12.9653"N	80°42'18.1496"W	107.74	68.740	0.68	-0.12	8.41
2912.00	4.570	76.870	2907.94	34.15	39.63	102.88	1723298.75	14443217.52	39°46'12.9708"N	80°42'18.1179"W	110.25	68.932	0.18	0.12	-1.56
2942.00	4.460	70.870	2937.85	35.07	40.28	105.14	1723301.01	14443218.17	39°46'12.9772"N	80°42'18.0889"W	112.60	69.036	1.62	-0.37	-20.00
2974.00	4.060	70.800	2969.76	35.88	41.07	107.39	1723303.26	14443218.95	39°46'12.9848"N	80°42'18.0601"W	114.97	69.073	1.25	-1.25	-0.22



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Facility	Knob Creek	Wellbore	Knob Creek S-10HM AWB
Slot	Slot 10		

WELLPATH DATA (245 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]
3006.00	3.880	68.910	3001.68	36.60	41.83	109.47	1723305.34	14443219.71	39°46'12.9923"N	80°42'18.0334"W	117.19	69.089	0.70	-0.56	-5.91
3038.00	4.240	68.330	3033.60	37.29	42.65	111.58	1723307.45	14443220.54	39°46'13.0004"N	80°42'18.0064"W	119.45	69.079	1.13	1.12	-1.81
3069.00	5.180	64.550	3064.50	37.96	43.68	113.91	1723309.77	14443221.56	39°46'13.0104"N	80°42'17.9765"W	122.00	69.021	3.19	3.03	-12.19
3101.00	6.530	62.830	3096.33	38.68	45.13	116.83	1723312.70	14443223.01	39°46'13.0247"N	80°42'17.9390"W	125.24	68.879	4.25	4.22	-5.38
3133.00	7.590	61.500	3128.09	39.45	46.97	120.31	1723316.17	14443224.85	39°46'13.0427"N	80°42'17.8944"W	129.15	68.674	3.35	3.31	-4.16
3164.00	7.740	62.650	3158.81	40.25	48.91	123.96	1723319.82	14443226.79	39°46'13.0617"N	80°42'17.8475"W	133.26	68.470	0.69	0.48	3.71
3196.00	8.100	65.520	3190.51	41.26	50.83	127.93	1723323.79	14443228.71	39°46'13.0806"N	80°42'17.7967"W	137.65	68.330	1.67	1.13	8.97
3227.00	8.250	66.580	3221.19	42.41	52.62	131.96	1723327.81	14443230.50	39°46'13.0982"N	80°42'17.7450"W	142.06	68.260	0.69	0.48	3.42
3259.00	9.450	66.340	3252.81	43.73	54.59	136.47	1723332.32	14443232.46	39°46'13.1175"N	80°42'17.6871"W	146.98	68.199	3.75	3.75	-0.75
3290.00	10.530	65.830	3283.34	45.14	56.77	141.38	1723337.24	14443234.64	39°46'13.1389"N	80°42'17.6241"W	152.35	68.124	3.50	3.48	-1.65
3322.00	11.710	66.460	3314.74	46.76	59.26	147.03	1723342.88	14443237.14	39°46'13.1633"N	80°42'17.5517"W	158.52	68.048	3.71	3.69	1.97
3355.00	12.740	66.960	3346.99	48.67	62.02	153.45	1723349.30	14443239.90	39°46'13.1904"N	80°42'17.4694"W	165.51	67.992	3.14	3.12	1.52
3387.00	13.580	69.860	3378.15	50.87	64.70	160.22	1723356.07	14443242.57	39°46'13.2166"N	80°42'17.3825"W	172.79	68.011	3.34	2.62	9.06
3417.00	14.400	72.070	3407.26	53.36	67.06	167.08	1723362.92	14443244.93	39°46'13.2397"N	80°42'17.2946"W	180.03	68.131	3.26	2.73	7.37
3449.00	15.500	71.460	3438.17	56.30	69.64	174.92	1723370.76	14443247.52	39°46'13.2650"N	80°42'17.1941"W	188.27	68.290	3.47	3.44	-1.91
3481.00	16.630	67.980	3468.93	59.15	72.72	183.22	1723379.05	14443250.59	39°46'13.2951"N	80°42'17.0876"W	197.12	68.352	4.64	3.53	-10.88
3513.00	17.460	65.710	3499.52	61.72	76.41	191.84	1723387.67	14443254.28	39°46'13.3314"N	80°42'16.9771"W	206.50	68.282	3.32	2.59	-7.09
3542.00	17.940	67.190	3527.15	64.09	79.93	199.92	1723395.75	14443257.80	39°46'13.3659"N	80°42'16.8734"W	215.31	68.207	2.27	1.66	5.10
3556.00	17.670	68.800	3540.48	65.35	81.54	203.89	1723399.72	14443259.40	39°46'13.3816"N	80°42'16.8225"W	219.59	68.203	4.01	-1.93	11.50
3599.00	16.660	71.650	3581.56	69.54	85.84	215.82	1723411.65	14443263.70	39°46'13.4237"N	80°42'16.6695"W	232.27	68.311	3.06	-2.35	6.63
3695.00	17.490	64.670	3673.34	77.86	96.34	241.93	1723437.74	14443274.20	39°46'13.5267"N	80°42'16.3348"W	260.41	68.286	2.30	0.86	-7.27
3790.00	19.350	60.900	3763.55	83.95	109.99	268.38	1723464.18	14443287.85	39°46'13.6607"N	80°42'15.9954"W	290.05	67.715	2.06	1.64	-3.97
3885.00	21.930	61.890	3852.53	90.03	125.89	297.58	1723493.37	14443303.74	39°46'13.8169"N	80°42'15.6208"W	323.12	67.069	3.05	3.03	1.04
3980.00	22.630	62.520	3940.44	97.10	142.69	329.44	1723525.22	14443320.53	39°46'13.9818"N	80°42'15.2120"W	359.02	66.582	0.78	0.74	0.66
4075.00	24.630	67.650	4027.48	106.50	158.65	363.97	1723559.74	14443336.49	39°46'14.1385"N	80°42'14.7691"W	397.05	66.448	3.02	2.11	5.40
4170.00	28.550	68.400	4112.41	119.04	174.54	403.41	1723599.16	14443352.37	39°46'14.2942"N	80°42'14.2634"W	439.55	66.603	4.14	4.13	0.79
4264.00	30.970	70.270	4194.01	133.83	190.98	447.06	1723642.80	14443368.80	39°46'14.4552"N	80°42'13.7036"W	486.15	66.869	2.76	2.57	1.99
4360.00	31.330	71.790	4276.17	150.93	207.12	494.02	1723689.74	14443384.93	39°46'14.6132"N	80°42'13.1015"W	535.68	67.254	0.90	0.38	1.58
4455.00	29.560	70.750	4358.07	167.70	222.56	539.61	1723735.31	14443400.37	39°46'14.7644"N	80°42'12.5170"W	583.71	67.586	1.94	-1.86	-1.09
4550.00	28.550	69.900	4441.11	183.06	238.09	583.06	1723778.74	14443415.90	39°46'14.9164"N	80°42'11.9600"W	629.79	67.787	1.15	-1.06	-0.89

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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]
4645.00	27.630	68.460	4524.92	197.10	253.98	624.87	1723820.53	14443431.78	39°46'15.0721"N	80°42'11.4239"W	674.51	67.881	1.20	-0.97	-1.52
4740.00	26.120	67.000	4609.66	209.55	270.24	664.61	1723860.26	14443448.03	39°46'15.2314"N	80°42'10.9142"W	717.45	67.873	1.73	-1.59	-1.54
4835.00	29.330	69.210	4693.75	222.67	286.67	705.62	1723901.25	14443464.46	39°46'15.3925"N	80°42'10.3882"W	761.63	67.890	3.55	3.38	2.33
4930.00	30.880	70.690	4775.93	238.25	303.00	750.39	1723946.00	14443480.78	39°46'15.5523"N	80°42'9.8143"W	809.25	68.012	1.81	1.63	1.56
5025.00	30.940	68.910	4857.44	254.06	319.84	796.18	1723991.78	14443497.62	39°46'15.7174"N	80°42'9.2271"W	858.02	68.113	0.96	0.06	-1.87
5121.00	30.770	67.820	4939.85	268.85	338.00	841.95	1724037.52	14443515.76	39°46'15.8952"N	80°42'8.6402"W	907.26	68.127	0.61	-0.18	-1.14
5216.00	31.090	69.010	5021.34	283.55	355.96	887.35	1724082.91	14443533.72	39°46'16.0712"N	80°42'8.0579"W	956.08	68.142	0.73	0.34	1.25
5311.00	30.970	69.720	5102.75	299.07	373.21	933.18	1724128.72	14443550.97	39°46'16.2403"N	80°42'7.4703"W	1005.04	68.202	0.41	-0.13	0.75
5406.00	31.480	68.460	5183.99	314.45	390.79	979.18	1724174.70	14443568.54	39°46'16.4125"N	80°42'6.8804"W	1054.28	68.243	0.87	0.54	-1.33
5501.00	28.030	65.850	5266.45	327.70	409.04	1022.63	1724218.14	14443586.78	39°46'16.5914"N	80°42'6.3231"W	1101.41	68.199	3.88	-3.63	-2.75
5595.00	25.800	61.440	5350.27	337.15	427.86	1060.76	1724256.25	14443605.59	39°46'16.7761"N	80°42'5.8340"W	1143.80	68.033	3.18	-2.37	-4.69
5690.00	28.600	67.300	5434.78	347.36	446.52	1099.91	1724295.39	14443624.25	39°46'16.9593"N	80°42'5.3318"W	1187.09	67.905	4.08	2.95	6.17
5785.00	28.130	68.030	5518.37	360.39	463.68	1141.66	1724337.12	14443641.40	39°46'17.1275"N	80°42'4.7964"W	1232.23	67.896	0.61	-0.49	0.77
5880.00	27.310	68.020	5602.47	373.40	480.21	1182.64	1724378.08	14443657.92	39°46'17.2895"N	80°42'4.2709"W	1276.41	67.900	0.86	-0.86	-0.01
5972.00	28.040	68.970	5683.94	386.33	495.87	1222.39	1724417.82	14443673.58	39°46'17.4430"N	80°42'3.7611"W	1319.14	67.920	0.93	0.79	1.03
6023.00	26.800	67.520	5729.21	393.34	504.57	1244.21	1724439.62	14443682.27	39°46'17.5282"N	80°42'3.4814"W	1342.62	67.926	2.76	-2.43	-2.84
6118.00	28.990	79.880	5813.24	410.65	516.82	1286.70	1724482.10	14443694.51	39°46'17.6478"N	80°42'2.9366"W	1386.61	68.117	6.50	2.31	13.01
6211.00	33.640	95.800	5892.81	439.82	518.18	1334.62	1724530.01	14443695.87	39°46'17.6597"N	80°42'2.3228"W	1431.69	68.781	10.17	5.00	17.12
6306.00	38.620	108.310	5969.62	483.47	506.18	1389.06	1724584.42	14443683.88	39°46'17.5393"N	80°42'1.6262"W	1478.41	69.978	9.35	5.24	13.17
6401.00	45.890	117.440	6039.95	539.87	481.09	1447.60	1724642.94	14443658.80	39°46'17.2895"N	80°42'0.8774"W	1525.45	71.616	10.00	7.65	9.61
6495.00	53.030	124.340	6101.05	606.96	444.29	1508.68	1724704.00	14443622.01	39°46'16.9237"N	80°42'0.0968"W	1572.74	73.591	9.42	7.60	7.34
6591.00	60.670	131.340	6153.56	685.17	394.90	1571.91	1724767.20	14443572.64	39°46'16.4335"N	80°41'59.2891"W	1620.76	75.898	10.02	7.96	7.29
6686.00	68.380	137.290	6194.42	770.27	334.96	1633.09	1724828.36	14443512.73	39°46'15.8391"N	80°41'58.5081"W	1667.09	78.409	9.89	8.12	6.26
6781.00	74.960	140.110	6224.28	860.32	267.23	1692.54	1724887.78	14443445.02	39°46'15.1678"N	80°41'57.7497"W	1713.51	81.028	7.48	6.93	2.97
6876.00	77.770	143.610	6246.68	952.61	194.63	1749.53	1724944.75	14443372.45	39°46'14.4484"N	80°41'57.0230"W	1760.32	83.652	4.64	2.96	3.68
6971.00	85.040	148.770	6260.88	1046.04	116.64	1801.71	1724996.91	14443294.49	39°46'13.6759"N	80°41'56.3581"W	1805.48	86.296	9.35	7.65	5.43
7066.00	88.820	148.590	6265.97	1140.01	35.61	1851.01	1725046.19	14443213.50	39°46'12.8735"N	80°41'55.7302"W	1851.36	88.898	3.98	3.98	-0.19
7161.00	88.890	148.140	6267.86	1234.18	-45.26	1900.83	1725095.99	14443132.66	39°46'12.0727"N	80°41'55.0956"W	1901.37	91.364	0.48	0.07	-0.47
7256.00	89.320	148.580	6269.35	1328.36	-126.13	1950.66	1725145.80	14443051.82	39°46'11.2718"N	80°41'54.4610"W	1954.73	93.699	0.65	0.45	0.46
7351.00	89.410	148.220	6270.40	1422.54	-207.03	2000.44	1725195.56	14442970.95	39°46'10.4706"N	80°41'53.8270"W	2011.12	95.909	0.39	0.09	-0.38



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7445.00	89.470	149.260	6271.32	1515.66	-287.38	2049.21	1725244.31	14442890.63	39°46'9.6749"N	80°41'53.2058"W	2069.27	97.983	1.11	0.06	1.11
7540.00	89.340	149.440	6272.31	1609.62	-369.11	2097.64	1725292.72	14442808.94	39°46'8.8657"N	80°41'52.5892"W	2129.87	99.980	0.23	-0.14	0.19
7635.00	89.830	148.870	6272.99	1703.63	-450.67	2146.35	1725341.41	14442727.41	39°46'8.0580"N	80°41'51.9689"W	2193.15	101.858	0.79	0.52	-0.60
7730.00	88.940	149.980	6274.01	1797.57	-532.45	2194.67	1725389.71	14442645.66	39°46'7.2481"N	80°41'51.3537"W	2258.33	103.637	1.50	-0.94	1.17
7825.00	88.940	149.060	6275.77	1891.48	-614.31	2242.84	1725437.87	14442563.83	39°46'6.4376"N	80°41'50.7402"W	2325.45	105.317	0.97	0.00	-0.97
7920.00	89.040	149.970	6277.45	1985.39	-696.16	2291.03	1725486.04	14442482.01	39°46'5.6270"N	80°41'50.1267"W	2394.47	106.902	0.96	0.11	0.96
8015.00	89.040	149.830	6279.04	2079.20	-778.34	2338.67	1725533.66	14442399.87	39°46'4.8133"N	80°41'49.5202"W	2464.79	108.408	0.15	0.00	-0.15
8109.00	88.880	149.050	6280.74	2172.14	-859.27	2386.45	1725581.42	14442318.97	39°46'4.0119"N	80°41'48.9117"W	2536.43	109.802	0.85	-0.17	-0.83
8205.00	88.860	149.650	6282.64	2267.08	-941.84	2435.38	1725630.33	14442236.43	39°46'3.1942"N	80°41'48.2887"W	2611.16	111.143	0.63	-0.02	0.62
8299.00	88.940	150.000	6284.44	2359.92	-1023.09	2482.62	1725677.55	14442155.22	39°46'2.3897"N	80°41'47.6872"W	2685.17	112.397	0.38	0.09	0.37
8394.00	88.910	150.480	6286.22	2453.64	-1105.54	2529.77	1725724.68	14442072.79	39°46'1.5732"N	80°41'47.0871"W	2760.79	113.606	0.51	-0.03	0.51
8489.00	88.850	150.520	6288.08	2547.29	-1188.21	2576.54	1725771.44	14441990.16	39°46'0.7547"N	80°41'46.4917"W	2837.32	114.758	0.08	-0.06	0.04
8584.00	88.910	150.360	6289.94	2640.95	-1270.83	2623.40	1725818.27	14441907.57	39°45'59.9366"N	80°41'45.8952"W	2915.00	115.847	0.18	0.06	-0.17
8679.00	88.760	150.120	6291.87	2734.67	-1353.28	2670.54	1725865.40	14441825.15	39°45'59.1202"N	80°41'45.2950"W	2993.86	116.873	0.30	-0.16	-0.25
8774.00	88.970	150.260	6293.75	2828.40	-1435.70	2717.76	1725912.60	14441742.77	39°45'58.3041"N	80°41'44.6940"W	3073.67	117.846	0.27	0.22	0.15
8869.00	88.970	150.800	6295.46	2922.05	-1518.39	2764.49	1725959.31	14441660.11	39°45'57.4853"N	80°41'44.0991"W	3154.03	118.778	0.57	0.00	0.57
8963.00	89.040	150.540	6297.09	3014.67	-1600.33	2810.53	1726005.33	14441578.20	39°45'56.6740"N	80°41'43.5132"W	3234.21	119.657	0.29	0.07	-0.28
9058.00	88.820	150.490	6298.86	3108.31	-1683.01	2857.28	1726052.06	14441495.55	39°45'55.8553"N	80°41'42.9181"W	3316.11	120.499	0.24	-0.23	-0.05
9153.00	88.880	150.580	6300.77	3201.95	-1765.71	2904.00	1726098.76	14441412.89	39°45'55.0365"N	80°41'42.3234"W	3398.67	121.301	0.11	0.06	0.09
9248.00	88.820	150.200	6302.68	3295.63	-1848.28	2950.93	1726145.68	14441330.34	39°45'54.2189"N	80°41'41.7260"W	3481.97	122.061	0.40	-0.06	-0.40
9343.00	88.700	150.000	6304.73	3389.38	-1930.62	2998.27	1726193.00	14441248.04	39°45'53.4036"N	80°41'41.1233"W	3566.08	122.778	0.25	-0.13	-0.21
9438.00	88.880	149.860	6306.74	3483.18	-2012.82	3045.86	1726240.57	14441165.88	39°45'52.5896"N	80°41'40.5175"W	3650.85	123.458	0.24	0.19	-0.15
9533.00	88.790	150.340	6308.67	3576.94	-2095.15	3093.21	1726287.90	14441083.57	39°45'51.7743"N	80°41'39.9148"W	3735.99	124.111	0.51	-0.09	0.51
9628.00	88.850	148.130	6310.63	3670.91	-2176.76	3141.79	1726336.46	14441002.00	39°45'50.9662"N	80°41'39.2962"W	3822.19	124.716	2.33	0.06	-2.33
9723.00	88.480	148.930	6312.84	3765.04	-2257.77	3191.37	1726386.02	14440921.02	39°45'50.1640"N	80°41'38.6649"W	3909.27	125.278	0.93	-0.39	0.84
9818.00	88.850	150.610	6315.05	3858.87	-2339.82	3239.19	1726433.82	14440839.00	39°45'49.3514"N	80°41'38.0562"W	3995.89	125.842	1.81	0.39	1.77
9913.00	88.790	150.540	6317.01	3952.50	-2422.55	3285.85	1726480.46	14440756.30	39°45'48.5323"N	80°41'37.4622"W	4082.35	126.400	0.10	-0.06	-0.07
10008.00	88.940	150.240	6318.89	4046.17	-2505.13	3332.78	1726527.38	14440673.76	39°45'47.7146"N	80°41'36.8649"W	4169.30	126.931	0.35	0.16	-0.32
10103.00	88.850	150.360	6320.72	4139.88	-2587.63	3379.84	1726574.42	14440591.29	39°45'46.8977"N	80°41'36.2659"W	4256.66	127.438	0.16	-0.09	0.13
10198.00	88.880	150.490	6322.61	4233.55	-2670.24	3426.72	1726621.28	14440508.71	39°45'46.0797"N	80°41'35.6692"W	4344.26	127.927	0.14	0.03	0.14



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Operator	EQT (TUG HILL OPERATING, LLC)	Well	Knob Creek S-10HM
Field	Marshall	API	47-051-02286-0000
Facility	Knob Creek	Wellbore	Knob Creek S-10HM AWB
Slot	Slot 10		

WELLPATH DATA (245 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]
10293.00	88.850	150.350	6324.49	4327.22	-2752.84	3473.60	1726668.15	14440426.14	39°45'45.2618"N	80°41'35.0724"W	4432.16	128.397	0.15	-0.03	-0.15
10388.00	88.880	150.390	6326.37	4420.90	-2835.40	3520.56	1726715.09	14440343.62	39°45'44.4443"N	80°41'34.4748"W	4520.38	128.847	0.05	0.03	0.04
10484.00	88.850	150.140	6328.27	4515.60	-2918.74	3568.17	1726762.67	14440260.31	39°45'43.6190"N	80°41'33.8688"W	4609.87	129.283	0.26	-0.03	-0.26
10579.00	88.910	150.200	6330.13	4609.34	-3001.14	3615.42	1726809.90	14440177.94	39°45'42.8031"N	80°41'33.2674"W	4698.73	129.696	0.09	0.06	0.06
10674.00	88.850	150.190	6331.99	4703.07	-3083.56	3662.63	1726857.09	14440095.56	39°45'41.9870"N	80°41'32.6665"W	4787.81	130.094	0.06	-0.06	-0.01
10769.00	88.820	150.160	6333.92	4796.81	-3165.96	3709.86	1726904.31	14440013.19	39°45'41.1711"N	80°41'32.0652"W	4877.13	130.477	0.04	-0.03	-0.03
10863.00	88.670	150.250	6335.98	4889.55	-3247.51	3756.56	1726950.99	14439931.67	39°45'40.3635"N	80°41'31.4709"W	4965.69	130.843	0.19	-0.16	0.10
10958.00	88.820	149.660	6338.06	4983.34	-3329.73	3804.11	1726998.53	14439849.48	39°45'39.5494"N	80°41'30.8656"W	5055.53	131.196	0.64	0.16	-0.62
11053.00	88.700	149.770	6340.11	5077.19	-3411.75	3852.01	1727046.40	14439767.50	39°45'38.7372"N	80°41'30.2558"W	5145.68	131.531	0.17	-0.13	0.12
11148.00	89.030	149.840	6341.99	5171.02	-3493.84	3899.78	1727094.16	14439685.44	39°45'37.9243"N	80°41'29.6478"W	5235.95	131.857	0.36	0.35	0.07
11243.00	88.660	149.400	6343.91	5264.90	-3575.78	3947.82	1727142.17	14439603.53	39°45'37.1129"N	80°41'29.0363"W	5326.49	132.169	0.61	-0.39	-0.46
11338.00	88.880	150.210	6345.95	5358.73	-3657.87	3995.59	1727189.92	14439521.47	39°45'36.3000"N	80°41'28.4283"W	5417.08	132.473	0.88	0.23	0.85
11433.00	88.730	152.300	6347.93	5452.16	-3741.14	4041.26	1727235.58	14439438.24	39°45'35.4755"N	80°41'27.8471"W	5507.08	132.792	2.21	-0.16	2.20
11528.00	88.690	152.660	6350.07	5545.20	-3825.37	4085.14	1727279.44	14439354.04	39°45'34.6416"N	80°41'27.2889"W	5596.59	133.119	0.38	-0.04	0.38
11623.00	88.790	151.110	6352.16	5638.43	-3909.14	4129.90	1727324.18	14439270.31	39°45'33.8122"N	80°41'26.7195"W	5686.60	133.427	1.63	0.11	-1.63
11718.00	88.910	150.540	6354.06	5731.98	-3992.07	4176.20	1727370.46	14439187.41	39°45'32.9911"N	80°41'26.1303"W	5777.30	133.709	0.61	0.13	-0.60
11813.00	87.990	150.080	6356.63	5825.67	-4074.56	4223.24	1727417.48	14439104.94	39°45'32.1742"N	80°41'25.5317"W	5868.37	133.974	1.08	-0.97	-0.48
11908.00	88.450	150.560	6359.59	5919.34	-4157.06	4270.25	1727464.48	14439022.48	39°45'31.3573"N	80°41'24.9333"W	5959.55	134.230	0.70	0.48	0.51
12003.00	88.940	151.780	6361.75	6012.79	-4240.26	4316.05	1727510.26	14438939.31	39°45'30.5334"N	80°41'24.3505"W	6050.46	134.493	1.38	0.52	1.28
12098.00	88.200	150.140	6364.12	6106.29	-4323.29	4362.15	1727556.34	14438856.32	39°45'29.7113"N	80°41'23.7640"W	6141.59	134.744	1.89	-0.78	-1.73
12193.00	88.050	149.210	6367.23	6200.12	-4405.25	4410.09	1727604.26	14438774.39	39°45'28.8997"N	80°41'23.1537"W	6233.38	134.969	0.99	-0.16	-0.98
12288.00	88.660	150.010	6369.96	6293.99	-4487.16	4458.13	1727652.28	14438692.51	39°45'28.0886"N	80°41'22.5423"W	6325.31	135.186	1.06	0.64	0.84
12382.00	88.480	150.600	6372.30	6386.69	-4568.79	4504.68	1727698.81	14438610.91	39°45'27.2803"N	80°41'21.9498"W	6416.07	135.405	0.66	-0.19	0.63
12478.00	88.420	150.160	6374.90	6481.34	-4652.21	4552.11	1727746.22	14438527.52	39°45'26.4542"N	80°41'21.3462"W	6508.82	135.623	0.46	-0.06	-0.46
12573.00	88.020	149.180	6377.85	6575.18	-4734.17	4600.06	1727794.15	14438445.15	39°45'25.6426"N	80°41'20.7359"W	6600.98	135.823	1.11	-0.42	-1.03
12668.00	88.290	149.820	6380.91	6669.06	-4815.98	4648.25	1727842.33	14438363.82	39°45'24.8324"N	80°41'20.1225"W	6693.27	136.015	0.73	0.28	0.67
12763.00	88.320	148.960	6383.72	6762.98	-4897.71	4696.60	1727890.66	14438282.12	39°45'24.0231"N	80°41'19.5070"W	6785.69	136.201	0.91	0.03	-0.91
12858.00	88.570	149.880	6386.30	6856.89	-4979.46	4744.91	1727938.95	14438200.40	39°45'23.2135"N	80°41'18.8921"W	6878.17	136.382	1.00	0.26	0.97
12954.00	89.310	149.700	6388.07	6951.72	-5062.41	4793.21	1727987.23	14438117.49	39°45'22.3921"N	80°41'18.2774"W	6971.57	136.565	0.79	0.77	-0.19
13049.00	89.280	149.170	6389.24	7045.65	-5144.20	4841.51	1728035.51	14438035.72	39°45'21.5821"N	80°41'17.6625"W	7064.21	136.736	0.56	-0.03	-0.56



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Operator	EQT (TUG HILL OPERATING, LLC)	Well	Knob Creek S-10HM
Field	Marshall	API	47-051-02286-0000
Facility	Knob Creek	Wellbore	Knob Creek S-10HM AWB
Slot	Slot 10		

WELLPATH DATA (245 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]
13144.00	89.190	148.100	6390.51	7139.78	-5225.31	4890.95	1728084.94	14437954.65	39°45'20.7788"N	80°41'17.0331"W	7157.19	136.893	1.13	-0.09	-1.13
13239.00	89.310	148.840	6391.75	7233.94	-5306.28	4940.63	1728134.59	14437873.71	39°45'19.9769"N	80°41'16.4007"W	7250.27	137.044	0.79	0.13	0.78
13333.00	89.190	149.450	6392.98	7326.96	-5386.97	4988.83	1728182.78	14437793.06	39°45'19.1778"N	80°41'15.7870"W	7342.20	137.197	0.66	-0.13	0.65
13428.00	88.970	149.340	6394.51	7420.90	-5468.72	5037.19	1728231.12	14437711.33	39°45'18.3682"N	80°41'15.1715"W	7435.07	137.352	0.26	-0.23	-0.12
13523.00	88.200	148.310	6396.85	7514.96	-5549.98	5086.36	1728280.26	14437630.11	39°45'17.5635"N	80°41'14.5457"W	7528.17	137.496	1.35	-0.81	-1.08
13618.00	88.880	149.730	6399.27	7608.97	-5631.40	5135.24	1728329.12	14437548.72	39°45'16.7572"N	80°41'13.9234"W	7621.24	137.638	1.66	0.72	1.49
13713.00	88.540	148.800	6401.41	7702.93	-5713.03	5183.78	1728377.64	14437467.12	39°45'15.9487"N	80°41'13.3056"W	7714.29	137.781	1.04	-0.36	-0.98
13809.00	88.260	150.450	6404.09	7797.78	-5795.82	5232.30	1728426.15	14437384.37	39°45'15.1289"N	80°41'12.6880"W	7808.23	137.925	1.74	-0.29	1.72
13904.00	88.390	149.210	6406.87	7891.58	-5877.91	5280.02	1728473.85	14437302.30	39°45'14.3159"N	80°41'12.0807"W	7901.17	138.067	1.31	0.14	-1.31
13998.00	88.260	149.490	6409.62	7984.52	-5958.75	5327.92	1728521.73	14437221.50	39°45'13.5154"N	80°41'11.4710"W	7993.34	138.199	0.33	-0.14	0.30
14093.00	88.690	149.420	6412.15	8078.43	-6040.53	5376.19	1728569.98	14437139.75	39°45'12.7055"N	80°41'10.8567"W	8086.50	138.330	0.46	0.45	-0.07
14188.00	88.460	150.290	6414.51	8172.24	-6122.66	5423.88	1728617.65	14437057.65	39°45'11.8922"N	80°41'10.2498"W	8179.57	138.463	0.95	-0.24	0.92
14283.00	88.050	149.060	6417.40	8266.08	-6204.62	5471.82	1728665.57	14436975.72	39°45'11.0805"N	80°41'9.6396"W	8272.74	138.591	1.36	-0.43	-1.29
14379.00	87.000	149.680	6421.55	8360.94	-6287.15	5520.69	1728714.42	14436893.23	39°45'10.2633"N	80°41'9.0177"W	8366.97	138.714	1.27	-1.09	0.65
14473.00	88.080	148.920	6425.58	8453.84	-6367.90	5568.63	1728762.35	14436812.51	39°45'9.4636"N	80°41'8.4074"W	8459.30	138.831	1.40	1.15	-0.81
14568.00	86.690	148.540	6429.92	8547.85	-6449.01	5617.89	1728811.59	14436731.43	39°45'8.6603"N	80°41'7.7804"W	8552.80	138.940	1.52	-1.46	-0.40
14663.00	87.620	147.650	6434.63	8641.98	-6529.56	5668.04	1728861.71	14436650.92	39°45'7.8625"N	80°41'7.1419"W	8646.49	139.040	1.35	0.98	-0.94
14758.00	90.050	150.690	6436.56	8735.95	-6611.10	5716.70	1728910.36	14436569.40	39°45'7.0549"N	80°41'6.5225"W	8739.99	139.150	4.10	2.56	3.20
14853.00	89.160	146.920	6437.22	8830.03	-6692.35	5765.90	1728959.53	14436488.19	39°45'6.2503"N	80°41'5.8963"W	8833.63	139.253	4.08	-0.94	-3.97
14948.00	89.370	149.240	6438.44	8924.27	-6772.97	5816.12	1729009.74	14436407.60	39°45'5.4518"N	80°41'5.2569"W	8927.51	139.346	2.45	0.22	2.44
15043.00	89.420	149.790	6439.44	9018.19	-6854.83	5864.31	1729057.91	14436325.77	39°45'4.6411"N	80°41'4.6436"W	9021.03	139.453	0.58	0.05	0.58
15138.00	89.280	148.750	6440.52	9112.17	-6936.49	5912.85	1729106.43	14436244.15	39°45'3.8324"N	80°41'4.0258"W	9114.64	139.555	1.10	-0.15	-1.09
15233.00	88.350	149.150	6442.48	9206.21	-7017.86	5961.84	1729155.40	14436162.81	39°45'3.0266"N	80°41'3.4023"W	9208.36	139.651	1.07	-0.98	0.42
15423.00	88.290	148.590	6448.05	9394.29	-7180.43	6060.02	1729253.55	14436000.30	39°45'1.4166"N	80°41'2.1526"W	9395.87	139.837	0.30	-0.03	-0.29
15518.00	88.320	147.390	6450.86	9488.51	-7260.95	6110.36	1729303.86	14435919.82	39°45'0.6191"N	80°41'1.5118"W	9489.88	139.918	1.26	0.03	-1.26
15614.00	88.450	151.310	6453.57	9583.41	-7343.49	6159.27	1729352.75	14435837.31	39°44'59.8016"N	80°41'0.8893"W	9584.54	140.012	4.08	0.14	4.08
15709.00	88.850	152.140	6455.81	9676.69	-7427.13	6204.26	1729397.72	14435753.70	39°44'58.9735"N	80°41'0.3171"W	9677.55	140.126	0.97	0.42	0.87
15804.00	88.480	149.910	6458.02	9770.18	-7510.21	6250.26	1729443.71	14435670.65	39°44'58.1508"N	80°40'59.7319"W	9770.82	140.232	2.38	-0.39	-2.35
15898.00	87.890	149.080	6461.00	9863.07	-7591.15	6297.95	1729491.38	14435589.74	39°44'57.3492"N	80°40'59.1249"W	9863.56	140.319	1.08	-0.63	-0.88
15993.00	88.110	149.730	6464.32	9956.97	-7672.88	6346.28	1729539.68	14435508.05	39°44'56.5398"N	80°40'58.5100"W	9957.32	140.406	0.72	0.23	0.68



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Slot	Slot 10		

WELLPATH DATA (245 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]
16088.00	87.980	149.910	6467.56	10050.76	-7754.95	6394.01	1729587.40	14435426.00	39°44'55.7270"N	80°40'57.9026"W	10051.00	140.494	0.23	-0.14	0.19
16183.00	89.090	150.250	6469.98	10144.51	-7837.26	6441.37	1729634.75	14435343.73	39°44'54.9119"N	80°40'57.2999"W	10144.65	140.584	1.22	1.17	0.36
16277.00	88.140	150.430	6472.26	10237.21	-7918.92	6487.88	1729681.23	14435262.10	39°44'54.1033"N	80°40'56.7083"W	10237.28	140.673	1.03	-1.01	0.19
16411.00	88.780	151.630	6475.86	10369.06	-8036.11	6552.75	1729746.08	14435144.96	39°44'52.9429"N	80°40'55.8830"W	10369.07	140.806	1.01	0.48	0.90
16436.00†	88.780	151.630	6476.39	10393.62	-8058.10	6564.63	1729757.95	14435122.97	39°44'52.7251"N	80°40'55.7319"W	10393.62	140.832	0.00	0.00	0.00

HOLE & CASING SECTIONS - Ref Wellbore: Knob Creek S-10HM AWB Ref Wellpath: Knob Creek S-10HM AWB Proj:16436'

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	-0.13	0.10
17.5in Open Hole	148.00	494.00	346.00	148.00	493.99	-0.13	0.10	-1.95	0.09
13.375in Casing Surface	28.00	494.00	466.00	28.00	493.99	0.00	0.00	-1.95	0.09
12.25in Open Hole	494.00	2309.00	1815.00	493.99	2306.88	-1.95	0.09	20.68	58.76
9.625in Casing Intermediate	28.00	2309.00	2281.00	28.00	2306.88	0.00	0.00	20.68	58.76
8.75in Open Hole	2309.00	6046.00	3737.00	2306.88	5749.70	20.68	58.76	508.30	1253.96
8.5in Open Hole	6046.00	16436.00	10390.00	5749.70	6476.39	508.30	1253.96	-8058.10	6564.63
5.5in Casing Production	28.00	16439.00	16411.00	28.00	N/A	0.00	0.00	N/A	N/A

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Actual Wellpath Report

Knob Creek S-10HM AWB Proj:16436'

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REFERENCE WELLPATH IDENTIFICATION

Operator	EQT (TUG HILL OPERATING, LLC)	Well	Knob Creek S-10HM
Field	Marshall	API	47-051-02286-0000
Facility	Knob Creek	Wellbore	Knob Creek S-10HM AWB
Slot	Slot 10		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Knob Creek LP Rev-1	6246.00	106.95	1788.20	1724983.41	14443284.81	39°46'13.5807"N	80°41'56.5315"W	point
Knob Creek BHL Rev-1	6411.10	-8065.98	6556.66	1729749.98	14435115.10	39°44'52.6475"N	80°40'55.8344"W	point

WELLPATH COMPOSITION - Ref Wellbore: Knob Creek S-10HM AWB Ref Wellpath: Knob Creek S-10HM AWB Proj:16436'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
28.00	510.00	Gyrodata 2015 - CT+WIR+DPIPE	03 Gyrodata Cont. Gyro<17-1/2">(203'-510')	Knob Creek S-10HM AWB	10/16/2023
510.00	2343.00	Gyrodata 2015 - CT+WIR+DPIPE	04 Gyrodata Cont Gyro<12-1/4">(510')(541'-2343')	Knob Creek S-10HM AWB	10/16/2023
2343.00	3556.00	Gyrodata 2015 - CT+WIR+DPIPE	05 Gyrodata Cont. Gyro<8 3/4">(2343')(2374'-3556')	Knob Creek S-10HM AWB	10/16/2023
3556.00	5972.00	OWSG MWD rev2 + HRGM	06 SDI MWD <8-3/4">(3556')(3599'-5972')	Knob Creek S-10HM AWB	10/16/2023
5972.00	16436.00	OWSG MWD rev2 + IFR1 + Sag + Multi-Station Correction	07 BH Lucida+SQC IFR1+SAG+FDIR<8-1/2">(5972')(6023'-16411')	Knob Creek S-10HM AWB	10/16/2023

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Knob Creek S-10HM AWB Proj:16436'

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REFERENCE WELLPATH IDENTIFICATION

Operator	EQT (TUG HILL OPERATING, LLC)	Well	Knob Creek S-10HM
Field	Marshall	API	47-051-02286-0000
Facility	Knob Creek	Wellbore	Knob Creek S-10HM AWB
Slot	Slot 10		

COMMENTS

Wellpath general comments

API: 47-051-02286-0000

BH Job #: 111995193

Rig: Patterson 294

Duration:10/17/2023-10/19/2023

03_Gyrodata Cont. Gyro<17-1/2">(203'-510')

04_Gyrodata Cont Gyro<12-1/4">(510')(541'-2343')

05_Gyrodata Cont. Gyro<8 3/4">(2343')(2374'-3556')

06_SDI MWD <8-3/4">(3556')(3599'-5972')

07_BH Lucida+SQC IFR1+SAG+FDIR<8-1/2">(5972')(6023'-16411')

Landing Pt. @ 7066' MD

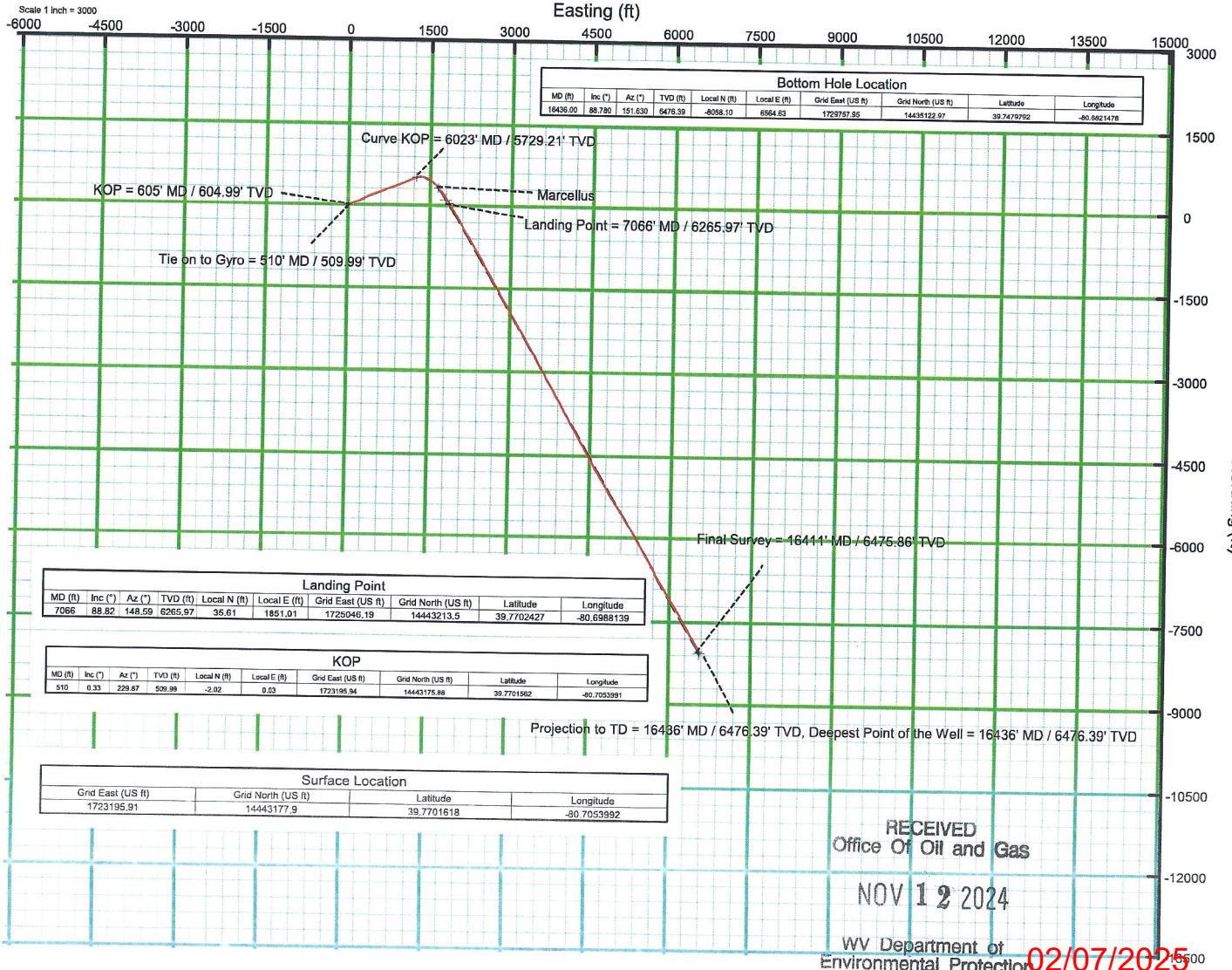
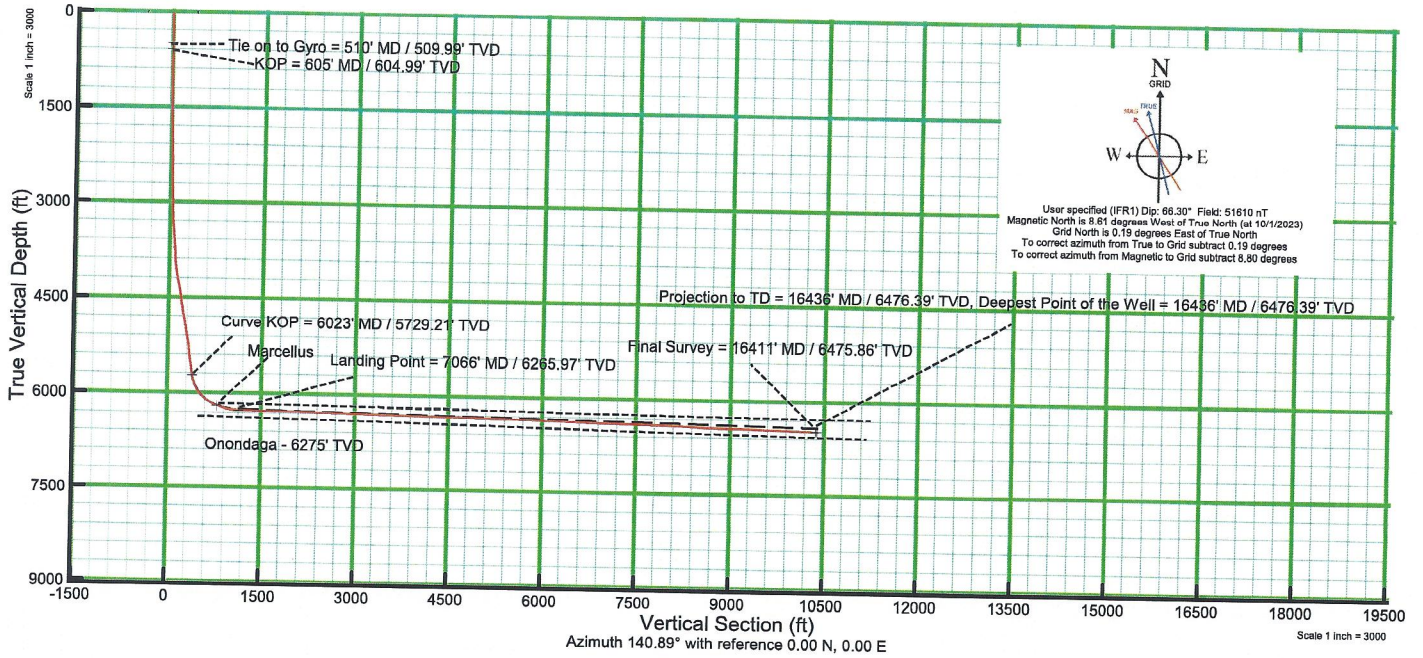
Final Survey @ 16411' MD

Projected MD at TD: 16436'

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



02/07/2025