



EQT (Chevron Data) 02-13-21

Marshall County, WV Chevron

Longworth

M10H

OH

Design: Longworth 10H As Drilled

Standard Survey Report

26 July, 2021

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Environmental

12/16/2022



EQT
Survey Report

Database:	EDM_Definitive	Local Co-ordinate Reference:	Well M10H
Company:	EQT (Chevron Data) 02-13-21	TVD Reference:	Air RKB @ 1294.000usft (Highlands 9)
Project:	Marshall County, WV Chevron	MD Reference:	Air RKB @ 1294.000usft (Highlands 9)
Site:	Longworth	North Reference:	True
Well:	M10H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Longworth 10H As Drilled		

Project	Marshall County, WV Chevron		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	West Virginia Northern Zone		

Site	Longworth				
Site Position:		Northing:	493,086.404 usft	Latitude:	39.85
From:	Map	Easting:	1,624,022.636 usft	Longitude:	-80.73
Position Uncertainty:	0.000 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.7825 °

Well	M10H					
Well Position	+N/-S	0.000 usft	Northing:	493,057.539 usft	Latitude:	39.8472369
	+E/-W	0.000 usft	Easting:	1,624,158.649 usft	Longitude:	80.7264482°W
Position Uncertainty		0.000 usft	Wellhead Elevation:	0.000 usft	Ground Level:	1,270.000 usft

Wellbore	OH				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	User Defined	5/16/2016	-8.7191	67.0777	52,269.27697306

Design	Longworth 10H As Drilled				
Audit Notes:	NOV 18 2022				
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.000
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.000	0.000	0.000	150.065	

Survey Program	Date	7/26/2021			
From (')	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	585.000	Surface Gyro (OH)	NS-GYRO-MS c	North sensing gyrocompassing m/s c	
0.00	17,561.000	Magvar Batch corrections and Halo (OH)	11_MWD+IFR1+AX+Sag c	A007Mb: IFR dec & axial + sag corrections c	

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.000	0.000	0.000	0.000	-1,294.000	0.000	0.000	0.000	0.00000	0.00000	0.00000
100.000	0.550	183.000	99.998	-1,194.001	-0.479	-0.025	0.403	0.55000	0.55000	0.00000
125.000	0.450	207.490	124.998	-1,169.002	-0.686	-0.077	0.556	0.93409	-0.40000	97.96000
150.000	0.350	203.740	149.997	-1,144.003	-0.843	-0.153	0.654	0.41327	-0.40000	-15.00000
175.000	0.450	205.020	174.996	-1,119.004	-1.002	-0.225	0.756	0.40157	0.40000	5.12000
200.000	0.350	181.490	199.996	-1,094.004	-1.167	-0.269	0.878	0.76096	-0.40000	-94.12000
225.000	0.390	187.020	224.995	-1,069.005	-1.328	-0.281	1.011	0.21431	0.16000	22.12000
250.000	0.380	186.710	249.995	-1,044.005	-1.495	-0.301	1.145	0.04086	-0.04000	-1.24000



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Wellbore:	OH		
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Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
275.000	0.530	190.150	274.994	-1,019.006	-1.691	-0.331	1.300	0.60960	0.60000	13.76000
300.000	0.660	206.300	299.992	-994.007	-1.934	-0.415	1.469	0.84387	0.52000	64.60000
325.000	0.810	209.670	324.990	-969.010	-2.217	-0.567	1.638	0.62416	0.60000	13.48000
350.000	0.800	196.820	349.988	-944.012	-2.537	-0.704	1.847	0.72172	-0.04000	-51.40000
375.000	0.860	195.630	374.985	-919.015	-2.885	-0.806	2.098	0.24970	0.24000	-4.76000
400.000	0.830	191.630	399.983	-894.017	-3.243	-0.893	2.365	0.26464	-0.12000	-16.00000
425.000	0.730	191.540	424.980	-869.020	-3.576	-0.961	2.620	0.40003	-0.40000	-0.36000
450.000	0.740	194.530	449.978	-844.022	-3.889	-1.033	2.854	0.15853	0.04000	11.96000
475.000	0.800	184.040	474.976	-819.024	-4.219	-1.086	3.114	0.61172	0.24000	-41.96000
500.000	0.820	184.820	499.974	-794.026	-4.571	-1.113	3.406	0.09135	0.08000	3.12000
525.000	0.810	189.820	524.971	-769.029	-4.924	-1.159	3.689	0.28718	-0.04000	20.00000
550.000	0.890	192.280	549.968	-744.032	-5.288	-1.230	3.968	0.35165	0.32000	9.84000
575.000	0.900	189.660	574.965	-719.035	-5.671	-1.304	4.263	0.16850	0.04000	-10.48000
585.000	0.810	196.080	584.964	-709.036	-5.816	-1.337	4.373	1.31311	-0.90000	64.20000
598.000	0.980	195.380	597.962	-696.037	-6.012	-1.392	4.515	1.31037	1.30769	-5.38462
631.000	1.130	194.910	630.957	-663.043	-6.598	-1.551	4.944	0.45530	0.45455	-1.42424
662.000	1.110	206.080	661.951	-632.049	-7.163	-1.761	5.329	0.70611	-0.06452	36.03226
692.000	1.020	222.930	691.946	-602.054	-7.620	-2.071	5.570	1.08170	-0.30000	56.16667
723.000	0.980	239.250	722.941	-571.059	-7.957	-2.487	5.655	0.92455	-0.12903	52.64516
791.000	1.330	264.420	790.928	-503.072	-8.331	-3.772	5.338	0.89451	0.51471	37.01471
Nudge KOP=884' MD										
884.000	1.390	233.390	883.903	-410.097	-9.109	-5.751	5.024	0.78474	0.06452	-33.36559
978.000	2.630	196.670	977.847	-316.153	-11.855	-7.285	6.638	1.83890	1.31915	-39.06383
1,072.000	3.190	176.760	1,071.727	-222.273	-16.533	-7.756	10.456	1.22025	0.59574	-21.18085
1,166.000	3.490	188.780	1,165.569	-128.431	-21.972	-8.045	15.026	0.80854	0.31915	12.78723
1,259.000	3.410	198.370	1,258.401	-35.599	-27.394	-9.349	19.074	0.62572	-0.08602	10.31183
1,317.000	4.010	197.270	1,316.279	22.279	-30.968	-10.495	21.599	1.04169	1.03448	-1.89655
1,384.000	4.100	204.270	1,383.112	89.112	-35.388	-12.175	24.592	0.75042	0.13433	10.44776
1,447.000	4.370	201.670	1,445.940	151.940	-39.672	-13.987	27.400	0.52578	0.42857	-4.12695
1,540.000	4.710	207.780	1,538.648	244.648	-46.343	-17.075	31.640	0.63519	0.36559	6.56989
1,634.000	4.900	210.610	1,632.318	338.318	-53.212	-20.918	35.675	0.32313	0.20213	3.01064
1,728.000	5.610	208.260	1,725.923	431.923	-60.715	-25.137	40.071	0.78911	0.75532	-2.50000
1,821.000	5.520	200.640	1,818.485	524.486	-68.905	-28.866	45.307	0.79984	-0.09677	-8.19355
1,915.000	5.040	208.930	1,912.088	618.088	-76.749	-32.457	50.313	0.95755	-0.51064	8.81915
2,009.000	4.580	220.530	2,005.759	711.759	-83.216	-36.894	53.703	1.14200	-0.48936	12.34043
2,102.000	5.530	219.250	2,098.396	804.396	-89.508	-42.142	56.537	1.02862	1.02151	-1.37634
2,196.000	6.000	214.940	2,191.921	897.921	-97.043	-47.821	60.233	0.67946	0.50000	-4.58511
2,294.000	5.870	201.140	2,289.400	995.400	-105.916	-52.562	65.556	1.45852	-0.13265	-14.08163
KOP=2196' MD										
2,388.000	6.430	214.190	2,382.864	1,088.864	-114.754	-57.254	70.874	1.59781	0.59574	13.88298
2,482.000	10.640	216.580	2,475.802	1,181.802	-126.082	-65.387	76.631	4.49363	4.47872	2.54255
2,576.000	14.120	224.580	2,567.609	1,273.609	-141.223	-78.611	83.153	4.11888	3.70213	8.51064
2,669.000	16.500	228.900	2,657.305	1,363.305	-157.987	-96.529	88.740	2.83619	2.55914	4.64516

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Wellbore:	OH		
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2,766.000	20.520	226.480	2,749.269	1,455.269	-178.758	-119.247	95.403	4.21848	4.14433	-2.49485
2,860.000	19.500	224.940	2,837.594	1,543.594	-201.209	-142.276	103.367	1.22128	-1.08511	-1.63830
2,954.000	20.430	228.020	2,925.947	1,631.947	-223.289	-165.555	110.884	1.49318	0.98936	3.27660
3,048.000	21.980	229.520	3,013.580	1,719.580	-245.684	-191.133	117.528	1.74691	1.64894	1.59574
3,141.000	21.150	228.930	3,100.069	1,806.069	-268.006	-217.021	123.953	0.92242	-0.89247	-0.63441
3,235.000	21.910	229.710	3,187.510	1,893.510	-290.488	-243.184	130.380	0.86394	0.80851	0.82979
3,328.000	21.590	227.830	3,273.890	1,979.890	-313.196	-269.101	137.125	0.82429	-0.34409	-2.02151
3,422.000	20.870	227.050	3,361.511	2,067.511	-336.215	-294.175	144.561	0.82277	-0.76596	-0.82979
3,516.000	19.690	225.810	3,449.682	2,155.682	-358.662	-317.786	152.231	1.33593	-1.25532	-1.31915
3,609.000	18.470	223.530	3,537.573	2,243.573	-380.265	-339.167	160.282	1.53702	-1.31183	-2.45161
3,703.000	18.750	225.720	3,626.659	2,332.659	-401.608	-360.239	168.263	0.80089	0.29787	2.32979
3,800.000	18.620	226.770	3,718.547	2,424.547	-423.099	-382.683	175.686	0.37178	-0.13402	1.08247
3,893.000	20.430	229.390	3,806.197	2,512.197	-443.835	-405.825	182.108	2.16157	1.94624	2.81720
3,987.000	23.070	226.460	3,893.500	2,599.500	-467.206	-431.636	189.480	3.03594	2.80851	-3.11702
4,081.000	19.980	226.300	3,980.933	2,686.933	-490.994	-456.603	197.635	3.28782	-3.28723	-0.17021
4,174.000	19.650	224.160	4,068.428	2,774.428	-513.189	-478.984	205.701	0.85688	-0.35484	-2.30108
4,268.000	21.250	227.090	4,156.503	2,862.504	-536.127	-502.473	213.858	2.02023	1.70213	3.11702
4,361.000	20.340	224.540	4,243.446	2,949.446	-559.123	-526.155	221.968	1.38004	-0.97849	-2.74194
4,455.000	19.150	221.860	4,331.920	3,037.920	-582.252	-547.903	231.158	1.59041	-1.26596	-2.85106
4,548.000	20.380	225.360	4,419.442	3,125.442	-604.993	-569.606	240.034	1.83492	1.32258	3.76344
4,642.000	20.760	226.330	4,507.449	3,213.449	-627.997	-593.303	248.145	0.54301	0.40426	1.03191
4,735.000	22.090	225.710	4,594.021	3,300.021	-651.590	-617.743	256.394	1.45067	1.43011	-0.66667
4,833.000	22.040	222.880	4,684.846	3,390.846	-677.932	-643.446	266.395	1.08591	-0.05102	-2.88776
4,927.000	20.280	224.790	4,772.505	3,478.505	-702.419	-666.927	275.899	2.01065	-1.87234	2.03191
5,020.000	18.460	228.960	4,860.242	3,566.242	-723.528	-689.390	282.981	2.45680	-1.95699	4.48387
5,114.000	19.620	229.580	4,949.098	3,655.098	-743.533	-712.630	288.720	1.25264	1.23404	0.65957
5,208.000	20.740	229.440	5,037.326	3,743.326	-764.589	-737.291	294.661	1.19260	1.19149	-0.14885
5,301.000	22.530	226.720	5,123.773	3,829.773	-787.514	-762.775	301.810	2.20574	1.92473	-2.92473
5,395.000	22.530	224.750	5,210.600	3,916.600	-812.650	-788.565	310.723	0.80299	0.00000	-2.09574
5,488.000	22.230	220.580	5,296.601	4,002.601	-838.666	-812.554	321.298	1.73708	-0.32258	-4.48387
5,582.000	19.930	225.480	5,384.311	4,090.311	-863.410	-835.549	331.265	3.08061	-2.44681	5.21277
5,675.000	18.930	226.560	5,472.014	4,178.014	-884.896	-857.804	338.779	1.14251	-1.07527	1.16129
5,772.000	18.660	228.790	5,563.842	4,269.843	-905.939	-880.903	345.488	0.79121	-0.27835	2.29897
5,866.000	19.300	232.070	5,652.734	4,358.734	-925.396	-904.469	350.589	1.32319	0.68085	3.48936
5,957.000	20.060	233.320	5,738.418	4,444.418	-943.963	-928.848	354.513	0.95468	0.83516	1.37363
6,016.000	20.110	230.910	5,793.831	4,499.831	-956.403	-944.835	357.315	1.40522	0.08475	-4.08475
6,108.000	20.760	207.250	5,880.189	4,586.189	-980.913	-964.611	368.687	8.94990	0.70652	-25.71739
6,201.000	21.570	197.540	5,966.942	4,672.942	-1,011.876	-977.314	389.181	3.86457	0.87097	-10.44086
6,293.000	25.700	189.030	6,051.231	4,757.231	-1,047.728	-985.547	416.141	5.81242	4.48913	-9.25000
6,385.000	29.780	181.750	6,132.664	4,838.664	-1,090.296	-989.378	451.118	5.75770	4.43478	-7.91304
6,477.000	33.650	172.380	6,210.959	4,916.959	-1,138.444	-986.694	494.183	6.79841	4.20652	-10.18478
6,570.000	40.730	165.230	6,285.034	4,991.034	-1,193.417	-975.522	547.397	8.90865	7.61290	-7.68817

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6,662.000	47.740	160.260	6,350.929	5,056.929	-1,254.579	-956.342	609.970	8.49597	7.61957	-5.40217
6,755.000	55.640	156.860	6,408.546	5,114.546	-1,322.389	-929.586	682.085	8.96379	8.49462	-3.65591
6,847.000	61.260	155.490	6,456.667	5,162.667	-1,394.066	-897.904	760.010	6.23889	6.10870	-1.48913
6,940.000	67.940	151.870	6,496.546	5,202.546	-1,469.275	-860.619	843.791	7.99575	7.18280	-3.89247
Top of Microseal (usft) 570										
6,996.382	71.259	149.493	6,516.200	5,222.200	-1,515.336	-834.738	896.622	7.08895	5.88618	-4.21568
7,033.000	73.430	148.000	6,527.305	5,233.305	-1,545.160	-816.634	931.502	7.08895	5.92947	-4.07754
7,125.000	82.480	145.710	6,546.486	5,252.487	-1,620.395	-767.469	1,021.234	10.13300	9.83696	-2.48913
M10H LP2										
7,204.273	88.148	143.432	6,552.961	5,258.961	-1,684.739	-721.685	1,099.841	7.70189	7.14995	-2.87390
LP=7218' MD/ 6553' TVD										
7,218.000	89.130	143.040	6,553.287	5,259.287	-1,695.733	-713.472	1,113.467	7.70189	7.15392	-2.85402
7,311.000	88.090	147.230	6,555.544	5,261.544	-1,771.998	-660.336	1,206.073	4.64074	-1.11828	4.50538
7,403.000	85.900	145.850	6,560.367	5,266.367	-1,848.640	-609.687	1,297.765	2.81247	-2.38043	-1.50000
7,496.000	90.740	141.430	6,563.094	5,269.094	-1,923.458	-554.601	1,390.091	7.04556	5.20430	-4.75269
7,589.000	89.560	143.640	6,562.850	5,268.850	-1,997.268	-498.036	1,482.281	2.69382	-1.26882	2.37634
7,681.000	89.770	142.240	6,563.388	5,269.388	-2,070.681	-442.595	1,573.567	1.53874	0.22826	-1.52174
7,774.000	89.830	141.020	6,563.713	5,269.713	-2,143.593	-384.868	1,665.558	1.31341	0.06452	-1.31183
7,867.000	88.090	140.960	6,565.401	5,271.401	-2,215.843	-326.340	1,757.376	1.87208	-1.87097	-0.06452
7,959.000	91.070	140.280	6,566.075	5,272.075	-2,286.944	-267.978	1,848.115	3.32237	3.23913	-0.73913
8,052.000	91.910	141.590	6,563.657	5,269.657	-2,359.126	-209.391	1,939.903	1.67290	0.90323	1.40860
8,145.000	91.750	141.990	6,560.687	5,266.687	-2,432.163	-151.896	2,031.888	0.46304	-0.17204	0.43011
8,237.000	90.340	142.860	6,559.009	5,265.009	-2,505.063	-95.805	2,123.053	1.80078	-1.53261	0.94565
8,330.000	88.150	141.490	6,560.234	5,266.235	-2,578.511	-38.783	2,215.157	2.77754	-2.35484	-1.47312
8,423.000	89.330	139.800	6,562.280	5,268.280	-2,650.400	20.173	2,306.876	2.21595	1.26882	-1.81720
8,515.000	89.630	140.980	6,563.115	5,269.115	-2,721.272	78.825	2,397.562	1.32336	0.32609	1.28261
8,608.000	89.360	141.180	6,563.934	5,269.934	-2,793.626	137.249	2,489.417	0.36129	-0.29032	0.21505
8,700.000	90.230	141.050	6,564.263	5,270.263	-2,865.238	195.002	2,580.295	0.95615	0.94565	-0.14130
8,793.000	90.740	141.700	6,563.476	5,269.476	-2,937.891	253.051	2,672.224	0.88836	0.54839	0.69892
8,886.000	89.430	140.980	6,563.338	5,269.338	-3,010.509	311.147	2,764.145	1.60733	-1.40860	-0.77419
8,978.000	89.530	139.800	6,564.173	5,270.173	-3,081.382	369.799	2,854.831	1.28715	0.10870	-1.28261
9,071.000	90.540	141.440	6,564.116	5,270.116	-3,153.264	428.801	2,946.566	2.07101	1.08602	1.76344
9,163.000	89.130	141.770	6,564.381	5,270.381	-3,225.366	485.938	3,037.562	1.57402	-1.53261	0.35870
9,256.000	89.030	141.890	6,565.875	5,271.875	-3,298.471	543.404	3,129.592	0.16795	-0.10753	0.12903
9,349.000	88.990	142.130	6,567.481	5,273.481	-3,371.755	600.640	3,221.660	0.26159	-0.04301	0.25806
9,442.000	89.060	141.850	6,569.064	5,275.064	-3,445.020	657.901	3,313.725	0.31030	0.07527	-0.30108
9,534.000	87.280	142.120	6,572.002	5,278.002	-3,517.462	714.529	3,404.761	1.95689	-1.93478	0.29348
9,627.000	89.060	141.940	6,574.971	5,280.972	-3,590.736	771.716	3,496.798	1.92373	1.91398	-0.19355
9,719.000	89.870	143.120	6,575.831	5,281.831	-3,663.749	827.680	3,587.997	1.55566	0.88043	1.28261
9,812.000	89.600	141.850	6,576.261	5,282.261	-3,737.514	884.312	3,680.181	1.39610	-0.29032	-1.36559
9,905.000	89.600	142.070	6,576.910	5,282.910	-3,810.757	941.618	3,772.250	0.23655	0.00000	0.23656
9,997.000	89.460	142.950	6,577.665	5,283.665	-3,883.752	997.609	3,863.448	0.96852	-0.15217	0.95652

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EQT
Survey Report

Database:	EDM Definitive	Local Co-ordinate Reference:	Well M10H
Company:	EQT (Chevron Data) 02-13-21	TVD Reference:	Air RKB @ 1294.000usft (Highlands 9)
Project:	Marshall County, WV Chevron	MD Reference:	Air RKB @ 1294.000usft (Highlands 9)
Site:	Longworth	North Reference:	True
Well:	M10H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Longworth 10H As Drilled		

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,090.00	89.970	140.850	6,578.127	5,284.127	-3,956.932	1,054.989	3,955.498	2.32367	0.54839	-2.25806
0										
10,182.00	89.900	139.850	6,578.232	5,284.232	-4,027.767	1,113.694	4,046.178	1.08962	-0.07609	-1.08696
0										
10,275.00	91.280	140.050	6,577.274	5,283.274	-4,098.951	1,173.530	4,137.725	1.49937	1.48387	0.21505
0										
10,367.00	90.370	141.050	6,575.949	5,281.949	-4,169.983	1,231.980	4,228.448	1.46955	-0.98913	1.08696
0										
10,460.00	92.420	141.030	6,573.685	5,279.685	-4,242.273	1,290.436	4,320.265	2.20441	2.20430	-0.02151
0										
10,552.00	88.460	136.900	6,572.979	5,278.979	-4,311.638	1,350.809	4,410.504	6.21856	-4.30435	-4.48913
0										
10,645.00	89.130	141.860	6,574.936	5,280.936	-4,382.191	1,411.323	4,501.842	5.38057	0.72043	5.33333
0										
10,738.00	88.990	142.940	6,576.461	5,282.462	-4,455.863	1,468.058	4,593.997	1.17085	-0.15054	1.16129
0										
10,830.00	89.560	140.330	6,577.626	5,283.626	-4,527.985	1,525.150	4,684.988	2.90359	0.61957	-2.83696
0										
10,923.00	88.350	139.410	6,579.322	5,285.322	-4,599.078	1,585.079	4,776.502	1.63433	-1.30108	-0.98925
0										
11,015.000	88.590	140.480	6,581.778	5,287.778	-4,669.471	1,644.261	4,867.037	1.19154	0.26087	1.16304
11,107.000	88.620	142.780	6,584.018	5,290.018	-4,741.575	1,701.348	4,958.008	2.49947	0.03261	2.50000
11,199.000	88.420	143.970	6,586.395	5,292.395	-4,815.384	1,756.214	5,049.350	1.31119	-0.21739	1.29348
11,292.000	88.090	142.640	6,589.227	5,295.227	-4,889.917	1,811.759	5,141.658	1.47283	-0.35484	-1.43011
11,384.000	88.990	140.450	6,591.571	5,297.571	-4,961.934	1,868.951	5,232.607	2.57287	0.97826	-2.38043
11,476.000	89.530	139.710	6,592.759	5,298.759	-5,032.486	1,927.984	5,323.205	0.99568	0.58696	-0.80435
11,569.000	89.530	140.320	6,593.522	5,299.522	-5,103.741	1,987.742	5,414.775	0.65589	0.00000	0.65591
11,661.000	89.660	141.040	6,594.172	5,300.173	-5,174.911	2,046.036	5,505.540	0.79524	0.14130	0.78261
11,754.000	90.470	142.990	6,594.067	5,300.067	-5,248.207	2,103.270	5,597.619	2.27046	0.87097	2.09677
11,846.000	88.460	144.870	6,594.926	5,300.926	-5,322.560	2,157.430	5,689.079	2.99137	-2.18478	2.04348
11,939.000	87.550	146.070	6,598.164	5,304.164	-5,399.127	2,210.113	5,781.721	1.61874	-0.97849	1.29032
12,031.00	87.450	145.780	6,602.177	5,308.177	-5,475.259	2,261.609	5,873.394	0.33315	-0.10870	-0.31522
0										
12,123.00	86.610	144.680	6,606.944	5,312.944	-5,550.729	2,314.003	5,964.941	1.50312	-0.91304	-1.19565
0										
12,216.00	90.640	142.780	6,609.175	5,315.175	-5,625.668	2,368.993	6,057.323	4.79036	4.33333	-2.04301
0										
12,308.00	89.530	141.770	6,609.038	5,315.039	-5,698.434	2,425.283	6,148.472	1.63122	-1.20652	-1.09783
0										
12,401.00	90.000	139.930	6,609.420	5,315.420	-5,770.551	2,483.996	6,240.267	2.04200	0.50538	-1.97849
0										
12,493.00	90.770	142.300	6,608.802	5,314.802	-5,842.157	2,541.744	6,331.137	2.70856	0.83696	2.57609
0										
12,585.00	91.110	141.000	6,607.292	5,313.292	-5,914.295	2,598.817	6,422.133	1.46039	0.36957	-1.41304
0										
12,677.00	89.900	141.790	6,606.481	5,312.481	-5,986.185	2,656.217	6,513.075	1.57069	-1.31522	0.85870
0										
12,770.00	90.670	141.320	6,606.019	5,312.019	-6,059.022	2,714.040	6,605.049	0.97000	0.82796	-0.50538
0										

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EQT
Survey Report

Database:	EDM_Definitive	Local Co-ordinate Reference:	Well M10H
Company:	EQT (Chevron Data) 02-13-21	TVD Reference:	Air RKB @ 1294.000usft (Highlands 9)
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Site:	Longworth	North Reference:	True
Well:	M10H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Longworth 10H As Drilled		

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,862.000	89.130	141.610	6,606.179	5,312.179	-6,130.984	2,771.353	6,696.012	1.70333	-1.67391	0.31522
12,955.000	89.060	141.680	6,607.648	5,313.648	-6,203.904	2,829.055	6,787.998	0.10644	-0.07527	0.07527
13,047.000	89.030	141.810	6,609.182	5,315.182	-6,276.138	2,886.010	6,879.017	0.14500	-0.03261	0.14130
13,139.000	89.030	141.530	6,610.739	5,316.739	-6,348.297	2,943.059	6,970.019	0.30430	0.00000	-0.30435
13,232.000	88.960	141.820	6,612.370	5,318.370	-6,421.245	3,000.722	7,062.009	0.32074	-0.07527	0.31183
13,324.000	88.690	141.700	6,614.257	5,320.257	-6,493.489	3,057.654	7,153.025	0.32115	-0.29348	-0.13043
13,416.000	88.890	141.840	6,616.200	5,322.200	-6,565.742	3,114.572	7,244.042	0.26534	0.21739	0.15217
13,509.000	89.530	141.260	6,617.482	5,323.482	-6,638.567	3,172.397	7,336.008	0.92868	0.68817	-0.62366
13,601.000	90.540	141.680	6,617.426	5,323.426	-6,710.536	3,229.705	7,426.973	1.18896	1.09783	0.45652
13,693.000	89.500	141.740	6,617.394	5,323.394	-6,782.744	3,286.711	7,517.995	1.13231	-1.13043	0.06522
13,785.000	89.460	141.410	6,618.229	5,324.229	-6,854.816	3,343.886	7,608.983	0.36131	-0.04348	-0.35870
13,878.000	89.530	141.760	6,619.048	5,325.048	-6,927.682	3,401.669	7,700.963	0.38378	0.07527	0.37634
13,970.000	89.090	142.220	6,620.156	5,326.156	-7,000.163	3,458.318	7,792.044	0.69188	-0.47826	0.50000
14,062.000	87.150	142.720	6,623.174	5,329.174	-7,073.079	3,514.330	7,883.183	2.17753	-2.10870	0.54348
14,154.000	88.620	141.090	6,626.570	5,332.570	-7,145.428	3,571.049	7,974.184	2.38488	1.59783	-1.77174
14,247.000	88.860	140.950	6,628.615	5,334.615	-7,217.705	3,629.537	8,066.005	0.29874	0.25806	-0.15054
14,339.000	89.060	141.070	6,630.284	5,336.285	-7,289.201	3,687.412	8,156.844	0.25351	0.21739	0.13043
14,431.000	88.820	141.260	6,631.986	5,337.986	-7,360.853	3,745.093	8,247.721	0.33270	-0.26087	0.20652
14,523.000	88.790	141.510	6,633.905	5,339.905	-7,432.722	3,802.497	8,338.647	0.27363	-0.03261	0.27174
14,616.000	88.320	141.370	6,636.250	5,342.250	-7,505.420	3,860.448	8,430.566	0.52731	-0.50538	-0.15054
14,708.000	90.340	139.560	6,637.326	5,343.326	-7,576.362	3,919.001	8,521.263	2.94798	2.19565	-1.96739
14,800.000	89.090	141.330	6,637.784	5,343.784	-7,647.291	3,977.584	8,611.963	2.35526	-1.35870	1.92391
14,893.000	89.130	140.940	6,639.228	5,345.228	-7,719.694	4,035.934	8,703.824	0.42150	0.04301	-0.41935
14,985.000	89.130	140.940	6,640.625	5,346.625	-7,791.122	4,093.899	8,794.649	0.00000	0.00000	0.00000
15,077.000	88.990	141.210	6,642.135	5,348.135	-7,862.686	4,151.695	8,885.507	0.33055	-0.15217	0.29348

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Project:	Marshall County, WV Chevron	MD Reference:	Air RKB @ 1294.000usft (Highlands 9)
Site:	Longworth	North Reference:	True
Well:	M10H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Longworth 10H As Drilled		

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,170.00	88.990	141.930	6,643.774	5,349.774	-7,935.527	4,209.491	8,977.472	0.77407	0.00000	0.77419
0										
15,262.00	89.060	141.620	6,645.339	5,351.339	-8,007.791	4,266.408	9,068.497	0.34539	0.07609	-0.33696
0										
15,354.00	90.230	140.990	6,645.909	5,351.909	-8,079.592	4,323.921	9,159.420	1.44437	1.27174	-0.68478
0										
15,447.00	89.090	142.730	6,646.461	5,352.461	-8,152.732	4,381.353	9,251.462	2.23671	-1.22581	1.87097
0										
15,539.00	89.030	142.940	6,647.971	5,353.971	-8,226.037	4,436.923	9,342.718	0.23737	-0.06522	0.22826
0										
15,632.00	89.870	143.590	6,648.863	5,354.863	-8,300.563	4,492.545	9,435.058	1.14204	0.90323	0.69892
0										
15,724.00	89.060	142.720	6,649.722	5,355.722	-8,374.183	4,547.709	9,526.384	1.29203	-0.88043	-0.94565
0										
15,816.00	89.560	142.400	6,650.830	5,356.830	-8,447.224	4,603.635	9,617.589	0.64524	0.54348	-0.34783
0										
15,909.00	88.250	141.570	6,652.607	5,358.608	-8,520.479	4,660.898	9,709.647	1.66744	-1.40860	-0.89247
0										
16,001.00	88.930	142.480	6,654.871	5,360.871	-8,592.977	4,717.489	9,800.713	1.23454	0.73913	0.98913
0										
16,094.00	88.350	142.960	6,657.079	5,363.079	-8,666.955	4,773.804	9,892.924	0.80943	-0.62366	0.51613
0										
16,188.00	88.660	142.880	6,659.531	5,365.531	-8,741.922	4,830.460	9,986.162	0.34058	0.32979	-0.08511
0										
16,280.00	88.620	142.770	6,661.715	5,367.715	-8,815.206	4,886.035	10,077.40	0.12719	-0.04348	-0.11957
0							3			
16,372.00	88.050	142.560	6,664.388	5,370.388	-8,888.324	4,941.807	10,168.59	0.66024	-0.61957	-0.22826
0							8			
16,464.00	88.560	142.770	6,667.109	5,373.109	-8,961.442	4,997.578	10,259.79	0.59947	0.55435	0.22826
0							1			
16,557.00	88.560	142.560	6,669.446	5,375.446	-9,035.363	5,053.962	10,351.98	0.22574	0.00000	-0.22581
0							7			
16,649.00	88.590	142.550	6,671.734	5,377.734	-9,108.382	5,109.881	10,443.17	0.03437	0.03261	-0.01087
0							0			
16,741.00	88.290	142.890	6,674.239	5,380.239	-9,181.558	5,165.586	10,534.38	0.49276	-0.32609	0.36957
0							2			
16,834.00	88.360	142.680	6,676.957	5,382.957	-9,255.589	5,221.809	10,626.59	0.23793	0.07527	-0.22581
0							3			
16,926.00	88.290	142.640	6,679.646	5,385.646	-9,328.702	5,277.587	10,717.78	0.08762	-0.07609	-0.04348
0							7			
17,019.00	88.290	142.460	6,682.421	5,388.421	-9,402.501	5,334.112	10,809.94	0.19346	0.00000	-0.19355
0							7			
17,111.000	88.250	142.970	6,685.199	5,391.199	-9,475.665	5,389.818	10,901.14	0.55580	-0.04348	0.55435
							9			
17,203.00	88.960	142.200	6,687.439	5,393.439	-9,548.714	5,445.699	10,992.33	1.13827	0.77174	-0.83696
0							8			
17,295.00	89.330	143.860	6,688.811	5,394.812	-9,622.207	5,501.019	11,083.632	1.84843	0.40217	1.80435
0										
17,388.00	89.400	142.010	6,689.842	5,395.842	-9,696.408	5,557.066	11,175.903	1.99055	0.07527	-1.98925
0										

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EQT
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Project: Marshall County, WV Chevron	MD Reference: Air RKB @ 1294.000usft (Highlands 9)
Site: Longworth	North Reference: True
Well: M10H	Survey Calculation Method: Minimum Curvature
Wellbore: OH	
Design: Longworth 10H As Drilled	

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,480.00 0	89.400	142.630	6,690.806	5,396.806	-9,769.216	5,613.298	11,267.058	0.67388	0.00000	0.67391
Final Survey=17539'MD/ 6691' TVD										
17,539.00 0	89.300	142.470	6,691.475	5,397.475	-9,816.052	5,649.171	11,325.548	0.31978	-0.16949	-0.27119
Projection to BHL/Deepest Point of Well=17561' MD/6692' TVD - M10H BHL - Longworth M10H BHL rev1										
17,561.00 0	89.300	142.470	6,691.744	5,397.744	-9,833.498	5,662.572	11,347.353	0.00000	0.00000	0.00000

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (-114.752)	+E/-W (-57.254)	Northing (usft)	Easting (usft)	Latitude	Longitude
Longworth 10H KOP	0.000	0.000	2,382.86 4	-114.752	-57.254	492,943.579	1,624,099.834	39.8469219	80.7266521°W
- actual wellpath misses target center by 0.001usft at 2388.000usft MD (2382.864 TVD, -114.754 N, -57.254 E)									
- Point									
Longworth 10H LP	0.000	0.000	6,553.28 7	-1,695.731	-713.471	491,371.706	1,623,422.095	39.8425815	80.7289891°W
- actual wellpath misses target center by 0.001usft at 7217.999usft MD (6553.287 TVD, -1695.732 N, -713.472 E)									
- Point									
Longworth 10H TD	0.000	0.000	6,691.74 4	-9,833.496	5,662.573	483,147.656	1,629,686.452	39.8469219	80.7062881°W
- actual wellpath misses target center by 0.001usft at 17560.999usft MD (6691.744 TVD, -9833.497 N, 5662.572 E)									
- Point									

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Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,996.382	6,516.200	Top of Marcellus@6516' TVD		0.0000	

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
884.000	883.903	-9.109	-5.751	Nudge KOP=884' MD
2,388.000	2,382.864	-114.754	-57.254	KOP=2388' MD
7,218.000	6,553.287	-1,695.733	-713.472	LP=7218' MD/ 6553' TVD
17,539.000	6,691.475	-9,816.052	5,649.171	Final Survey=17539'MD/ 6691' TVD
17,561.000	6,691.744	-9,833.498	5,662.572	Projection to BHL/Deepest Point of Well=17561' MD/6692' TVD

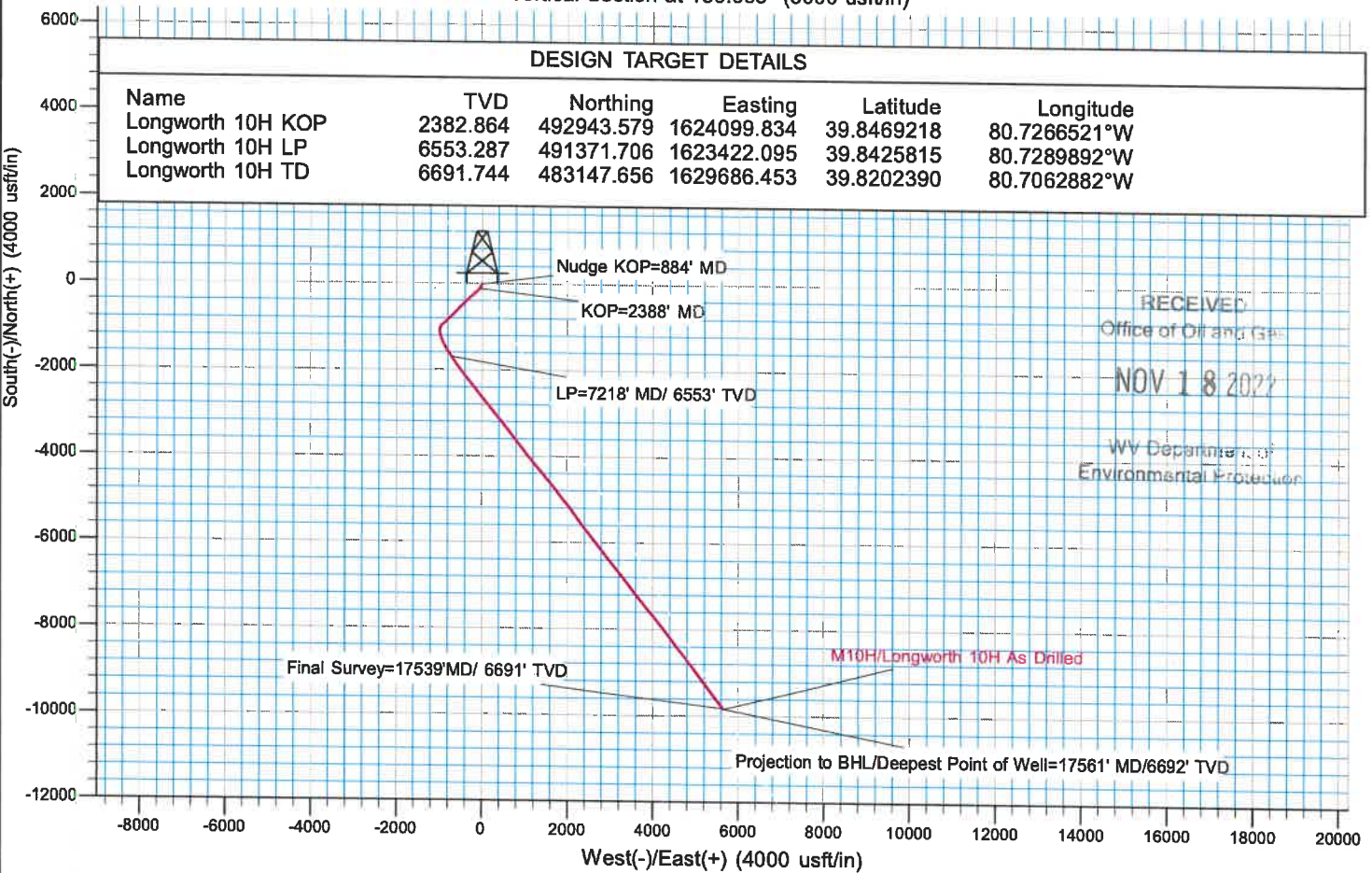
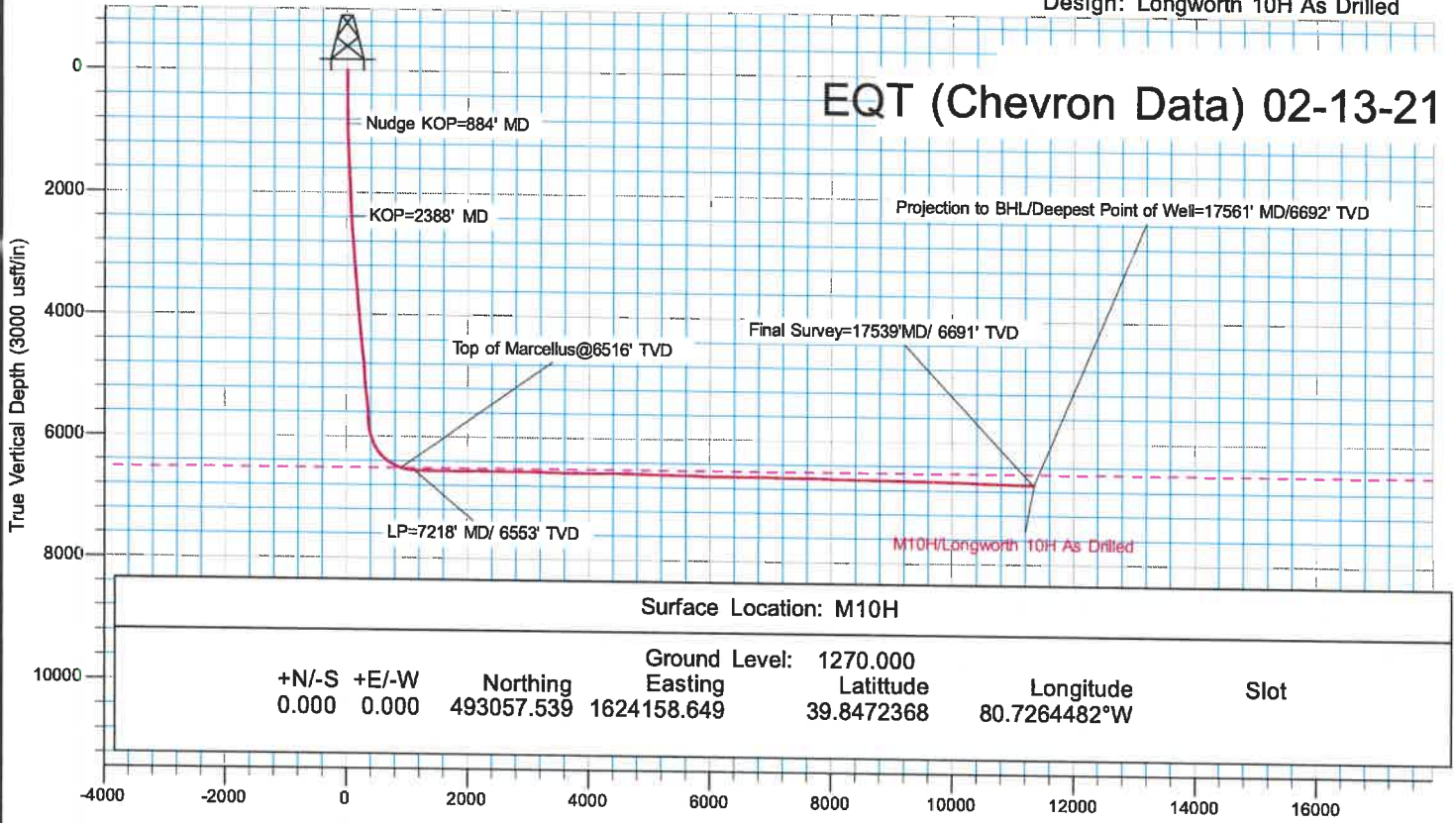
Checked By: _____ Approved By: _____ Date: _____



KB Elevation= Air RKB @ 1294.000usft (Highlands 9)
 Ground Elevation= 1270.000
 All measurements were taken from KB Elevation

Project: Marshall County, WV Chevron
 Site: Longworth
 Well: M10H
 Wellbore: OH
 Design: Longworth 10H As Drilled

EQT (Chevron Data) 02-13-21



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