



EQT (Chevron Data) 02-13-21

Marshall County, WV Chevron

Longworth

M11H

OH - ST01

Design: Longworth 11H ST01 As Drilled

Standard Survey Report

26 July, 2021

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Office of Oil and Gas
NOV 18 2022
WV Department of
Environmental Protection

12/16/2022



EQT
Survey Report

Database:	EDM_Definitive	Local Co-ordinate Reference:	Well M11H
Company:	EQT (Chevron Data) 02-13-21	TVD Reference:	GL @ 1270.000usft
Project:	Marshall County, WV Chevron	MD Reference:	GL @ 1270.000usft
Site:	Longworth	North Reference:	True
Well:	M11H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH - ST01		
Design:	Longworth 11H ST01 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)
10,275.000	88.560	142.390	6,583.620	5,313.620	-1,563.625	3,914.070	3,997.306	2.05480	-0.72043	1.92473
10,367.000	87.210	141.050	6,587.015	5,317.015	-1,635.792	3,971.022	4,087.408	2.06681	-1.46739	-1.45652
10,460.000	87.380	139.850	6,591.405	5,321.405	-1,707.420	4,030.173	4,178.838	1.30178	0.18280	-1.29032
10,552.000	87.780	138.650	6,595.289	5,325.289	-1,777.052	4,090.172	4,269.626	1.37380	0.43478	-1.30435
10,645.000	90.100	140.600	6,597.010	5,327.010	-1,847.882	4,150.399	4,361.362	3.25845	2.49462	2.09677
10,737.000	88.790	138.670	6,597.901	5,327.901	-1,917.972	4,209.976	4,452.123	2.53531	-1.42391	-2.09783
10,830.000	89.730	140.040	6,599.102	5,329.102	-1,988.528	4,270.546	4,543.944	1.78642	1.01075	1.47312
10,922.000	88.420	138.100	6,600.587	5,330.588	-2,058.021	4,330.806	4,634.842	2.54416	-1.42391	-2.10870
11,015.000	89.330	140.770	6,602.414	5,332.414	-2,128.650	4,391.267	4,726.626	3.03258	0.97849	2.87097
11,107.000	89.870	141.520	6,603.056	5,333.056	-2,200.291	4,448.982	4,816.969	1.00452	0.58696	0.81522
11,199.000	90.070	141.990	6,603.104	5,333.104	-2,272.545	4,505.932	4,907.125	0.55520	0.21739	0.51087
11,292.000	89.870	143.100	6,603.153	5,333.153	-2,346.370	4,562.488	4,997.995	1.21277	-0.21505	1.19355
11,384.000	89.660	141.950	6,603.530	5,333.530	-2,419.381	4,618.460	5,087.894	1.27066	-0.22826	-1.25000
11,476.000	89.600	141.370	6,604.124	5,334.124	-2,491.539	4,675.529	5,178.078	0.63379	-0.06522	-0.63043
11,569.000	88.860	140.350	6,605.374	5,335.374	-2,563.662	4,734.226	5,269.483	1.35492	-0.79570	-1.09677
11,661.000	90.370	142.820	6,605.992	5,335.992	-2,635.738	4,791.383	5,359.681	3.14662	1.64130	2.68478
11,753.000	90.970	143.910	6,604.917	5,334.917	-2,709.557	4,846.276	5,449.279	1.35234	0.65217	1.18478
11,846.000	90.470	143.940	6,603.748	5,333.748	-2,784.718	4,901.034	5,539.640	0.53860	-0.53763	0.03226
11,938.000	90.540	143.600	6,602.937	5,332.937	-2,858.927	4,955.406	5,629.093	0.37730	0.07609	-0.36957
12,031.000	90.440	143.420	6,602.142	5,332.142	-2,933.692	5,010.709	5,719.615	0.22141	-0.10753	-0.19355
12,123.000	90.470	143.670	6,601.411	5,331.411	-3,007.688	5,065.373	5,809.152	0.27368	0.03261	0.27174
12,216.000	90.200	144.160	6,600.867	5,330.867	-3,082.844	5,120.148	5,899.523	0.60157	-0.29032	0.52688
12,308.000	88.860	142.000	6,601.622	5,331.622	-3,156.387	5,175.406	5,989.221	2.76281	-1.45652	-2.34783
12,400.000	88.960	141.220	6,603.372	5,333.372	-3,228.483	5,232.528	6,079.406	0.85461	0.10870	-0.84783
12,493.000	89.430	142.140	6,604.679	5,334.679	-3,301.439	5,290.186	6,170.556	1.11077	0.50538	0.98925
12,585.000	89.060	141.520	6,605.891	5,335.891	-3,373.761	5,347.037	6,260.679	0.78474	-0.40217	-0.67391
12,677.000	89.330	141.400	6,607.184	5,337.184	-3,445.713	5,404.352	6,350.920	0.32115	0.29348	-0.13043
12,770.000	88.990	141.350	6,608.547	5,338.547	-3,518.362	5,462.399	6,442.166	0.36952	-0.36559	-0.05376
12,862.000	88.990	141.360	6,610.169	5,340.169	-3,590.205	5,519.843	6,532.434	0.01087	0.00000	0.01087
12,955.000	89.060	142.030	6,611.751	5,341.751	-3,663.173	5,577.480	6,623.576	0.72425	0.07527	0.72043

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Survey Report

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Company:	EQT (Chevron Data) 02-13-21	TVD Reference:	GL @ 1270.000usft
Project:	Marshall County, WV Chevron	MD Reference:	GL @ 1270.000usft
Site:	Longworth	North Reference:	True
Well:	M11H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH - ST01		
Design:	Longworth 11H ST01 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: M11H

Well Position	+N/-S	0.000 usft	Northing:	493,065.999 usft	Latitude:	39.8472596
	+E/-W	0.000 usft	Easting:	1,624,146.262 usft	Longitude:	80.7264927°W
Position Uncertainty		0.000 usft	Wellhead Elevation:	0.000 usft	Ground Level:	1,270.000 usft

Wellbore: OH - ST01

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	User Defined	7/16/2019	-8.0500	66.8167	52,301.80000000

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Audit Notes:	
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 0.000 130.264

Survey Program Date: 7/26/2021

From (')	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	576.000	Survey #1 (OH - ST01)	53_SDJ_Keeper_WL_NS+CT SDI_101Ga -	SDI Keep static gyrocompass with con c
0.00	17,321.000	Survey #2 (OH - ST01)	11_MWD+IFR1+AX+Sag c	A007Mb: IFR dec & axial + sag corrections c

Survey

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0.000	0.000	0.000	0.000	-1,270.000	0.000	0.000	0.000	0.00000	0.00000	0.00000
101.000	0.460	96.520	100.999	-1,169.001	-0.046	0.403	0.337	0.45545	0.45545	0.00000
126.000	0.520	103.850	125.998	-1,144.002	-0.085	0.613	0.522	0.34663	0.24000	29.32000
151.000	0.570	99.020	150.997	-1,119.003	-0.131	0.846	0.730	0.27144	0.20000	-19.32000
176.000	0.460	107.080	175.996	-1,094.004	-0.180	1.064	0.929	0.52581	-0.44000	32.24000
201.000	0.580	106.750	200.995	-1,069.005	-0.246	1.281	1.137	0.48015	0.48000	-1.32000
226.000	0.730	99.380	225.993	-1,044.007	-0.309	1.560	1.390	0.68697	0.60000	-29.48000
251.000	0.790	102.150	250.991	-1,019.009	-0.371	1.885	1.678	0.28136	0.24000	11.08000



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276.000	0.860	96.320	275.988	-994.012	-0.428	2.240	1.986	0.43686	0.28000	-23.32000
301.000	0.970	97.970	300.985	-969.015	-0.478	2.636	2.321	0.45240	0.44000	6.60000
326.000	1.080	107.360	325.981	-944.019	-0.577	3.071	2.716	0.80171	0.44000	37.56000
351.000	1.030	106.680	350.977	-919.023	-0.712	3.511	3.139	0.20617	-0.20000	-2.72000
376.000	1.150	101.960	375.972	-894.027	-0.829	3.972	3.566	0.59911	0.48000	-18.88000
401.000	1.040	100.650	400.968	-869.032	-0.923	4.440	3.984	0.45122	-0.44000	-5.24000
426.000	0.990	89.970	425.964	-844.036	-0.964	4.879	4.346	0.78145	-0.20000	-42.72000
451.000	1.130	91.100	450.960	-819.040	-0.969	5.341	4.702	0.56618	0.56000	4.52000
476.000	1.240	98.780	475.954	-794.046	-1.015	5.855	5.124	0.77185	0.44000	30.72000
501.000	1.300	93.800	500.948	-769.052	-1.075	6.406	5.583	0.50229	0.24000	-19.92000
526.000	1.400	92.550	525.941	-744.059	-1.107	6.994	6.052	0.41696	0.40000	-5.00000
551.000	1.390	96.900	550.934	-719.066	-1.158	7.600	6.547	0.42538	-0.04000	17.40000
576.000	1.470	100.030	575.926	-694.074	-1.250	8.216	7.078	0.44713	0.32000	12.52000
ST Point=612' MD										
612.000	1.551	98.011	611.914	-658.086	-1.398	9.154	7.889	0.26963	0.22553	-5.60801
665.000	1.860	92.480	664.890	-605.110	-1.535	10.723	9.175	0.65963	0.58266	-10.43607
742.000	4.410	59.150	741.774	-528.226	-0.071	14.514	11.121	3.93889	3.31169	-43.28572
775.000	4.630	57.030	774.671	-495.329	1.304	16.721	11.916	0.83701	0.66667	-6.42424
797.000	5.000	56.700	796.593	-473.407	2.314	18.267	12.444	1.68652	1.68182	-1.50000
890.000	5.560	55.780	889.198	-380.801	7.073	25.380	14.795	0.60897	0.60215	-0.98925
982.000	6.020	56.670	980.729	-289.271	12.230	33.096	17.350	0.50942	0.50000	0.96739
1,074.000	7.020	51.760	1,072.133	-197.867	18.361	41.543	19.833	1.24352	1.08696	-5.33696
1,166.000	7.800	49.360	1,163.365	-106.635	25.907	50.696	21.941	0.91196	0.84783	-2.60870
1,259.000	8.500	48.250	1,255.425	-14.575	34.594	60.612	23.893	0.77144	0.75269	-1.19355
1,351.000	9.110	49.670	1,346.340	76.340	43.835	71.237	26.028	0.70383	0.66304	1.54348
1,443.000	7.740	51.260	1,437.345	167.345	52.426	81.622	28.400	1.51037	-1.48913	1.72826
1,535.000	7.340	51.510	1,528.550	258.550	59.960	91.054	30.728	0.43624	-0.43478	0.27174
1,628.000	7.610	51.700	1,620.759	350.759	67.474	100.537	33.107	0.29154	0.29032	0.20430
1,720.000	6.980	56.540	1,712.015	442.015	74.332	109.981	35.882	0.95608	-0.68478	5.26087
1,812.000	6.770	56.540	1,803.353	533.354	80.404	119.169	38.968	0.22826	-0.22826	0.00000
1,905.000	7.210	56.310	1,895.662	625.662	86.663	128.598	42.117	0.47407	0.47312	-0.24731
1,997.000	7.690	57.620	1,986.885	716.885	93.162	138.600	45.549	0.55341	0.52174	1.42391
2,089.000	8.140	58.610	2,078.009	808.009	99.851	149.358	49.436	0.51107	0.48913	1.07609
2,181.000	8.750	58.480	2,169.011	899.011	106.902	160.884	53.673	0.66337	0.66304	-0.14130
2,198.000	8.590	58.810	2,185.816	915.816	108.236	163.072	54.481	0.98561	-0.94118	1.94118
2,271.000	8.140	57.830	2,258.040	988.040	113.811	172.110	57.775	0.64661	-0.61644	-1.34247
2,364.000	5.930	42.650	2,350.342	1,080.342	120.851	180.940	59.962	3.08593	-2.37634	-16.32258
2,456.000	4.710	35.630	2,441.944	1,171.944	127.417	186.361	59.855	1.50062	-1.32609	-7.63043
2,548.000	3.390	21.070	2,533.715	1,263.715	133.026	189.539	58.655	1.80785	-1.43478	-15.82609
2,640.000	2.400	13.620	2,625.597	1,355.597	137.436	190.971	56.897	1.14896	-1.07609	-8.09783
2,733.000	1.700	11.020	2,718.537	1,448.537	140.683	191.693	55.350	0.75911	-0.75269	-2.79570
2,825.000	1.280	2.370	2,810.506	1,540.506	143.049	191.996	54.052	0.51661	-0.45652	-9.40217
2,917.000	1.160	340.710	2,902.485	1,632.485	144.955	191.731	52.618	0.51450	-0.13043	-23.54348



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3,010.000	1.670	95.420	2,995.469	1,725.469	145.715	192.770	52.919	2.57925	0.54839	123.34409
3,103.000	1.550	104.140	3,088.433	1,818.433	145.280	195.338	55.160	0.29295	-0.12903	9.37634
KOP=3195' MD										
3,195.000	1.310	85.470	3,180.405	1,910.405	145.059	197.593	57.024	0.56611	-0.26087	-20.29348
3,287.000	2.930	52.460	3,272.341	2,002.342	146.575	200.506	58.267	2.13640	1.76087	-35.88044
3,380.000	5.300	61.430	3,365.096	2,095.096	150.078	206.164	60.320	2.63301	2.54839	9.64516
3,472.000	6.150	57.910	3,456.637	2,186.637	154.728	214.071	63.348	0.99922	0.92391	-3.82609
3,564.000	7.050	53.930	3,548.026	2,278.026	160.670	222.810	66.176	1.09681	0.97826	-4.32609
3,657.000	7.760	46.060	3,640.253	2,370.253	168.388	231.944	68.159	1.32959	0.76344	-8.46237
3,749.000	10.350	51.460	3,731.100	2,461.100	177.848	242.883	70.391	2.95988	2.81522	5.86957
3,841.000	14.410	57.620	3,820.946	2,550.946	189.133	259.022	75.413	4.63457	4.41304	6.69565
3,934.000	18.000	65.300	3,910.246	2,640.247	201.340	281.860	84.950	4.48796	3.86022	8.25806
4,026.000	22.780	58.100	3,996.471	2,726.471	216.704	309.916	96.429	5.85859	5.19565	-7.82609
4,118.000	24.220	56.600	4,080.839	2,810.839	236.505	340.793	107.192	1.69475	1.56522	-1.63043
4,211.000	22.440	56.310	4,166.231	2,896.232	256.853	371.490	117.465	1.91795	-1.91398	-0.31183
4,303.000	26.050	56.740	4,250.103	2,980.103	277.679	403.002	128.051	3.92858	3.92391	0.46739
4,396.000	30.370	58.170	4,332.038	3,062.038	301.289	440.070	141.077	4.70138	4.64516	1.53763
4,488.000	34.600	64.080	4,409.645	3,139.645	324.990	483.353	158.787	5.74374	4.59783	6.42391
4,581.000	37.100	60.840	4,485.028	3,215.028	350.205	531.608	179.312	3.37405	2.68817	-3.48387
4,674.000	39.070	57.710	4,558.231	3,288.231	379.534	580.887	197.960	2.96542	2.11828	-3.36559
4,766.000	40.680	55.740	4,628.836	3,358.836	411.905	630.183	214.654	2.22404	1.75000	-2.14130
4,859.000	40.620	55.100	4,699.396	3,429.396	446.289	680.063	230.493	0.45292	-0.06452	-0.68817
4,951.000	41.650	56.730	4,768.688	3,498.688	480.196	730.188	246.827	1.61605	1.11957	1.77174
5,044.000	40.360	59.050	4,838.873	3,568.873	512.639	781.856	265.286	2.14530	-1.38710	2.49462
5,136.000	37.360	57.260	4,910.506	3,640.506	543.063	830.896	283.042	3.48159	-3.26087	-1.94565
5,229.000	35.320	57.190	4,985.415	3,715.415	572.894	877.230	299.118	2.19400	-2.19355	-0.07527
5,321.000	35.020	57.160	5,060.620	3,790.620	601.620	921.761	314.533	0.32663	-0.32609	-0.03261
5,415.000	36.290	57.840	5,136.998	3,866.998	631.055	967.974	330.772	1.41532	1.35106	0.72340
5,507.000	35.170	57.830	5,211.680	3,941.680	659.655	1,013.452	346.991	1.21741	-1.21739	-0.01087
5,599.000	34.120	60.280	5,287.370	4,017.370	686.557	1,058.293	363.820	1.89573	-1.14130	2.66304
5,723.000	31.270	61.880	5,391.715	4,121.715	718.974	1,116.892	387.585	2.40157	-2.29839	1.29032
5,815.000	29.580	56.760	5,471.056	4,201.056	742.680	1,156.953	402.832	3.36268	-1.83696	-5.56522
5,908.000	29.370	56.180	5,552.019	4,282.019	767.956	1,195.098	415.603	0.38099	-0.22581	-0.62366
6,000.000	30.080	56.220	5,631.913	4,361.913	793.332	1,233.005	428.128	0.77204	0.77174	0.04348
6,092.000	29.730	56.000	5,711.663	4,441.663	818.908	1,271.081	440.652	0.39868	-0.38043	-0.23913
6,185.000	30.170	55.740	5,792.244	4,522.244	844.959	1,309.513	453.142	0.49328	0.47312	-0.27957
6,277.000	33.840	56.680	5,870.247	4,600.248	872.054	1,350.040	466.554	4.02561	3.98913	1.02174
6,369.000	33.960	56.770	5,946.609	4,676.609	900.207	1,392.939	481.094	0.14139	0.13043	0.09783
6,462.000	35.960	65.890	6,022.876	4,752.876	925.616	1,439.628	500.299	6.01098	2.15054	9.80645
6,554.000	36.830	76.750	6,097.008	4,827.008	942.988	1,491.179	528.408	7.06047	0.94565	11.80435
6,647.000	41.090	87.980	6,169.398	4,899.398	950.467	1,548.953	567.660	8.85273	4.58065	12.07527
6,739.000	44.370	96.020	6,237.019	4,967.019	948.157	1,611.222	616.668	6.91374	3.56522	8.73913

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EQT
Survey Report

Database:	EDM_Definitive	Local Co-ordinate Reference:	Well M11H
Company:	EQT (Chevron Data) 02-13-21	TVD Reference:	GL @ 1270.000usft
Project:	Marshall County, WV Chevron	MD Reference:	GL @ 1270.000usft
Site:	Longworth	North Reference:	True
Well:	M11H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH - ST01		
Design:	Longworth 11H ST01 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)
6,832.000	47.920	105.320	6,301.516	5,031.516	935.610	1,676.942	674.927	8.15177	3.81720	10.00000
6,924.000	52.820	113.970	6,360.245	5,090.245	911.658	1,743.475	741.176	8.98144	5.32609	9.40217
7,017.000	59.530	116.250	6,411.989	5,141.989	878.841	1,813.359	815.714	7.49624	7.21505	2.45161
7,110.000	64.050	121.590	6,455.964	5,185.964	839.169	1,884.998	896.019	7.01395	4.86022	5.74194
7,202.000	70.330	125.050	6,491.621	5,221.621	792.568	1,955.780	980.151	7.65473	6.82609	3.76087
7,218.000	71.340	126.510	6,496.874	5,226.874	783.731	1,968.040	995.217	10.68346	6.31250	9.12500
7,310.000	76.480	136.210	6,522.420	5,252.420	725.347	2,034.210	1,083.444	11.56440	5.58696	10.54348
Top of Marcellus@6523' TVD										
7,311.632	76.582	136.298	6,522.800	5,252.800	724.201	2,035.308	1,085.022	8.15150	6.23523	5.39912
7,403.000	82.320	141.130	6,539.530	5,269.530	656.731	2,094.505	1,173.800	8.15150	6.28036	5.28838
LP=7496' MD/ 6547' TVD										
7,496.000	88.150	139.330	6,547.252	5,277.253	585.534	2,153.769	1,265.039	6.55859	6.26882	-1.93548
7,588.000	87.920	139.580	6,550.407	5,280.407	515.665	2,213.538	1,355.804	0.36913	-0.25000	0.27174
7,681.000	91.140	140.980	6,551.170	5,281.170	444.145	2,272.957	1,447.369	3.77537	3.46237	1.50538
7,774.000	89.400	141.620	6,550.732	5,280.732	371.569	2,331.101	1,538.644	1.99350	-1.87097	0.68817
7,866.000	86.880	139.910	6,553.718	5,283.718	300.355	2,389.253	1,629.045	3.30959	-2.73913	-1.85870
7,959.000	88.690	139.600	6,557.312	5,287.312	229.425	2,449.289	1,720.700	1.97453	1.94624	-0.33333
8,052.000	89.190	138.840	6,559.032	5,289.032	159.016	2,510.021	1,812.549	0.97808	0.53763	-0.81720
8,145.000	90.870	139.430	6,558.984	5,288.984	88.688	2,570.867	1,904.433	1.91461	1.80645	0.63441
8,237.000	91.810	139.270	6,556.832	5,286.832	18.907	2,630.782	1,995.253	1.03643	1.02174	-0.17391
8,330.000	91.280	140.440	6,554.325	5,284.325	-52.156	2,690.718	2,086.918	1.38070	-0.56989	1.25806
8,422.000	89.030	141.640	6,554.076	5,284.076	-123.688	2,748.561	2,177.288	2.77170	-2.44565	1.30435
8,515.000	87.920	141.240	6,556.551	5,286.551	-196.383	2,806.509	2,268.490	1.26863	-1.19355	-0.43011
8,608.000	88.450	140.840	6,559.496	5,289.496	-268.662	2,864.956	2,359.804	0.71385	0.56989	-0.43011
8,700.000	90.200	142.290	6,560.580	5,290.580	-340.717	2,922.137	2,450.008	2.47018	1.90217	1.57609
8,793.000	90.840	142.480	6,559.736	5,289.736	-414.382	2,978.898	2,540.931	0.71786	0.68817	0.20430
8,885.000	88.290	141.200	6,560.435	5,290.435	-486.711	3,035.733	2,631.048	3.10126	-2.77174	-1.39130
8,978.000	88.120	140.420	6,563.348	5,293.348	-558.755	3,094.470	2,722.431	0.85800	-0.18280	-0.83871
9,070.000	88.480	141.460	6,566.077	5,296.077	-630.159	3,152.416	2,812.798	1.19577	0.39130	1.13043
9,163.000	88.460	140.150	6,568.560	5,298.560	-702.207	3,211.166	2,904.194	1.40826	-0.02151	-1.40860
9,256.000	89.360	139.910	6,570.330	5,300.330	-773.467	3,270.896	2,995.829	1.00155	0.96774	-0.25806
9,349.000	89.600	140.360	6,571.174	5,301.174	-844.846	3,330.505	3,087.448	0.54837	0.25806	0.48387
9,441.000	89.830	140.700	6,571.631	5,301.631	-915.865	3,388.986	3,177.974	0.44618	0.25000	0.36957
9,534.000	90.300	140.940	6,571.526	5,301.526	-987.955	3,447.739	3,269.400	0.56745	0.50538	0.25806
9,627.000	89.130	141.610	6,571.988	5,301.988	-1,060.507	3,505.917	3,360.684	1.44973	-1.25806	0.72043
9,719.000	89.460	140.870	6,573.120	5,303.120	-1,132.241	3,563.509	3,450.994	0.88065	0.35870	-0.80435
9,812.000	88.660	140.050	6,574.646	5,304.646	-1,203.950	3,622.706	3,542.511	1.23174	-0.86022	-0.88172
9,904.000	89.260	140.050	6,576.316	5,306.316	-1,274.465	3,681.771	3,633.158	0.65217	0.65217	0.00000
9,997.000	88.420	141.640	6,578.199	5,308.199	-1,346.563	3,740.478	3,724.554	1.93328	-0.90323	1.70968
10,090.000	88.930	141.430	6,580.349	5,310.349	-1,419.362	3,798.312	3,815.736	0.59303	0.54839	-0.22581
10,182.000	89.230	140.600	6,581.826	5,311.826	-1,490.864	3,856.183	3,906.108	0.95919	0.32609	-0.90217

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EQT
Survey Report

Database:	EDM_Definitive	Local Co-ordinate Reference:	Well M11H
Company:	EQT (Chevron Data) 02-13-21	TVD Reference:	GL @ 1270.000usft
Project:	Marshall County, WV Chevron	MD Reference:	GL @ 1270.000usft
Site:	Longworth	North Reference:	True
Well:	M11H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH - ST01		
Design:	Longworth 11H ST01 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)
13,047.00 0	89.160	141.530	6,613.180	5,343.180	-3,735.443	5,634.392	6,713.713	0.55418	0.10870	-0.54348
13,139.00 0	89.660	144.290	6,614.128	5,344.128	-3,808.820	5,689.866	6,803.467	3.04866	0.54348	3.00000
13,232.00 0	88.890	144.650	6,615.305	5,345.305	-3,884.497	5,743.906	6,893.615	0.91396	-0.82796	0.38710
13,324.00 0	87.310	143.010	6,618.355	5,348.355	-3,958.721	5,798.169	6,982.994	2.47456	-1.71739	-1.78261
13,416.00 0	88.120	141.690	6,622.023	5,352.023	-4,031.502	5,854.320	7,072.880	1.68240	0.88043	-1.43478
13,509.00 0	89.830	139.960	6,623.687	5,353.687	-4,103.580	5,913.053	7,164.284	2.61532	1.83871	-1.86022
13,601.00 0	90.000	140.980	6,623.823	5,353.823	-4,174.538	5,971.609	7,254.827	1.12399	0.18478	1.10870
13,693.00 0	90.170	141.040	6,623.687	5,353.687	-4,246.046	6,029.494	7,345.213	0.19595	0.18478	0.06522
13,785.00 0	90.100	140.640	6,623.470	5,353.470	-4,317.381	6,087.590	7,435.650	0.44139	-0.07609	-0.43478
13,878.00 0	89.900	140.310	6,623.470	5,353.470	-4,389.116	6,146.777	7,527.177	0.41492	-0.21505	-0.35484
13,970.00 0	89.870	140.520	6,623.655	5,353.655	-4,460.018	6,205.401	7,617.737	0.23058	-0.03261	0.22826
14,062.00 0	89.970	140.850	6,623.783	5,353.783	-4,531.196	6,263.691	7,708.219	0.37480	0.10870	0.35870
14,154.00 0	89.830	141.340	6,623.944	5,353.944	-4,602.789	6,321.469	7,798.580	0.55392	-0.15217	0.53261
14,246.00 0	88.790	139.520	6,625.052	5,355.052	-4,673.698	6,380.067	7,889.124	2.27832	-1.13043	-1.97826
14,339.00 0	89.130	140.310	6,626.740	5,356.740	-4,744.839	6,439.942	7,980.792	0.92466	0.36559	0.84946
14,431.00 0	89.230	141.060	6,628.056	5,358.057	-4,816.009	6,498.225	8,071.264	0.82235	0.10870	0.81522
14,523.00 0	88.690	140.350	6,629.726	5,359.726	-4,887.195	6,556.480	8,161.725	0.96948	-0.58696	-0.77174
14,616.00 0	89.060	140.760	6,631.552	5,361.552	-4,958.999	6,615.554	8,253.211	0.59377	0.39785	0.44086
14,708.00 0	88.960	140.490	6,633.142	5,363.142	-5,030.105	6,673.910	8,343.698	0.31292	-0.10870	-0.29348
14,800.00 0	89.090	141.860	6,634.707	5,364.707	-5,101.767	6,731.579	8,434.019	1.49560	0.14130	1.48913
14,893.00 0	88.930	140.680	6,636.314	5,366.314	-5,174.304	6,789.755	8,525.294	1.28024	-0.17204	-1.26882
14,985.00 0	89.160	142.160	6,637.848	5,367.848	-5,246.212	6,847.117	8,615.540	1.62778	0.25000	1.60870
15,077.00 0	88.760	141.630	6,639.518	5,369.518	-5,318.593	6,903.881	8,705.636	0.72167	-0.43478	-0.57609
15,170.00 0	88.790	140.790	6,641.506	5,371.506	-5,391.064	6,962.129	8,796.922	0.90360	0.03226	-0.90323
15,262.00 0	88.860	140.260	6,643.392	5,373.392	-5,462.064	7,020.604	8,887.432	0.58097	0.07609	-0.57609



EQT
Survey Report

Database:	EDM_Definitive	Local Co-ordinate Reference:	Well M11H
Company:	EQT (Chevron Data) 02-13-21	TVD Reference:	GL @ 1270.000usft
Project:	Marshall County, WV Chevron	MD Reference:	GL @ 1270.000usft
Site:	Longworth	North Reference:	True
Well:	M11H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH - ST01		
Design:	Longworth 11H ST01 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)
15,354.00	89.060	140.440	6,645.062	5,375.062	-5,532.889	7,079.299	8,977.995	0.29245	0.21739	0.19565
0										
15,447.00	88.090	138.990	6,647.375	5,377.375	-5,603.808	7,139.411	9,069.701	1.87543	-1.04301	-1.55914
0										
15,539.00	89.130	140.450	6,649.607	5,379.607	-5,673.971	7,198.871	9,160.420	1.94802	1.13043	1.58696
0										
15,631.00	89.000	140.810	6,651.108	5,381.108	-5,745.083	7,257.221	9,250.907	0.41599	-0.14130	0.39130
0										
15,724.00	88.590	140.370	6,653.064	5,383.064	-5,816.921	7,316.250	9,342.380	0.64661	-0.44086	-0.47312
0										
15,816.00	88.590	140.680	6,655.328	5,385.328	-5,887.914	7,374.721	9,432.881	0.33685	0.00000	0.33696
0										
15,909.00	88.720	141.890	6,657.511	5,387.511	-5,960.458	7,432.870	9,524.139	1.30821	0.13978	1.30108
0										
16,001.00	88.990	142.080	6,659.349	5,389.349	-6,032.925	7,489.519	9,614.203	0.35884	0.29348	0.20652
0										
16,094.00	88.460	141.110	6,661.419	5,391.419	-6,105.785	7,547.277	9,705.366	1.18832	-0.56989	-1.04301
0										
16,187.00	88.490	140.390	6,663.894	5,393.894	-6,177.777	7,606.097	9,796.780	0.77459	0.03226	-0.77419
0										
16,280.00	88.550	140.530	6,666.296	5,396.296	-6,249.473	7,665.282	9,888.281	0.16373	0.06452	0.15054
0										
16,372.00	88.420	140.640	6,668.728	5,398.728	-6,320.524	7,723.676	9,978.761	0.18508	-0.14130	0.11957
0										
16,464.00	88.550	140.900	6,671.160	5,401.160	-6,391.764	7,781.839	10,069.18	0.31588	0.14130	0.28261
0							7			
16,557.00	88.660	140.590	6,673.424	5,403.425	-6,463.756	7,840.670	10,160.60	0.35360	0.11828	-0.33333
0							8			
16,649.00	88.390	140.700	6,675.793	5,405.793	-6,534.869	7,898.990	10,251.07	0.31688	-0.29348	0.11957
0							2			
16,741.00	88.520	140.530	6,678.273	5,408.273	-6,605.950	7,957.345	10,341.54	0.23257	0.14130	-0.18478
0							2			
16,834.00	88.660	140.090	6,680.562	5,410.562	-6,677.493	8,016.720	10,433.08	0.49635	0.15054	-0.47312
0							8			
16,926.00	88.490	139.910	6,682.849	5,412.850	-6,747.947	8,075.838	10,523.73	0.26907	-0.18478	-0.19565
0							5			
Final Survey=17018' MD/6684' TVD										
17,018.00	89.090	140.610	6,684.792	5,414.792	-6,818.674	8,134.640	10,614.31	1.00199	0.65217	0.76087
0							8			
Projection to TD/Deepest point of Well=17321' MD/ 6890' TVD										
17,321.00	89.090	140.610	6,689.604	5,419.604	-7,052.817	8,326.898	10,912.35	0.00000	0.00000	0.00000
0							5			

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EQT
Survey Report

Database:	EDM_Definitive	Local Co-ordinate Reference:	Well M11H
Company:	EQT (Chevron Data) 02-13-21	TVD Reference:	GL @ 1270.000usft
Project:	Marshall County, WV Chevron	MD Reference:	GL @ 1270.000usft
Site:	Longworth	North Reference:	True
Well:	M11H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH - ST01		
Design:	Longworth 11H ST01 As Drilled		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(144.956)	(198.240)	(usft)	(usft)		
- Shape									
Longworth 11H KOP	0.000	0.000	3,180.39 6	144.956	198.240	493,208.236	1,624,346.463	39.8476576	80.7257866°W
- actual wellpath misses target center by 0.655usft at 3195.010usft MD (3180.415 TVD, 145.059 N, 197.593 E)									
- Point									
Longworth 11H LP	0.000	0.000	6,547.24 4	585.432	2,154.416	493,621.964	1,626,308.470	39.8488666	80.7188193°W
- actual wellpath misses target center by 0.425usft at 7496.498usft MD (6547.269 TVD, 585.157 N, 2154.093 E)									
- Point									
Longworth 11H TD	0.000	0.000	6,689.59 6	-7,052.919	8,327.545	485,900.050	1,632,376.747	39.8278934	80.6968415°W
- actual wellpath misses target center by 0.655usft at 17321.000usft MD (6689.605 TVD, -7052.817 N, 8326.899 E)									
- Point									

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(usft)	(usft)			(°)	(°)
7,311.632	6,522.800	Top of Marcellus@6523' TVD		0.0000	

Design Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(usft)	(usft)	+N/-S	+E/-W		
		(usft)	(usft)		
612.000	611.914	-1.398	9.154	ST Point=612' MD	
3,195.000	3,180.405	145.059	197.593	KOP=3195' MD	
7,496.000	6,547.252	585.534	2,153.769	LP=7496' MD/ 6547' TVD	
17,018.000	6,684.792	-6,818.674	8,134.640	Final Survey=17018' MD/6684' TVD	
17,321.000	6,689.604	-7,052.817	8,326.898	Projection to TD/Deepest point of Well=17321' MD/ 6690' TVD	

Checked By: _____ Approved By: _____ Date: _____

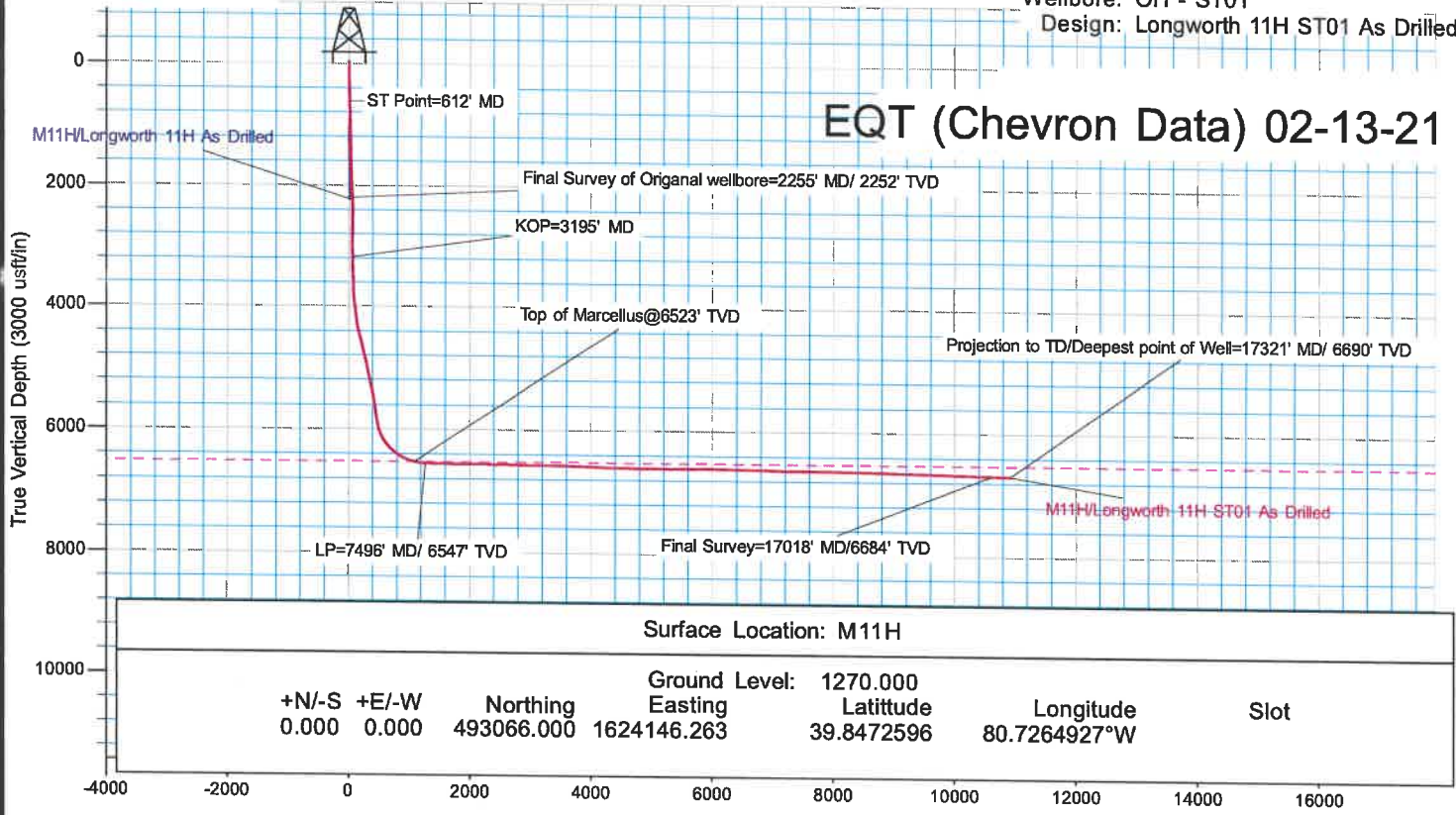
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KB Elevation= GL @ 1270.000usft
 Ground Elevation= 1270.000
 All measurements were taken from KB Elevation

Project: Marshall County, WV Chevron
 Site: Longworth
 Well: M11H
 Wellbore: OH - ST01
 Design: Longworth 11H ST01 As Drilled

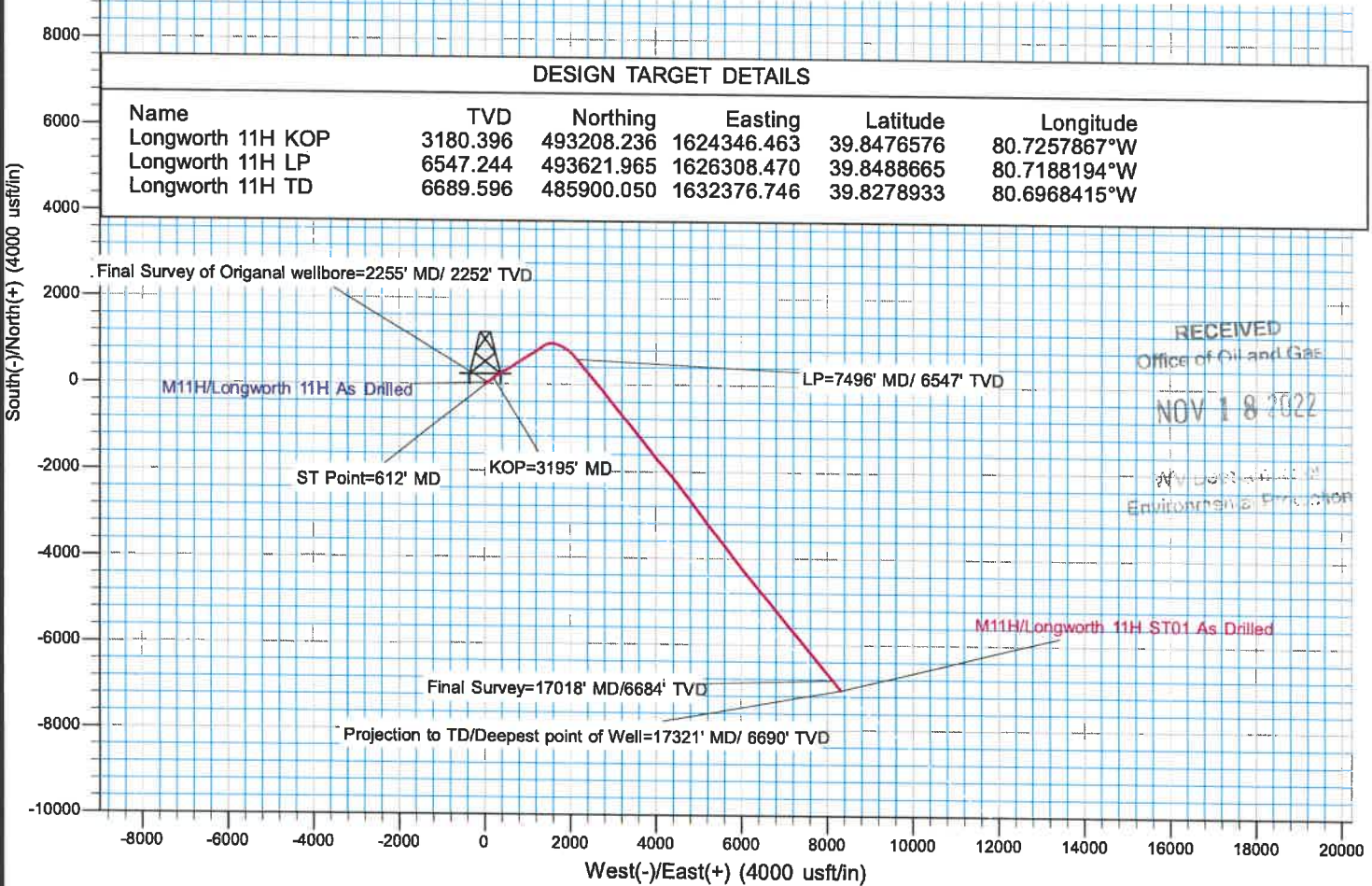
EQT (Chevron Data) 02-13-21



Surface Location: M11H

+N/-S	+E/-W	Northing	Easting	Ground Level: 1270.000	Latitude	Longitude	Slot
0.000	0.000	493066.000	1624146.263		39.8472596	80.7264927°W	

Vertical Section at 130.264° (3000 usft/in)



DESIGN TARGET DETAILS

Name	TVD	Northing	Easting	Latitude	Longitude
Longworth 11H KOP	3180.396	493208.236	1624346.463	39.8476576	80.7257867°W
Longworth 11H LP	6547.244	493621.965	1626308.470	39.8488665	80.7188194°W
Longworth 11H TD	6689.596	485900.050	1632376.746	39.8278933	80.6968415°W

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