

# **EQT (Chevron Data) 02-13-21**

**Marshall County, WV Chevron**

**Hines Pad EQT**

**Hines M02H**

**OH**

**Design: Hines M02H As Drilled**

## **Standard Survey Report**

**30 June, 2021**

**05/27/2022**

# EQT

## Survey Report

Database:	EDM_Definitive	Local Co-ordinate Reference:	Well Hines M02H
Company:	EQT (Chevron Data) 02-13-21	TVD Reference:	GL @ 1125.00 & 25' KB @ 1149.998usft (PD572)
Project:	Marshall County, WV Chevron	MD Reference:	GL @ 1125.00 & 25' KB @ 1149.998usft (PD572)
Site:	Hines Pad EQT	North Reference:	True
Well:	Hines M02H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Hines M02H As Drilled		

<b>Project</b> 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		

<b>Site</b> Hines Pad EQT					
Site Position:		Northing:	514,501.050 usft	Latitude:	39.91
From:	Map	Easting:	1,631,895.930 usft	Longitude:	-80.70
Position Uncertainty:	1.500 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.7653 °

<b>Well</b> Hines M02H						
Well Position	+N/-S	0.000 usft	Northing:	514,482.030 usft	Latitude:	39.9063407
	+E/-W	0.000 usft	Easting:	1,632,056.330 usft	Longitude:	80.6993409°W
Position Uncertainty		0.000 usft	Wellhead Elevation:	0.000 usft	Ground Level:	1,124.998 usft

<b>Wellbore</b> OH					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	4/25/2019	-7.9500	66.9667	52,392.30000000

<b>Design</b> Hines M02H As Drilled					
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	321.270	

<b>Survey Program</b>		Date	6/28/2021
From (')	To (usft)	Survey (Wellbore)	Tool Name
0.00	410.999	Gyro Keeper (OH)	SDI Standard Keeper 104
0.00	5,767.000	Survey #2 (OH)	MWD+IFR1+MS MagVar 201 OWSG MWD + IFR1 + Multi-Station Correction
			Description
			Standard Wireline Keeper ver 1.0.4

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	-1,149.998	0.000	0.000	0.000	0.00000	0.00000	0.00000
100.000	0.490	62.380	100.999	-1,048.999	0.200	0.383	-0.083	0.48515	0.48515	0.00000
125.000	0.390	27.310	125.998	-1,024.000	0.325	0.516	-0.069	1.12703	-0.40000	-140.28028
150.000	0.480	28.710	150.997	-999.001	0.491	0.601	0.007	0.28056	0.28000	-2.40000
175.000	0.440	24.520	175.996	-974.001	0.668	0.686	0.092	0.10550	-0.08000	-8.76002
200.000	0.470	42.070	200.995	-949.002	0.831	0.794	0.152	0.56782	0.12000	70.20014

# EQT

## Survey Report

<b>Database:</b>	EDM_Definitive	<b>Local Co-ordinate Reference:</b>	Well Hines M02H
<b>Company:</b>	EQT (Chevron Data) 02-13-21	<b>TVD Reference:</b>	GL @ 1125.00 & 25' KB @ 1149.998usft (PD572)
<b>Project:</b>	Marshall County, WV Chevron	<b>MD Reference:</b>	GL @ 1125.00 & 25' KB @ 1149.998usft (PD572)
<b>Site:</b>	Hines Pad EQT	<b>North Reference:</b>	True
<b>Well:</b>	Hines M02H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Hines M02H As Drilled		

Survey											
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	North Reference		Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
					+N/-S (usft)	+E/-W (usft)					
226.999	0.460	60.310	225.995	-924.003	0.950	0.939	0.154	0.61699	-0.28000	72.96015	
231.999	0.460	74.290	250.994	-899.004	1.021	1.111	0.101	0.48166	0.24000	55.92011	
275.999	0.400	77.370	275.993	-874.004	1.067	1.293	0.024	0.25711	-0.24000	12.32002	
300.999	0.510	50.210	300.992	-849.005	1.157	1.463	-0.013	0.95572	0.44000	-108.64022	
325.999	0.540	41.520	325.991	-824.006	1.317	1.627	0.009	0.33995	0.12000	-34.76007	
350.999	0.550	48.570	350.990	-799.008	1.484	1.795	0.035	0.27102	0.04000	28.20006	
375.999	0.600	22.850	375.989	-774.009	1.684	1.936	0.103	1.04221	0.20000	-102.88021	
400.999	0.530	29.510	400.988	-749.010	1.906	2.044	0.208	0.38349	-0.28000	26.64005	
<b>Circle Tie In=411' MD/TVD</b>											
410.999	0.640	34.280	410.987	-739.011	1.992	2.098	0.241	1.20206	1.10000	47.70010	
513.999	0.610	65.850	513.981	-636.017	2.692	2.922	0.272	0.33131	-0.02913	30.65055	
544.999	0.530	70.350	544.979	-605.018	2.807	3.208	0.183	0.29553	-0.25807	14.51616	
639.999	0.540	72.040	669.974	-480.024	3.193	4.313	-0.215	0.01494	0.00800	1.35200	
916.999	0.410	25.630	918.965	-231.032	4.348	5.814	-0.245	0.15780	-0.05221	-18.63859	
1,012.999	0.830	357.590	1,012.960	-137.038	5.332	5.931	0.449	0.53856	0.44681	-29.82985	
1,105.999	1.290	344.580	1,105.943	-44.054	7.014	5.624	1.953	0.55516	0.49462	-13.98928	
<b>Node X=P=1168' MD/ TVD</b>											
1,102.000	1.290	344.580	1,105.946	-44.052	7.014	5.624	1.953	0.00000	0.00000	0.00000	
1,199.999	2.700	331.770	1,199.884	49.887	9.985	4.296	5.102	1.56406	1.50004	-13.62801	
1,293.997	4.330	342.400	1,293.705	143.707	15.318	2.175	10.589	1.86024	1.73405	11.30853	
1,386.997	6.030	345.780	1,386.322	236.324	23.401	-0.086	18.309	1.85639	1.82796	3.63442	
1,480.997	7.540	341.670	1,479.661	329.664	34.042	-3.239	28.582	1.68639	1.60639	-4.37235	
1,573.997	8.550	348.420	1,571.747	421.749	46.607	-6.546	40.453	1.48527	1.08602	7.25808	
1,667.997	8.260	352.690	1,664.738	514.740	60.150	-8.808	52.433	0.73193	-0.30851	4.54256	
1,760.996	8.530	352.100	1,756.741	606.743	73.608	-10.606	64.057	0.30474	0.29032	-0.63441	
1,854.996	9.010	351.670	1,849.641	699.644	87.796	-12.630	76.392	0.51538	0.51064	-0.45745	
1,948.996	9.110	356.610	1,942.470	792.472	102.507	-14.137	88.811	0.83410	0.10638	5.25533	
2,020.996	8.710	356.550	2,013.601	863.603	113.639	-14.802	97.911	0.55571	-0.55556	-0.08333	
2,047.996	8.810	357.440	2,040.286	890.288	117.745	-15.017	101.249	0.62384	0.37037	3.29630	
2,142.996	8.000	353.440	2,135.255	985.257	131.726	-16.109	112.838	1.04012	-0.84375	-4.16668	
2,236.996	10.120	351.820	2,227.089	1,077.091	146.245	-18.011	125.354	2.29579	2.27957	-1.74194	
2,330.996	10.610	352.120	2,319.555	1,169.557	162.991	-20.372	139.896	0.52443	0.52128	0.31915	
2,423.996	11.420	10.510	2,410.869	1,260.871	180.530	-19.866	153.262	3.85961	0.87097	19.77423	
2,517.996	13.440	24.390	2,502.681	1,352.683	199.635	-13.656	164.280	3.82195	2.14894	14.76599	
2,610.996	15.460	29.580	2,592.738	1,442.740	220.261	-3.072	173.749	2.57809	2.17205	5.58066	
2,704.994	19.150	35.640	2,682.475	1,532.477	243.697	12.103	182.537	4.36390	3.92554	6.44682	
2,798.994	22.700	41.820	2,770.272	1,620.274	269.756	33.190	189.672	4.44224	3.77660	6.57448	
2,891.994	26.140	49.340	2,854.960	1,704.962	296.492	60.711	193.310	4.97915	3.69893	8.08604	
2,985.994	27.900	58.100	2,938.730	1,788.732	321.617	95.106	191.391	4.62435	1.87234	9.31917	
3,079.994	28.810	69.160	3,021.508	1,871.511	341.311	134.974	181.811	5.66401	0.96809	11.76598	
3,172.994	25.800	72.280	3,104.141	1,954.143	355.447	175.206	167.667	3.58282	-3.23657	3.35485	

# EQT

## Survey Report

<b>Database:</b>	EDM_Definitive	<b>Local Co-ordinate Reference:</b>	Well Hines M02H
<b>Company:</b>	EQT (Chevron Data) 02-13-21	<b>TVD Reference:</b>	GL @ 1125.00 & 25' KB @ 1149.998usft (PD572)
<b>Project:</b>	Marshall County, WV Chevron	<b>MD Reference:</b>	GL @ 1125.00 & 25' KB @ 1149.998usft (PD572)
<b>Site:</b>	Hines Pad EQT	<b>North Reference:</b>	True
<b>Well:</b>	Hines M02H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH	<b>Local Co-ordinate Reference:</b>	
<b>Design:</b>	Hines M02H As Drilled	<b>TVD Reference:</b>	

Survey											
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	North Reference:		Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
					+N/-S (usft)	+E/-W (usft)					
3,268.992	19.130	64.920	3,190.975	2,040.978	368.219	208.686	156.684	7.68787	-7.09576	-7.82980	
3,339.492	18.790	60.500	3,279.195	2,129.197	381.871	234.848	150.810	2.08969	-1.45162	-4.75270	
3,453.991	18.470	62.100	3,369.259	2,219.262	394.607	258.422	146.152	2.50502	-2.45745	1.70213	
3,544.309	18.220	60.120	3,459.154	2,309.156	406.102	279.289	142.064	1.45037	-1.34409	-2.12904	
3,645.399	18.690	58.130	3,550.178	2,400.180	417.969	299.530	138.657	0.56489	0.50000	-1.05319	
3,734.992	15.900	60.710	3,640.847	2,490.849	430.384	320.991	134.915	1.36135	1.28724	1.68085	
3,827.992	16.540	62.970	3,730.146	2,580.148	442.633	343.894	130.141	0.96650	0.68817	2.43011	
3,921.992	16.600	62.310	3,820.471	2,670.474	454.587	367.005	125.008	1.01870	-1.00000	-0.70213	
4,017.992	16.220	62.730	3,912.793	2,762.796	466.728	390.352	119.872	0.65687	0.64583	0.43750	
4,110.992	16.140	63.570	4,002.110	2,852.112	478.433	413.472	114.538	0.26598	-0.08602	0.90323	
4,204.991	18.280	66.800	4,091.898	2,941.900	490.058	438.725	107.806	2.49247	2.27660	3.43618	
4,267.991	19.460	63.920	4,179.899	3,029.902	502.614	466.047	100.508	1.61614	1.26882	-3.09678	
4,391.991	19.190	60.730	4,268.608	3,118.610	517.048	493.581	94.541	1.16145	-0.29787	-3.39362	
4,485.991	19.170	58.500	4,357.394	3,207.396	532.662	520.210	90.061	0.77924	-0.01064	-2.37235	
4,579.991	19.880	60.010	4,445.046	3,295.048	548.544	546.925	85.736	0.93660	0.76344	1.62366	
4,672.990	19.610	57.490	4,533.521	3,383.523	565.011	574.071	81.599	0.95006	-0.28723	-2.68086	
4,765.990	18.850	61.480	4,621.335	3,471.337	580.573	600.433	77.245	1.63191	-0.81721	4.29033	
4,859.990	19.610	62.130	4,710.089	3,560.091	595.197	627.721	71.581	0.83997	0.80851	0.69149	
4,952.990	19.710	59.920	4,797.669	3,647.671	610.353	655.088	66.282	0.80665	0.10753	-2.37635	
<b>Hines A SW1 BHL</b>											
5,009.581	19.914	59.169	4,850.910	3,700.912	620.075	671.621	63.522	0.57622	0.35989	-1.32776	
5,065.990	20.050	58.680	4,886.067	3,736.069	626.674	682.570	61.820	0.57622	0.36445	-1.30613	
5,139.989	19.680	60.240	4,973.533	3,823.536	642.734	709.783	57.322	0.69508	-0.39785	1.67742	
5,233.989	19.260	63.650	5,062.161	3,912.163	657.472	737.417	51.530	1.28885	-0.44681	3.62767	
<b>Hines A SW1 TOP</b>											
5,242.904	19.327	63.542	5,070.575	3,920.578	658.782	740.055	50.901	0.84925	0.74946	-1.20887	
<b>Hines A SW1 LP</b>											
5,267.341	19.510	63.250	5,093.622	3,943.624	662.420	747.319	49.195	0.84925	0.75077	-1.19396	
5,320.989	19.980	62.560	5,149.766	3,999.769	671.595	765.250	45.134	0.84925	0.75396	-1.15756	
5,420.989	19.120	61.880	5,238.352	4,088.354	686.245	793.067	39.158	0.92578	-0.89362	-0.72341	
5,514.989	17.760	60.040	5,327.524	4,177.526	700.661	819.066	34.138	1.57356	-1.44681	-1.95745	
5,607.989	18.620	60.190	5,415.875	4,265.878	715.125	844.238	29.673	0.92610	0.92473	0.16129	
<b>Final MWD Survey=5702' MD/ 5585' TVD</b>											
5,701.988	19.780	60.940	5,504.645	4,354.647	730.311	871.163	24.674	1.26161	1.23405	0.79787	
<b>Projection to Top Hole TD=5767' MD/ 5586' TVD</b>											
5,767.000	19.780	60.940	5,565.821	4,415.823	740.998	890.393	20.979	0.00000	0.00000	0.00000	

# EQT

## Survey Report

<b>Database:</b> EDM_Definitive <b>Company:</b> EQT (Chevron Data) 02-13-21  <b>Project:</b> Marshall County, WV Chevron  <b>Site:</b> Hines Pad EQT <b>Well:</b> Hines M02H <b>Wellbore:</b> OH <b>Design:</b> Hines M02H As Drilled	<b>Local Co-ordinate Reference:</b> <b>TVD Reference:</b> EQT <b>MD Reference:</b> <b>North Reference:</b> <b>Survey Calculation Method:</b> Local Co-ordinate Reference, TVD Reference	<b>Well Hines M02H</b> GL @ 1125.00 & 25' KB @ 1149.998usft (PD572) GL @ 1125.00 & 25' KB @ 1149.998usft (PD572) True Minimum Curvature
---	---	---

Design Targets											
Target Name	- hit/miss target	- Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (7,376.098)	+E/-W (-4,098.139)	Northing (usft)	Easting (usft)	Latitude	Longitude
(2) Hines M02H BHL - R			0.000	0.000	6,269.98	7,376.098	-4,098.139	521,912.181	1,628,057.024	39.9265891	80.7139536°W
- actual wellpath misses target center by 8331.019usft at 5767.000usft MD (5565.821 TVD, 740.998 N, 890.393 E) - Point:											
(1) Hines M02H LP - Rev			0.000	0.000	6,269.98	1,393.458	700.348	515,866.015	1,632,775.218	39.9101661	80.6968442°W
- actual wellpath misses target center by 978.608usft at 5767.000usft MD (5565.821 TVD, 740.998 N, 890.393 E) - Point:											
(1) Hines M02H LP - Re			0.000	0.000	6,269.98	1,409.485	687.493	515,882.212	1,632,762.579	39.9102101	80.6968901°W
- actual wellpath misses target center by 991.914usft at 5767.000usft MD (5565.821 TVD, 740.998 N, 890.393 E) - Point:											
Hines M02H BHL - Rev-			0.000	0.000	6,269.98	7,455.701	-5,088.420	522,004.997	1,627,067.895	39.9268071	80.7174847°W
- actual wellpath misses target center by 9018.276usft at 5764.764usft MD (5563.717 TVD, 740.630 N, 889.732 E) - Point:											
Hines M01H LP - Rev-2			0.000	0.000	6,269.98	1,080.997	115.419	515,561.390	1,632,186.170	39.9093083	80.6989294°W
- actual wellpath misses target center by 1100.925usft at 5767.000usft MD (5565.821 TVD, 740.998 N, 890.393 E) - Point:											

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
410.999	410.987	1.992	2.098	Gyro Tie In=411' MD/TVD	
1105.000	1,105.946	7.014	5.624	Nudge KOP=1106' MD/ TVD	
5702.000	5565.821	730.311	871.103	Final MWD Survey=5702' MD/ 5565' TVD	
5767.000	5565.821	740.998	890.393	Projection to Top Hole TD=5767' MD/ 5566' TVD	

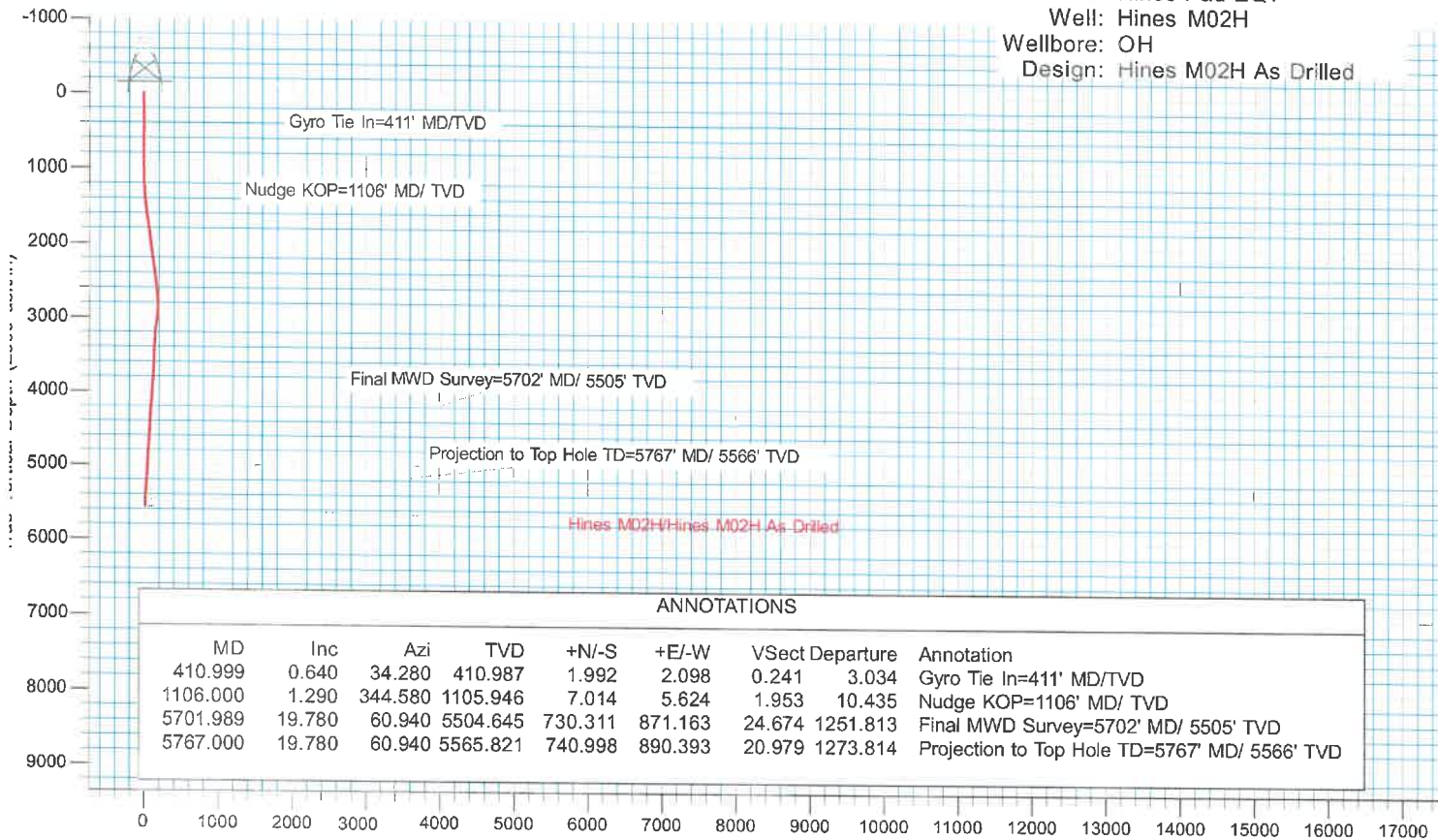
Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------



# EQT (Chevron Data) 02-13-21

KB Elevation= GL @ 1125.00 & 25' KB @ 1149.998usft (PD572)  
 Ground Elevation= 1124.998  
 All measurements were taken from KB Elevation

Project: Marshall County, WV Chevron  
 Site: Hines Pad EQT  
 Well: Hines M02H  
 Wellbore: OH  
 Design: Hines M02H As Drilled



ANNOTATIONS								
MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
410.999	0.640	34.280	410.987	1.992	2.098	0.241	3.034	Gyro Tie In=411' MD/TVD
1106.000	1.290	344.580	1105.946	7.014	5.624	1.953	10.435	Nudge KOP=1106' MD/ TVD
5701.989	19.780	60.940	5504.645	730.311	871.163	24.674	1251.813	Final MWD Survey=5702' MD/ 5505' TVD
5767.000	19.780	60.940	5565.821	740.998	890.393	20.979	1273.814	Projection to Top Hole TD=5767' MD/ 5566' TVD

Vertical Section at 321.270° (2500 usft/in)

