

EQT (Chevron Data) 02-13-21

Marshall County, WV Chevron

Hines Pad EQT

Hines M14H

OH

Design: Hines M14H As Drilled

Standard Survey Report

30 June, 2021

05/27/2022

EQT

Survey Report

Database: EDM_Definitive	Local Co-ordinate Reference: Well Hines M14H	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 M14H	Survey Calculation Method: Minimum Curvature	Wellbore: OH	
Design: Hines M14H 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: Hines Pad EQT			
Site Position: From: Map	Northing: 514,501.050 usft	Latitude: 39.91	
Position Uncertainty: 1.500 usft	Easting: 1,631,895.930 usft	Longitude: -80.70	
	Slot Radius: 13-3/16 "	Grid Convergence: -0.7653 °	

Well: Hines M14H			
Well Position: +N/-S 0.000 usft	Northing: 514,495.840 usft	Latitude: 39.9063797	
+E/-W 0.000 usft	Easting: 1,632,086.900 usft	Longitude: 80.6992326°W	
Position Uncertainty: 0.000 usft	Wellhead Elevation: 0.000 usft	Ground Level: 1,124.998 usft	

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

Design: Hines M14H 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	321.590	

Survey Program		Date: 6/28/2021			
From (')	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	402.589	Gyro Keeper (OH)	SDI Standard Keeper 104	Standard Wireline Keeper ver 1.0.4	
0.00	5,954.000	MWD (OH)	MWD c	MWD - Standard c	

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)	
0.000	0.000	0.000	0.000	-1,149.998	0.000	0.000	0.000	0.00000	0.00000	0.00000	
101.000	0.240	101.640	100.999	-1,048.998	-0.043	0.207	-0.162	0.23762	0.23762	0.00000	
126.000	0.100	40.630	125.999	-1,023.998	-0.037	0.273	-0.198	0.84225	-0.56000	-244.0404	8
151.000	0.180	148.800	150.999	-998.998	-0.054	0.307	-0.233	0.92629	0.32000	432.68087	
176.000	0.080	121.810	175.999	-973.999	-0.097	0.342	-0.288	0.45846	-0.40000	-107.9602	2

EQT

Survey Report

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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 M14H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Hines M14H 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)
201.000	0.050	119.570	200.999	-948.999	-0.111	0.367	-0.315	0.12041	-0.12000	-8.96002
226.000	0.070	279.220	225.999	-923.999	-0.114	0.361	-0.314	0.47266	0.08000	638.60127
250.999	0.060	338.250	250.999	-898.999	-0.099	0.341	-0.290	0.25853	-0.04000	236.12047
275.999	0.120	326.710	275.999	-873.999	-0.065	0.322	-0.251	0.24951	0.24000	-46.16009
300.999	0.290	348.700	300.999	-848.999	0.019	0.295	-0.169	0.73717	0.68000	87.96018
325.999	0.320	350.430	325.998	-823.999	0.149	0.271	-0.051	0.12551	0.12000	6.92001
350.999	0.330	14.240	350.998	-799.000	0.288	0.277	0.053	0.53778	0.04000	95.24019
375.999	0.350	36.140	375.997	-774.000	0.419	0.340	0.117	0.52260	0.08000	87.60018
400.999	0.360	4.400	400.997	-749.001	0.559	0.391	0.195	0.77756	0.04000	-126.96026
402.589	0.370	2.560	402.587	-747.411	0.570	0.392	0.203	0.96896	0.62893	-115.72350
Gyro Tie in=403' MD/TVD										
402.600	0.370	2.560	402.598	-747.400	0.570	0.392	0.203	0.00000	0.00000	0.00000
532.999	0.260	358.020	532.995	-617.003	1.286	0.400	0.759	0.08644	-0.08436	-3.48162
574.999	0.240	346.990	574.994	-575.004	1.467	0.377	0.915	0.12384	-0.04762	-26.26196
606.999	0.210	349.900	606.994	-543.004	1.590	0.352	1.027	0.10029	-0.09375	9.09377
637.999	0.210	351.030	637.993	-512.004	1.702	0.333	1.127	0.01336	0.00000	3.64517
668.999	0.310	330.440	668.993	-481.005	1.831	0.283	1.259	0.43658	0.32258	-66.41949
699.999	0.310	332.900	699.993	-450.005	1.979	0.203	1.424	0.04293	0.00000	7.93550
730.999	0.190	338.230	730.992	-419.005	2.101	0.146	1.556	0.39388	-0.38710	17.19358
793.998	0.390	332.920	793.991	-356.006	2.389	0.010	1.866	0.31997	0.31746	-8.42859
Nudge KOP=794' MD/TVD										
794.000	0.390	332.920	793.993	-356.005	2.389	0.010	1.866	0.00000	0.00000	0.00000
886.998	0.960	26.940	886.985	-263.013	3.365	0.218	2.501	0.85603	0.61291	58.08713
980.998	1.950	30.040	980.953	-169.044	5.452	1.376	3.417	1.05613	1.05319	3.29788
1,074.998	2.960	37.320	1,074.866	-75.132	8.766	3.648	4.603	1.12238	1.07447	7.74470
1,167.998	3.560	44.420	1,167.715	17.717	12.738	7.125	5.555	0.77646	0.64516	7.63442
1,261.997	4.430	44.370	1,261.486	111.488	17.418	11.706	6.376	0.92554	0.92553	-0.05319
1,355.997	5.260	44.830	1,355.149	205.151	23.069	17.282	7.339	0.88394	0.88298	0.48936
1,448.997	6.010	43.380	1,447.698	297.701	29.631	23.632	8.536	0.82079	0.80645	-1.55914
1,542.997	6.770	41.350	1,541.114	391.116	37.367	30.672	10.224	0.84336	0.80851	-2.15958
1,635.997	7.920	40.690	1,633.349	483.351	46.340	38.471	12.410	1.23987	1.23656	-0.70968
1,729.996	9.910	48.180	1,726.212	576.214	56.646	48.723	14.116	2.44655	2.11703	7.96810
1,822.996	9.310	49.210	1,817.906	667.908	66.896	60.382	14.904	0.67111	-0.64516	1.10753
1,916.996	9.090	48.070	1,910.697	760.699	76.825	71.663	15.676	0.30392	-0.23404	-1.21277
2,009.996	8.500	47.090	2,002.603	852.605	86.414	82.163	16.666	0.65453	-0.63441	-1.05377
2,041.996	8.310	46.410	2,034.259	884.261	89.619	85.570	17.061	0.67008	-0.59375	-2.12500
2,137.996	7.130	41.240	2,129.388	979.390	98.882	94.522	18.757	1.42507	-1.22917	-5.38543
2,230.995	10.720	40.830	2,221.247	1,071.249	109.771	103.985	21.410	3.86080	3.86022	-0.44086
2,324.995	12.810	41.000	2,313.267	1,163.269	124.252	116.539	24.958	2.22371	2.22341	0.18085
2,417.995	17.110	41.900	2,403.093	1,253.096	142.224	132.447	29.157	4.63027	4.62367	0.96774
2,511.995	20.160	45.240	2,492.157	1,342.160	163.927	153.189	33.277	3.43634	3.24469	3.55320

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Project: Marshall County, WV Chevron	MD Reference: GL @ 1125.00 & 25' KB @ 1149.998usft (PD572)
Site: Hines Pad EQT	North Reference: True
Well: Hines M14H	Survey Calculation Method: Minimum Curvature
Wellbore: OH	
Design: Hines M14H 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)
2,604.995	22.250	51.090	2,578.865	1,428.868	186.276	178.275	35.204	3.19551	2.24732	6.29034
2,698.994	25.730	55.740	2,664.740	1,514.742	208.949	208.999	33.882	4.21059	3.70214	4.94682
2,792.994	29.670	57.910	2,747.952	1,597.954	232.805	245.588	29.843	4.32605	4.19150	2.30852
2,979.994	32.380	60.290	2,908.191	1,758.194	282.221	328.308	17.171	1.59050	1.44920	1.27273
3,072.994	29.210	57.640	2,988.072	1,838.074	306.716	369.118	11.011	3.70694	-3.40861	-2.84947
3,166.994	26.470	56.400	3,071.185	1,921.187	330.590	405.949	6.836	2.97914	-2.91490	-1.31915
3,259.993	25.910	54.660	3,154.638	2,004.640	353.813	439.787	4.010	1.02193	-0.60215	-1.87097
3,355.993	25.060	55.820	3,241.296	2,091.298	377.368	473.717	1.387	1.02674	-0.88542	1.20834
3,449.993	24.560	58.400	3,326.622	2,176.625	398.789	506.826	-2.398	1.26848	-0.53192	2.74469
3,542.993	24.050	57.250	3,411.380	2,261.382	419.168	539.226	-6.559	0.74816	-0.54839	-1.23656
3,636.993	25.190	56.320	3,496.833	2,346.835	440.624	571.983	-10.098	1.28086	1.21277	-0.98936
3,729.992	26.500	56.730	3,580.529	2,430.531	462.982	605.801	-13.589	1.42165	1.40861	0.44086
3,823.992	26.240	54.370	3,664.750	2,514.752	486.593	640.226	-16.476	1.14886	-0.27660	-2.51064
3,917.992	26.010	57.040	3,749.149	2,599.151	509.913	674.411	-19.441	1.27434	-0.24468	2.84043
4,010.992	26.340	55.200	3,832.613	2,682.615	532.782	708.463	-22.677	0.94208	0.35484	-1.97850
4,104.992	25.490	57.950	3,917.163	2,767.165	555.418	742.733	-26.231	1.56581	-0.90426	2.92554
4,198.991	24.950	57.690	4,002.202	2,852.204	576.749	776.633	-30.578	0.58643	-0.57447	-0.27660
4,294.991	26.160	56.250	4,088.810	2,938.812	599.329	811.343	-34.449	1.41673	1.26042	-1.50000
4,387.991	25.660	59.080	4,172.464	3,022.467	621.066	845.664	-38.740	1.43410	-0.53764	3.04302
4,481.991	25.120	56.450	4,257.387	3,107.389	642.552	879.754	-43.083	1.32998	-0.57447	-2.79788
4,574.991	24.950	53.990	4,341.652	3,191.654	664.994	912.073	-45.577	1.13411	-0.18280	-2.64517
4,668.990	25.080	54.960	4,426.834	3,276.837	688.089	944.422	-47.579	0.45774	0.13830	1.03192
4,762.990	25.290	56.500	4,511.899	3,361.902	710.610	977.477	-50.468	0.73206	0.22340	1.63830
4,855.990	25.380	54.890	4,595.956	3,445.958	733.037	1,010.347	-53.316	0.74707	0.09677	-1.73119
4,949.990	25.950	57.490	4,680.684	3,530.686	755.678	1,044.172	-56.590	1.34255	0.60638	2.76596
5,042.990	26.340	56.100	4,764.169	3,614.171	778.121	1,078.456	-60.304	0.78075	0.41936	-1.49463
5,136.989	27.250	54.690	4,848.075	3,698.078	802.192	1,113.327	-63.107	1.18080	0.96809	-1.50000
5,230.989	26.950	56.310	4,931.756	3,781.759	826.446	1,148.612	-66.024	0.84745	-0.31915	1.72341
5,323.989	26.750	58.250	5,014.732	3,864.734	849.150	1,183.945	-70.186	0.96636	-0.21505	2.08603
5,416.989	26.480	57.220	5,097.877	3,947.880	871.389	1,219.175	-74.647	0.57485	-0.29032	-1.10753
5,513.989	26.240	58.750	5,184.792	4,034.794	894.222	1,255.689	-79.441	0.74275	-0.24742	1.57732
5,606.989	25.870	57.970	5,268.341	4,118.343	915.649	1,290.467	-84.258	0.54221	-0.39785	-0.83871
Hines A SE1 BHL										
5,637.755	25.916	58.157	5,296.019	4,146.021	922.756	1,301.868	-85.773	0.30420	0.14814	0.60843
5,700.988	26.010	58.540	5,352.870	4,202.873	937.282	1,325.433	-89.031	0.30420	0.14933	0.60539
5,793.988	26.220	56.260	5,436.378	4,286.380	959.336	1,359.912	-93.171	1.10245	0.22581	-2.45162
Final MWD Survey=5888' MD										
5,887.988	25.690	54.830	5,520.897	4,370.900	982.606	1,393.836	-96.014	0.87244	-0.56383	-1.52128
Projection to TD=5954' MD/5580' TVD - Hines A SE1 LP - Hines A SE1 70° - Hines NE4 70° - Hines NE3 70° - Hines A SE1 LP -1202' VS - Hines										
5,954.000	25.690	54.830	5,580.384	4,430.387	999.089	1,417.228	-97.631	0.00000	0.00000	0.00000

EQT Survey Report

Database: DM_Definitive Company: EQT (Chevron Data) 02-13-21	Local Co-ordinate Reference: Well Hines M14H TVD Reference: GL @ 1125.00 & 25' KB @ 1149.998usft (PD572) MD Reference: GL @ 1125.00 & 25' KB @ 1149.998usft (PD572) North Reference: True Survey Calculation Method: Minimum Curvature	
Project: Marshall County, WV Chevron Site: Hines Pad EQT Well: Hines M14H Wellbore: OH Design: Hines M14H As Drilled		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (7,587.901)	+E/-W (-3,365.915)	Northing (usft)	Easting (usft)	Latitude	Longitude
(2) Hines M14H BHL - R - actual wellpath misses target center by 8171.075usft at 5954.000usft MD (5580.384 TVD, 999.089 N, 1417.228 E) - Point	0.000	0.000	6,269.98 8	7,587.901	-3,365.915	522,127.996	1,628,822.572	39.9272099	80.7112345°W
(1) Hines M14H LP - Re - actual wellpath misses target center by 1047.585usft at 5954.000usft MD (5580.384 TVD, 999.089 N, 1417.228 E) - Point	0.000	0.000	6,269.98 8	1,769.341	1,248.135	516,248.363	1,633,358.542	39.9112369	80.6947831°W
Hines M01H BHL - Rev- - actual wellpath misses target center by 9201.491usft at 5637.755usft MD (5296.019 TVD, 922.756 N, 1301.868 E) - Point	0.000	0.000	6,269.98 7	7,441.491	-5,118.794	522,004.997	1,627,067.895	39.9268071	80.7174847°W
Interp @ 6270.00 (Hines - actual wellpath misses target center by 1068.032usft at 5954.000usft MD (5580.384 TVD, 999.089 N, 1417.228 E) - Point	0.000	0.000	6,269.98 8	1,792.764	1,229.561	516,272.032	1,633,340.283	39.9113012	80.6948493°W
Hines M01H LP - Rev-2 - actual wellpath misses target center by 1501.621usft at 5954.000usft MD (5580.384 TVD, 999.089 N, 1417.228 E) - Point	0.000	0.000	6,269.98 7	1,066.780	85.038	515,561.390	1,632,186.170	39.9093083	80.6989294°W

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
402.600	402.598	0.570	0.392		Gyro Tie in=403' MD/TVD
794.000	793.993	2.389	0.010		Nudge KOP=794' MD/TVD
5,887.988	5,520.897	982.606	1,393.836		Final MWD Survey=5888' MD
5,954.000	5,580.384	999.089	1,417.228		Projection to TD=5954' MD/5580' TVD

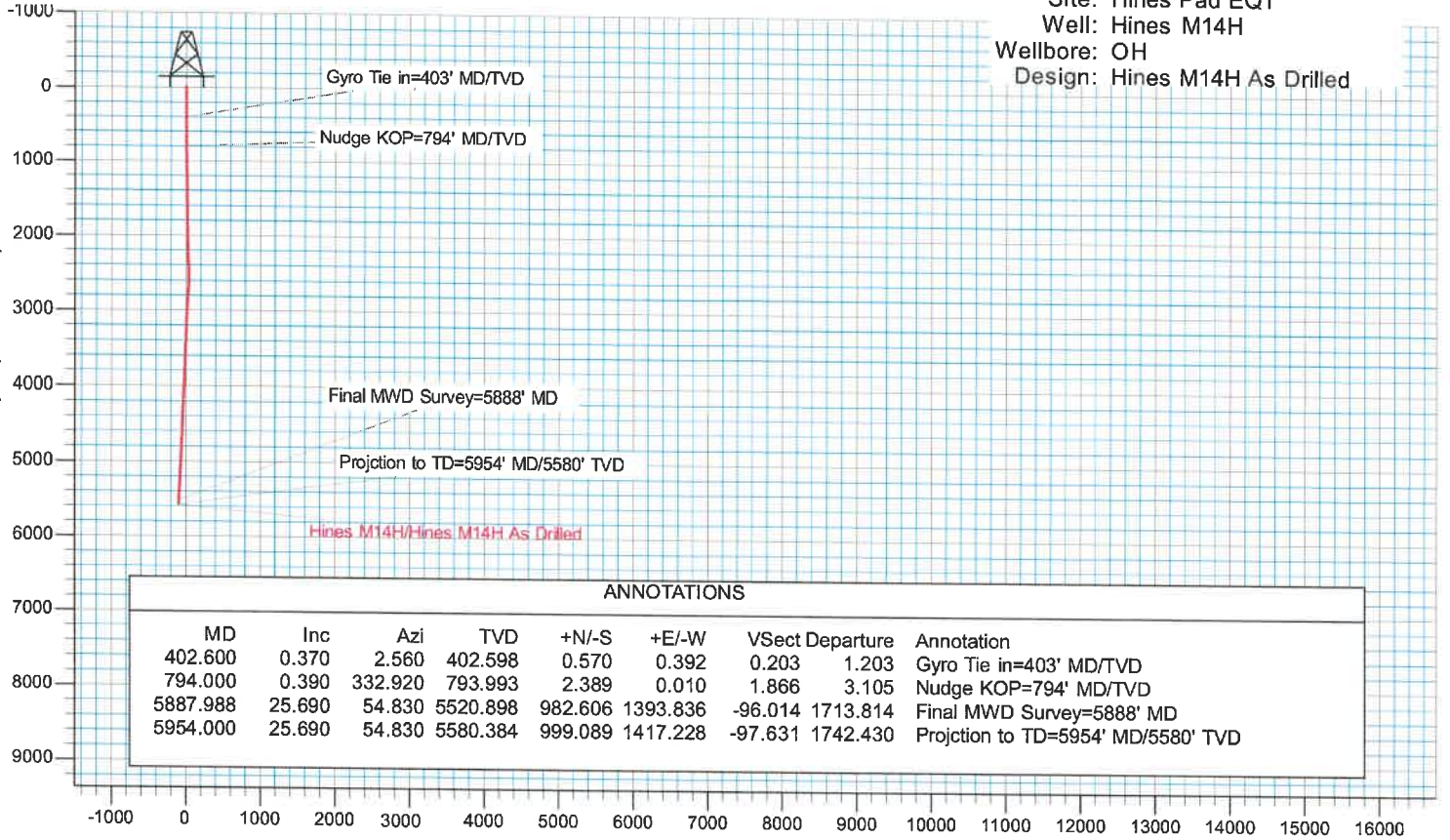
Checked By: _____ Approved By: _____ Date: _____



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 M14H
 Wellbore: OH
 Design: Hines M14H As Drilled



ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
402.600	0.370	2.560	402.598	0.570	0.392	0.203	1.203	Gyro Tie in=403' MD/TVD
794.000	0.390	332.920	793.993	2.389	0.010	1.866	3.105	Nudge KOP=794' MD/TVD
5887.988	25.690	54.830	5520.898	982.606	1393.836	-96.014	1713.814	Final MWD Survey=5888' MD
5954.000	25.690	54.830	5580.384	999.089	1417.228	-97.631	1742.430	Projection to TD=5954' MD/5580' TVD

