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JUL 16 2025
WV Department of
Environmental Protection

Well Operator's Report of Well Work



Well Number: Longworth M16H

API: 47 - 051 - 02083

Submission: ☐ Initial ☒ Amended

Notes: Updated with Stimulation Info.

09/26/2025

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

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API 47 - 051 - 02083 County Marshall District Clay
Quad Glen Easton Pad Name Longworth Field/Pool Name N/A
Farm name Graham H. Longworth Jr. Well Number Longworth M16H
Operator (as registered with the OOG) EQT CHAP LLC
Address 2400 Ansys Drive, Suite 200 City Canonsburg State PA Zip 15317

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,410,853.11 Easting 523,379.37
Landing Point of Curve Northing 4,411,051.96 Easting 523,231.49
Bottom Hole Northing 4,412,221.00 Easting 522,277.75

Elevation (ft) 1270' GL Type of Well ☒ New ☐ Existing Type of Report ☐ Interim ☒ Final
Permit Type ☐ Deviated ☐ Horizontal ☒ Horizontal 6A ☐ Vertical Depth Type ☐ Deep ☒ Shallow
Type of Operation ☐ Convert ☐ Deepen ☒ Drill ☐ Plug Back ☐ Redrilling ☐ Rework ☒ Stimulate
Well Type ☐ Brine Disposal ☐ CBM ☒ Gas ☐ Oil ☐ Secondary Recovery ☐ Solution Mining ☐ Storage ☐ Other _____
Type of Completion ☒ Single ☐ Multiple Fluids Produced ☐ Brine ☒ Gas ☒ NGL ☐ Oil ☐ Other _____
Drilled with ☐ Cable ☒ Rotary

Drilling Media Surface hole ☒ Air ☐ Mud ☐ Fresh Water Intermediate hole ☒ Air ☐ Mud ☐ Fresh Water ☐ Brine
Production hole ☒ Air ☒ Mud ☐ Fresh Water ☐ Brine
Mud Type(s) and Additive(s)

Synthetic Oil Based Mud 13.5 ppg barium sulfate, sodium chloride, xanthan gum, polyanionic cellulose, modified starch, sodium hydroxide, phosphonates and alkyl phosphates, glutaraldehyde solution, calcium hydroxide, partially hydrolyzed polyacrylamide/polyacrylate, potassium chloride, sodium carbonate, ground walnut shells, alcohol and modified fatty acid, ferrochrome lignosulfonate, calcium carbonate, fibrous cellulose

Date permit issued 09/18/2018 Date drilling commenced 12/29/2018 Date drilling ceased 09/24/2019
Date completion activities began 03/24/2025 Date completion activities ceased 04/21/2025
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 99,605 Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1576,1998,2102,2139 Void(s) encountered (Y/N) depths N
Coal depth(s) ft 583,853 Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

APPROVED

Reviewed by:

[Signature]
09/26/2025
1/29/2025

API 47-051 - 02083 Farm name Graham H. Longworth Jr. Well number Longworth M16H

CASING STRINGS	Hole Size	Casing Size	Depth (GL)	New or Used	Grade wt/ft	Basket Depth(s) (GL)	Did cement circulate (Y/N) * Provide details below*
Conductor	30"	20"	40'	NEW	X-52 78.67#	N/A	Y
Surface	17-1/2"	13-3/8"	621'	NEW	J-55 54.5#	N/A	Y
Coal							
Intermediate 1	12-3/8"	9-5/8"	2179'	NEW	L-80 40#	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-1/2"	5-1/2"	11,817'	NEW	P-110 20#	N/A	N
Tubing							
Packer type and depth set							

Comment Details Production Cement job has a calculated TOC of 1770' GL, which is greater than 500' TVD above the producing formation. No issues during cement job.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (GL)	WOC (hrs)
Conductor	CLASS A	N/A	N/A	N/A	N/A	0	8+
Surface	CLASS A	520	15.6	1.20	624	0	8
Coal							
Intermediate 1	CLASS A	898	15.6	1.19	1068	0	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	1782	15.0	1.23	2191	1770	8+
Tubing							

Drillers TD (ft) 11,873' Loggers TD (ft) N/A
 Deepest formation penetrated MARCELLUS Plug back to (ft) N/A
 Plug back procedure _____

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Kick off depth (ft) 5811'

Check all wireline logs run ☐ caliper ☐ density ☒ deviated/directional ☐ induction
☐ neutron ☐ resistivity ☒ gamma ray ☐ temperature ☐ sonic

Well cored ☐ Yes ☒ No ☐ Conventional ☐ Sidewall Were cuttings collected ☐ Yes ☒ No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING _____

CONDUCTOR- NONE

SURFACE- ON SHOE TRACK AND EVERY 500' TO SURFACE

INTERMEDIATE: ON SHOE TRACK AND EVERY 500' FEET TO SURFACE

PRODUCTION: ON SHOE TRACK AND EVERY JOINT TO ABOVE TOC

WAS WELL COMPLETED AS SHOT HOLE ☐ Yes ☒ No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? ☐ Yes ☒ No DETAILS _____

WERE TRACERS USED ☐ Yes ☒ No TYPE OF TRACER(S) USED _____

09/26/2025

Well number Longworth M16H

[illegible]

STIMULATION INFORMATION PER STAGE

[illegible]

09/26/2025

Well number Longworth M16H

MD

WV Department of
Environmental Protection

[illegible][illegible]

09/26/2025

API 47- 051 - 02083 Farm name Graham H. Longworth Jr. Well number Longworth M16H

Drilling Contractor Precision Drilling (Rig 572)
Address 10350 Richmond Ave. Suite 700 City Houston State TX Zip 77042

Logging Company Scientific Drilling International
Address 124 Vista Drive City Charleroi State PA Zip 15022

Logging Company _____
Address _____ City _____ State _____ Zip _____

Drilling Contractor _____
Address _____ City _____ State _____ Zip _____

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Well # Longworth 16H Final Formations API# 47-051-02083				
Formation Name	Drill Top MD (ftGRD)	Drill Top (TVD) (ftGRD)	Drill Btm MD (ftGRD)	Drill Btm (TVD) (ftGRD)
Sand/Shale	1	1	583	583
Waynesburg Coal	583	583	583	583
Sand/Shale	583	583	853	853
Pittsburgh Coal	853	853	858	858
Sand/Shale	858	858	1,872	1,869
Big Lime	1,872	1,869	2,100	2,097
Big Injun	2,100	2,097	2,182	2,178
Sand/Shale	2,182	2,178	2,819	2,814
Gantz	2,819	2,814	2,880	2,875
Gordon	2,880	2,875	2,960	2,955
50F	2,960	2,955	3,009	3,004
Sand/Shale	3,009	3,004	3,088	3,082
Bayard	3,088	3,082	3,453	3,447
Sand/Shale	3,453	3,447	5,255	5,249
Alexander	5,255	5,249	5,692	5,686
Elks	5,692	5,686	6,212	6,192
Sonyea	6,212	6,192	6,307	6,274
Middlesex	6,307	6,274	6,339	6,300
Genesee	6,339	6,300	6,406	6,352
Geneseo	6,406	6,352	6,439	6,375
Tully	6,439	6,375	6,512	6,420
Hamilton	6,512	6,420	6,648	6,479
Marcellus	6,648	6,479	11,873	6,516

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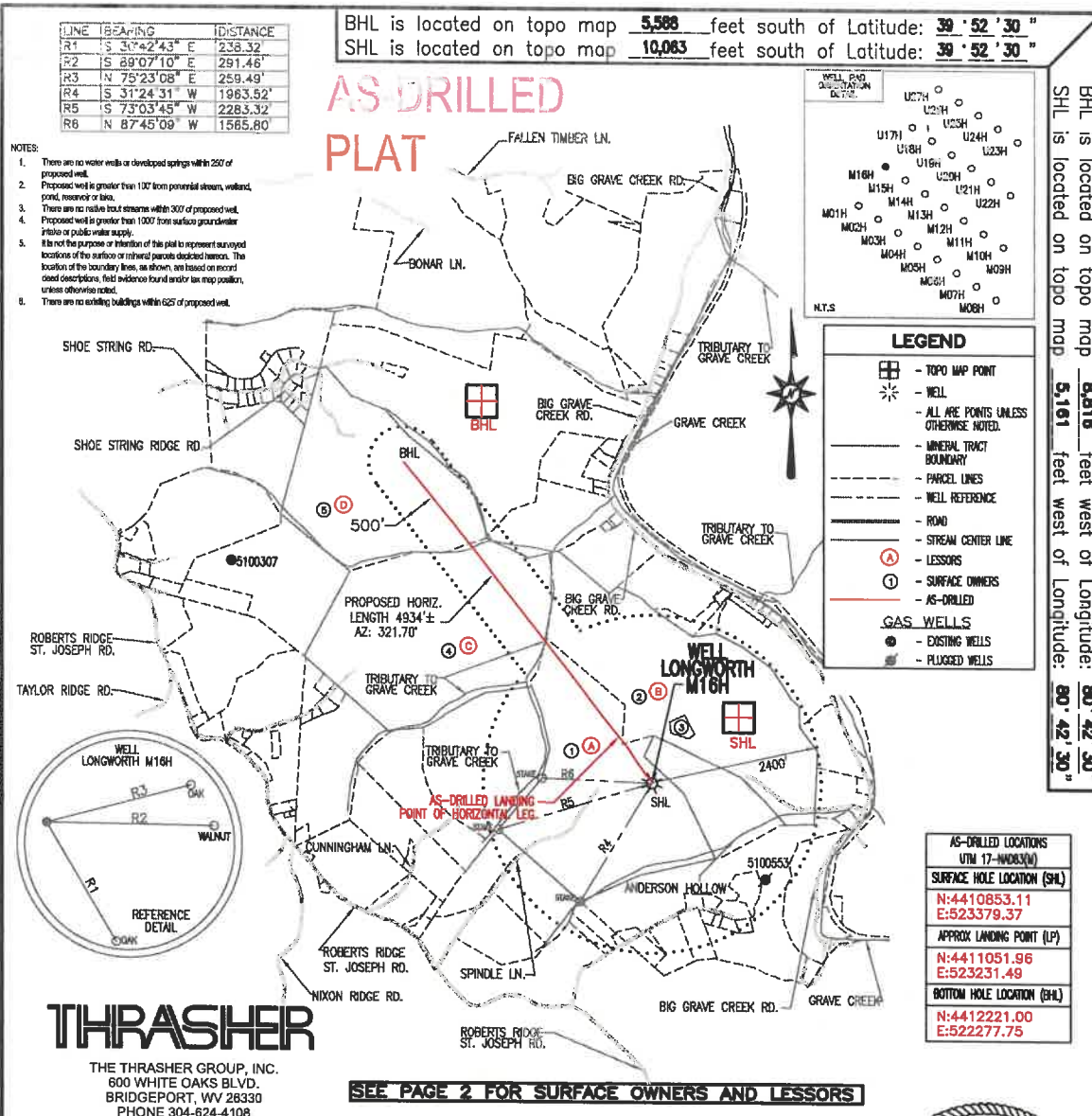
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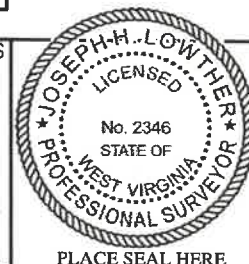
FILE #: LONGWORTH M16H - AS-DRILLED
DRAWING #: LONGWORTH M16H - AS-DRILLED
SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: 1/2500
PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Signed:

R.P.E.

L.L.S.: P.S. No. 2346



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304

DATE: FEBRUARY 23, 2021

OPERATOR'S WELL #: LONGWORTH M16H - AS-DRILLED

API WELL #: 47 51 02083
STATE COUNTY PERMIT

Well Type: ☐ Oil ☐ Waste Disposal ☒ Production ☐ Deep ☒ Gas ☐ Liquid Injection ☐ Storage ☒ Shallow

WATERSHED: MIDDLE GRAVE CREEK-GRAVE CREEK ELEVATION: 1295'

COUNTY/DISTRICT: MARSHALL / CLAY QUADRANGLE: GLEN EASTON, WV 7.5'

SURFACE OWNER: GRAHAM H. LONGWORTH JR. ACREAGE: 123.589±

OIL & GAS ROYALTY OWNER: GRAHAM H. LONGWORTH JR. ACREAGE: 539.594±

DRILL ☒ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR STIMULATE ☒ PLUG OFF OLD FORMATION ☐
PERFORATE NEW FORMATION ☐ PLUG & ABANDON ☐ CLEAN OUT & REPLUG ☐ OTHER CHANGE ☒

(SPECIFY): AS-DRILLED PLAT

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TMD: 6,488'± TMD: 11,897'±

WELL OPERATOR: EQT CHAP LLC

DESIGNATED AGENT: JOSEPH C. MALLOW

Address: 400 WOODCLIFF DRIVE

Address: 115 PROFESSIONAL PLACE, PO BOX 280

City: CANONSBURG State: PA Zip Code: 15317

City: BRIDGEPORT State: WV Zip Code: 26330

09/26/2025

LONGWORTH

M16H

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AS-DRILLED

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	LESSOR	DIST-TM/PAR
A	GRAHAM H. LONGWORTH JR. ET AL	4-11/1
B	GRAHAM H. LONGWORTH JR. ET AL	4-12/16
	SHERI L. EVRAETS FAMILY TRUST	
	LISA NICEWARNER	
	JULIA RODGERS	
	KEITH FRIESE	
	MARK FRIESE	
	ANTHONY FRIESE	
	JAMES FRIESE	
	HENRY FRIESE	
	STEVEN FRIESE	
C	BRETT A. ANDREWS ET UX	4-12/19
D	JMK IREV TRST	4-12/4
	PURPLEBURGH VENTURES LLC	
	MARCELUS TX MINERAL PRTRNS LTD	

	SURFACE OWNER	DIST-TM/PAR
1	GRAHAM H. LONGWORTH JR.	4-11/1
2	DANIEL C. LONGWORTH	4-12/16
3	DANIEL C. SR. AND JEANNETTE L. LONGWORTH	4-12/16.1
4	CODY M. JARRETT	4-12/19
5	MERLE L. CHAPLIN ET UX	4-12/4

AS-DRILLED LOCATIONS
UTM 17-NAD83(M)
SURFACE HOLE LOCATION (SHL)
N:4410853.11
E:523379.37
APPROX LANDING POINT (LP)
N:4411051.96
E:523231.49
BOTTOM HOLE LOCATION (BHL)
N:4412221.00
E:522277.75

FEBRUARY 23, 2021

THRASHER

THE THRASHER GROUP, INC.
600 WHITE OAKS BLVD.
BRIDGEPORT, WV 26330
PHONE 304-624-4108

09/26/2025



EQT (Chevron Data) 02-13-21

Marshall County, WV Chevron

Longworth

M16H

OH

Design: Longworth 16H As Drilled

Standard Survey Report

20 July, 2021

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EQT Survey Report

Database:	EDM Definitive	Local Co-ordinate Reference:	Well M16H
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:	M16H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Longworth 16H 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		

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

Well	M16H		
Well Position	+N/-S	0.000 usft	Northing:
	+E/-W	0.000 usft	Easting:
Position Uncertainty	0.000 usft	Wellhead Elevation:	0.000 usft
		Latitude:	39.8473734
		Longitude:	80.7267153°W
		Ground Level:	1,270.000 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	User Defined	5/16/2016	-8.7189
			Dip Angle
			(°)
			Field Strength
			(nT)
			67.0778
			52,269.37594936

Design	Longworth 16H As Drilled		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.000
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.000	0.000	0.000
			Direction
			(°)
			321.332

Survey Program	Date 7/20/2021		
From	To	Survey (Wellbore)	Tool Name
()	(usft)		
0.00	560.000	Surface Gyro (OH)	NS-GYRO-MS c
0.00	5,834.000	EM Tool (OH)	11_MWD+IFR1+AX+Sag c
0.00	11,897.000	Survey #3 (OH)	11_MWD+IFR1+AX+Sag c
			Description
			North sensing gyrocompassing m/s c
			A007Mb: IFR dec & axial + sag corrections c
			A007Mb: IFR dec & axial + sag corrections c

Survey											
Measured Depth	Inclination	Azimuth	Vertical Depth	Subsea Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate	
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/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	0.240	74.060	100.000	-1,194.000	0.058	0.201	-0.081	0.24000	0.24000	0.00000	
125.000	0.460	64.130	124.999	-1,169.001	0.116	0.342	-0.123	0.90957	0.88000	-39.72000	
150.000	0.530	56.860	149.998	-1,144.002	0.223	0.529	-0.157	0.37566	0.28000	-29.08000	
175.000	0.680	36.700	174.997	-1,119.003	0.405	0.715	-0.130	1.03274	0.60000	-80.64000	
200.000	0.750	34.410	199.995	-1,094.005	0.659	0.896	-0.045	0.30238	0.28000	-9.16000	
225.000	1.010	22.110	224.992	-1,069.008	0.998	1.071	0.110	1.27983	1.04000	-49.20000	



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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)
250.000	1.210	24.720	249.987	-1,044.013	1.442	1.264	0.336	0.82496	0.80000	10.44000
275.000	1.400	26.810	274.981	-1,019.019	1.954	1.513	0.581	0.78336	0.76000	8.36000
300.000	1.300	29.970	299.974	-994.026	2.472	1.792	0.811	0.49854	-0.40000	12.64000
325.000	1.320	38.570	324.967	-969.033	2.943	2.113	0.978	0.78975	0.08000	34.40000
350.000	1.340	36.950	349.961	-944.039	3.402	2.468	1.114	0.17035	0.08000	-6.48000
375.000	1.310	30.600	374.954	-919.046	3.882	2.790	1.288	0.59914	-0.12000	-25.40000
400.000	1.290	42.810	399.948	-894.052	4.334	3.126	1.430	1.10881	-0.08000	48.84000
425.000	1.360	30.130	424.941	-869.059	4.797	3.467	1.579	1.20306	0.28000	-50.72000
450.000	1.420	30.230	449.934	-844.066	5.321	3.771	1.798	0.24020	0.24000	0.40000
475.000	1.530	33.150	474.925	-819.075	5.868	4.110	2.014	0.53277	0.44000	11.68000
500.000	1.520	26.930	499.916	-794.083	6.443	4.443	2.255	0.66301	-0.04000	-24.88000
525.000	1.530	32.140	524.908	-769.092	7.022	4.770	2.502	0.55586	0.04000	20.84000
550.000	1.510	31.760	549.899	-744.101	7.584	5.121	2.722	0.08959	-0.08000	-1.52000
560.000	1.630	35.070	559.895	-734.105	7.813	5.272	2.806	1.50366	1.20000	33.10000
567.000	1.500	26.690	566.892	-727.107	7.976	5.371	2.872	3.75517	-1.85714	-119.71429
598.000	1.520	28.350	597.882	-696.118	8.700	5.748	3.202	0.15515	0.06452	5.35484
630.000	1.600	29.590	629.870	-664.130	9.482	6.170	3.533	0.27133	0.25000	3.87500
631.000	1.600	29.590	630.869	-663.131	9.487	6.184	3.543	0.00000	0.00000	0.00000
662.000	1.480	35.830	661.858	-632.142	10.188	6.632	3.810	0.66465	-0.38710	20.12903
693.000	1.030	54.300	692.851	-601.149	10.675	7.093	3.903	1.93420	-1.45161	59.58065
724.000	0.680	100.930	723.848	-570.152	10.802	7.500	3.748	2.41685	-1.12903	150.41936
755.000	1.080	151.990	754.844	-539.156	10.510	7.817	3.321	2.70971	1.29032	164.70968
787.000	1.270	154.760	786.838	-507.162	9.923	8.110	2.680	0.61954	0.59375	8.65625
818.000	0.640	129.790	817.833	-476.167	9.501	8.390	2.176	2.38979	-2.03226	-80.54839
849.000	0.630	46.570	848.832	-445.168	9.507	8.647	2.021	2.72057	-0.03226	-268.45161
880.000	1.120	13.710	879.828	-414.171	9.919	8.842	2.220	2.20178	1.58065	-106.00000
912.000	1.640	0.840	911.819	-382.181	10.681	8.923	2.764	1.88194	1.62500	-40.21875
943.000	2.030	344.700	942.803	-351.197	11.654	8.785	3.610	2.07671	1.25806	-52.06452
1,039.000	3.540	325.490	1,038.689	-255.311	15.736	6.657	8.127	1.82806	1.57292	-20.01042
1,133.000	4.190	322.700	1,132.475	-161.525	20.859	2.931	14.455	0.71965	0.69149	-2.96809
1,226.000	4.560	317.680	1,225.204	-68.796	26.296	-1.616	21.541	0.57221	0.39785	-5.39785
1,320.000	4.870	313.990	1,318.886	24.886	31.830	-7.003	29.227	0.46123	0.32979	-3.92553
1,413.000	5.470	313.520	1,411.507	117.507	37.624	-13.057	37.534	0.64676	0.64516	-0.50538
1,507.000	4.980	313.720	1,505.116	211.117	43.529	-19.255	46.017	0.52164	-0.52128	0.21277
1,601.000	3.750	307.370	1,598.843	304.843	48.215	-24.647	53.044	1.40394	-1.30851	-6.75532
1,694.000	4.100	307.460	1,691.624	397.624	52.083	-29.703	59.223	0.37640	0.37634	0.09677
1,788.000	3.280	312.320	1,785.429	491.429	55.937	-34.359	65.142	0.93288	-0.87234	5.17021
1,881.000	2.590	320.380	1,878.307	584.307	59.347	-37.666	69.871	0.86276	-0.74194	8.66667
1,975.000	3.360	324.940	1,972.179	678.179	63.238	-40.603	74.743	0.85633	0.81915	4.85106
2,069.000	4.690	328.150	2,065.946	771.946	68.757	-44.213	81.309	1.43450	1.41489	3.41489
2,162.000	5.590	327.120	2,158.571	864.571	75.791	-48.678	89.590	0.97278	0.96774	-1.10753



EQT Survey Report

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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)
2,194.000	5.890	327.690	2,190.410	896.410	78.487	-50.402	92.773	0.95427	0.93750	1.78125
2,271.000	6.340	328.490	2,266.972	972.972	85.451	-54.736	100.918	0.59479	0.58442	1.03896
2,364.000	4.500	312.970	2,359.557	1,065.557	92.317	-60.090	109.623	2.51260	-1.97849	-16.68817
2,458.000	3.860	309.400	2,453.307	1,159.307	96.838	-65.233	116.368	0.73466	-0.68085	-3.79787
2,552.000	3.680	311.650	2,547.103	1,253.103	100.852	-69.932	122.437	0.24783	-0.19149	2.39362
2,646.000	3.900	316.300	2,640.898	1,346.898	105.167	-74.395	128.595	0.40193	0.23404	4.94681
2,739.000	3.590	310.830	2,733.699	1,439.699	109.358	-78.783	134.608	0.50827	-0.33333	-5.88172
2,833.000	2.430	276.350	2,827.575	1,533.575	111.503	-82.991	138.912	2.23359	-1.23404	-36.68085
2,926.000	1.430	191.300	2,920.536	1,626.536	110.582	-85.178	139.580	2.91493	-1.07527	-91.45162
3,020.000	1.520	177.060	3,014.506	1,720.506	108.187	-85.344	137.794	0.40038	0.09574	-15.14894
3,113.000	1.350	78.960	3,107.487	1,813.487	107.165	-84.205	136.284	2.33379	-0.18280	-105.48387
3,207.000	1.820	56.360	3,201.452	1,907.452	108.204	-81.876	135.640	0.82277	0.50000	-24.04255
3,300.000	1.490	25.490	3,294.415	2,000.415	110.114	-80.126	136.038	1.00700	-0.35484	-33.19355
3,394.000	1.280	37.350	3,388.388	2,094.388	112.051	-78.963	136.824	0.37689	-0.22340	12.61702
3,487.000	1.970	352.320	3,481.353	2,187.353	114.461	-78.546	138.445	1.50336	0.74194	-48.41936
3,581.000	1.830	330.180	3,575.303	2,281.303	117.365	-79.509	141.313	0.78971	-0.14894	-23.55319
3,675.000	1.830	327.240	3,669.255	2,375.255	119.929	-81.067	144.289	0.09987	0.00000	-3.12766
3,768.000	1.360	338.630	3,762.219	2,468.219	122.206	-82.273	146.820	0.60722	-0.50538	12.24731
3,862.000	1.810	322.860	3,856.183	2,562.183	124.428	-83.576	149.369	0.66245	0.47872	-16.77660
3,955.000	0.820	320.710	3,949.157	2,655.157	126.114	-84.884	151.503	1.06565	-1.06452	-2.31183
4,049.000	0.230	290.750	4,043.153	2,749.153	126.701	-85.486	152.338	0.67156	-0.62766	-31.87234
4,142.000	0.570	320.870	4,136.151	2,842.151	127.126	-85.953	152.961	0.41784	0.36559	32.38710
4,236.000	0.500	257.950	4,230.147	2,936.147	127.403	-86.649	153.613	0.59746	-0.07447	-66.93617
4,330.000	0.640	293.510	4,324.143	3,030.143	127.527	-87.531	154.261	0.39656	0.14894	37.82979
4,423.000	0.890	278.350	4,417.135	3,123.135	127.839	-88.722	155.248	0.34365	0.26882	-16.30108
4,517.000	0.910	241.960	4,511.124	3,217.124	127.594	-90.103	155.920	0.59825	0.02128	-38.71277
4,611.000	0.850	231.280	4,605.113	3,311.113	126.807	-91.306	156.057	0.18547	-0.06383	-11.36170
4,704.000	0.870	245.410	4,698.102	3,404.103	126.082	-92.486	156.228	0.22847	0.02151	15.19355
4,798.000	0.700	204.120	4,792.094	3,498.094	125.261	-93.370	156.139	0.61270	-0.18085	-43.92553
4,891.000	0.820	135.400	4,885.088	3,591.088	124.269	-93.135	155.218	0.92856	0.12903	-73.89247
4,985.000	1.530	121.440	4,979.068	3,685.068	123.135	-91.592	153.369	0.80893	0.75532	-14.85106
5,079.000	0.570	120.670	5,073.051	3,779.051	122.242	-90.119	151.751	1.02136	-1.02128	-0.81915
5,172.000	0.880	135.760	5,166.043	3,872.043	121.494	-89.223	150.607	0.38872	0.33333	16.22581
5,266.000	0.440	105.760	5,260.037	3,966.037	120.879	-88.372	149.595	0.58010	-0.46809	-31.91489
5,360.000	0.400	160.270	5,354.035	4,060.035	120.472	-87.914	148.991	0.41098	-0.04255	57.98936
5,453.000	0.440	213.670	5,447.033	4,153.033	119.870	-88.002	148.576	0.40765	0.04301	57.41936
5,547.000	0.380	221.940	5,541.030	4,247.030	119.337	-88.411	148.416	0.08950	-0.06383	8.79787
5,640.000	0.450	225.890	5,634.028	4,340.028	118.854	-88.879	148.331	0.08127	0.07527	4.24731
5,734.000	0.500	213.170	5,728.025	4,434.025	118.253	-89.368	148.168	0.12381	0.05319	-13.53192
5,765.000	0.770	220.100	5,759.023	4,465.023	117.981	-89.577	148.085	0.90395	0.87097	22.35484
5,834.000	0.770	220.958	5,828.016	4,534.017	117.276	-90.179	147.911	0.01670	0.00000	1.24286



EQT Survey Report

Database:	EDM - Delmarva	Local Co-ordinate Reference:	Well M16H
Company:	EQT (Chevron Data) 02-13-2	TVD Reference:	Air RKB @ 1294.000usft (Highlands 9)
Project:	Marshall County, WV CH	MD Reference:	Air RKB @ 1294.000usft (Highlands 9)
Site:	Longworth	North Reference:	True
Well:	M16H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Longworth 16H 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)
5,835.000	0.770	220.970	5,829.016	4,535.016	117.266	-90.188	147.909	0.01670	0.00012	1.24281
5,925.000	4.650	329.270	5,918.920	4,624.920	119.947	-92.450	151.415	5.49553	4.31111	120.33334
6,018.000	11.650	328.900	6,010.924	4,716.924	131.242	-99.235	164.473	7.52705	7.52688	-0.39785
6,110.000	17.980	321.930	6,099.827	4,805.827	150.395	-112.804	187.906	7.13592	6.88043	-7.57609
6,202.000	24.850	323.490	6,185.424	4,891.425	177.143	-133.085	221.462	7.49238	7.46739	1.69565
6,295.000	30.180	324.270	6,267.876	4,973.876	211.851	-158.381	264.367	5.74415	5.73118	0.83871
6,387.000	38.670	322.440	6,343.696	5,049.696	253.486	-189.464	316.295	9.29560	9.22826	-1.98913
6,479.000	49.600	324.380	6,409.628	5,115.628	304.905	-227.504	380.210	11.96969	11.88044	2.10870
6,571.000	59.760	326.370	6,462.751	5,168.751	366.636	-270.030	454.979	11.18270	11.04348	2.16304
Top of Marcellus @ 6504' TVD										
6,650.250	69.686	328.018	6,496.550	5,202.550	426.815	-308.771	526.170	12.66493	12.52513	2.07962
6,664.000	71.410	328.280	6,501.128	5,207.128	437.827	-315.612	539.042	12.66493	12.53695	1.90472
6,756.000	78.820	324.290	6,524.754	5,230.754	511.687	-364.963	627.546	9.07802	8.05435	-4.33696
M16H LP										
6,849.000	86.220	317.350	6,536.867	5,242.867	583.039	-423.176	719.628	10.86166	7.95699	-7.46237
LP/Deepest Point of Well=6842' MD/ 6546' TVD										
6,942.000	90.400	319.890	6,539.609	5,245.609	652.771	-484.607	812.455	5.25844	4.49462	2.73118
M16H LP2										
6,961.701	90.501	319.929	6,539.454	5,245.454	667.843	-497.294	832.150	0.54705	0.51087	0.19564
7,034.000	90.870	320.070	6,538.589	5,244.590	723.222	-543.764	904.424	0.54705	0.51087	0.19566
7,127.000	90.200	320.760	6,537.721	5,243.721	794.891	-603.022	997.407	1.03413	-0.72043	0.74194
7,220.000	90.370	320.530	6,537.259	5,243.259	866.801	-661.995	1,090.399	0.30753	0.18280	-0.24731
7,312.000	90.000	321.930	6,536.961	5,242.961	938.528	-719.603	1,182.396	1.57398	-0.40217	1.52174
7,405.000	90.170	322.610	6,536.823	5,242.824	1,012.081	-776.513	1,275.383	0.75368	0.18280	0.73118
7,497.000	90.500	322.270	6,536.286	5,242.286	1,085.010	-832.594	1,367.364	0.51501	0.35870	-0.36957
7,590.000	90.400	322.750	6,535.555	5,241.555	1,158.799	-889.194	1,460.341	0.52720	-0.10753	0.51613
7,683.000	90.870	321.840	6,534.524	5,240.525	1,232.372	-946.069	1,553.321	1.10124	0.50538	-0.97849
7,776.000	90.230	321.710	6,533.632	5,239.632	1,305.428	-1,003.610	1,646.313	0.70222	-0.68817	-0.13978
7,868.000	90.700	322.590	6,532.885	5,238.885	1,378.070	-1,060.058	1,738.299	1.08437	0.51087	0.95652
7,961.000	90.200	320.730	6,532.155	5,238.155	1,451.008	-1,117.744	1,831.291	2.07094	-0.53763	-2.00000
8,054.000	90.670	321.780	6,531.449	5,237.449	1,523.539	-1,175.946	1,924.286	1.23695	0.50538	1.12903
8,146.000	90.370	321.250	6,530.614	5,236.614	1,595.550	-1,233.196	2,016.282	0.66195	-0.32609	-0.57609
8,239.000	90.800	321.790	6,529.664	5,235.664	1,668.349	-1,291.061	2,109.276	0.74222	0.46237	0.58065
8,332.000	90.770	321.560	6,528.390	5,234.390	1,741.301	-1,348.727	2,202.265	0.24938	-0.03226	-0.24731
8,424.000	90.870	321.290	6,527.073	5,233.073	1,813.219	-1,406.086	2,294.256	0.31293	0.10870	-0.29348
8,517.000	90.810	320.640	6,525.710	5,231.710	1,885.449	-1,464.650	2,387.243	0.70182	-0.06452	-0.69892
8,610.000	90.970	321.830	6,524.265	5,230.265	1,957.953	-1,522.872	2,480.230	1.29093	0.17204	1.27957
8,702.000	90.600	320.860	6,523.005	5,229.005	2,029.790	-1,580.332	2,572.220	1.12835	-0.40217	-1.05435
8,795.000	90.840	321.510	6,521.836	5,227.836	2,102.247	-1,638.620	2,665.212	0.74499	0.25806	0.69892
8,887.000	90.800	320.950	6,520.519	5,226.520	2,173.969	-1,696.224	2,757.202	0.61018	-0.04348	-0.60870
8,980.000	90.800	320.930	6,519.221	5,225.221	2,246.175	-1,754.821	2,850.191	0.02150	0.00000	-0.02151
9,072.000	90.870	321.120	6,517.880	5,223.880	2,317.690	-1,812.681	2,942.180	0.22007	0.07609	0.20652
9,165.000	90.370	320.920	6,516.874	5,222.874	2,389.981	-1,871.179	3,035.173	0.57905	-0.53763	-0.21505



EQT
Survey Report

Database: EDM Definitive Company: EQT (Chevron Data) 02-13-21 Project: Marshall County, WV Che Site: Longworth Well: M16H Wellbore: OH Design: Longworth 16H As Drilled	RECEIVED Office of Oil and Gas JUL 16 2025 WV Department of Environmental Protection	Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method:	Well M16H Air RKB @ 1294.000usft (Highlands 9) Air RKB @ 1294.000usft (Highlands 9) True Minimum Curvature
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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)	
9,258.000	90.700	321.600	6,516.006	5,222.006	2,462.516	-1,929.374	3,128.168	0.81271	0.35484	0.73118	
9,351.000	90.470	321.090	6,515.056	5,221.056	2,535.138	-1,987.461	3,221.163	0.60155	-0.24731	-0.54839	
9,443.000	90.640	321.340	6,514.165	5,220.165	2,606.849	-2,045.087	3,313.158	0.32860	0.18478	0.27174	
9,536.000	90.470	321.480	6,513.264	5,219.264	2,679.537	-2,103.093	3,406.153	0.23680	-0.18280	0.15054	
9,628.000	90.370	321.090	6,512.590	5,218.590	2,751.319	-2,160.632	3,498.151	0.43762	-0.10870	-0.42391	
9,721.000	90.470	321.590	6,511.908	5,217.908	2,823.938	-2,218.727	3,591.148	0.54827	0.10753	0.53763	
9,814.000	90.500	321.290	6,511.121	5,217.121	2,896.657	-2,276.695	3,684.144	0.32418	0.03226	-0.32258	
9,906.000	90.470	320.950	6,510.342	5,216.342	2,968.273	-2,334.441	3,776.140	0.37099	-0.03261	-0.36957	
9,999.000	90.230	321.380	6,509.774	5,215.774	3,040.714	-2,392.758	3,869.138	0.52950	-0.25806	0.46237	
10,091.000	90.370	321.610	6,509.292	5,215.292	3,112.708	-2,450.035	3,961.136	0.29267	0.15217	0.25000	
10,184.000	90.330	321.740	6,508.724	5,214.724	3,185.665	-2,507.705	4,054.133	0.14625	-0.04301	0.13978	
10,276.000	90.500	322.010	6,508.058	5,214.058	3,258.037	-2,564.502	4,146.126	0.34680	0.18478	0.29348	
10,369.000	90.700	321.330	6,507.084	5,213.084	3,330.986	-2,622.176	4,239.119	0.76211	0.21505	-0.73118	
10,461.000	90.800	321.030	6,505.880	5,211.880	3,402.659	-2,679.844	4,331.110	0.34370	0.10870	-0.32609	
10,554.000	90.470	320.480	6,504.849	5,210.849	3,474.678	-2,738.675	4,424.099	0.68965	-0.35484	-0.59140	
10,647.000	90.370	321.240	6,504.167	5,210.167	3,546.807	-2,797.376	4,517.093	0.82423	-0.10753	0.81720	
10,739.000	90.470	320.270	6,503.493	5,209.493	3,618.053	-2,855.577	4,609.085	1.05991	0.10870	-1.05435	
10,832.000	90.600	319.800	6,502.624	5,208.624	3,689.328	-2,915.310	4,702.057	0.52433	0.13978	-0.50538	
10,924.000	90.700	319.810	6,501.581	5,207.581	3,759.598	-2,974.682	4,794.018	0.10924	0.10870	0.01087	
11,016.000	90.770	320.020	6,500.400	5,206.401	3,829.981	-3,033.918	4,885.982	0.24059	0.07609	0.22826	
11,109.000	90.670	319.940	6,499.232	5,205.232	3,901.196	-3,093.717	4,978.949	0.13770	-0.10753	-0.08602	
11,201.000	90.810	319.440	6,498.044	5,204.044	3,971.345	-3,153.229	5,070.903	0.56434	0.15217	-0.54348	
11,293.000	91.010	319.500	6,496.582	5,202.583	4,041.263	-3,213.007	5,162.843	0.22696	0.21739	0.06522	
11,386.000	90.670	319.060	6,495.219	5,201.219	4,111.740	-3,273.670	5,255.773	0.59787	-0.36559	-0.47312	
11,478.000	91.210	318.940	6,493.710	5,199.710	4,181.164	-3,334.019	5,347.684	0.60127	0.58696	-0.13043	
11,571.000	90.300	320.430	6,492.484	5,198.484	4,252.067	-3,394.182	5,440.634	1.87719	-0.97849	1.60215	
11,663.000	90.970	319.470	6,491.465	5,197.465	4,322.486	-3,453.375	5,532.600	1.27242	0.72826	-1.04348	
11,755.000	91.310	321.200	6,489.634	5,195.634	4,393.290	-3,512.084	5,624.564	1.91604	0.36957	1.88043	
11,848.000	90.540	319.690	6,488.133	5,194.133	4,464.982	-3,571.299	5,717.538	1.82237	-0.82796	-1.62366	
11,875.000	90.300	319.700	6,487.935	5,193.935	4,485.572	-3,588.763	5,744.526	0.88966	-0.88889	0.03704	
11,896.553	90.300	319.700	6,487.822	5,193.822	4,502.010	-3,602.704	5,766.070	0.00000	0.00000	0.00000	
11,897.000	90.300	319.700	6,487.820	5,193.820	4,502.351	-3,602.993	5,766.517	0.00019	0.00000	0.00000	



EQT Survey Report

Database:	EDM Definitive	Local Co-ordinate Reference:	Well M16H
Company:	EQT (Chevron Data) 02-13-21	TVD Reference:	Air RKB @ 1294.000usft (Highlands 8)
Project:	Marshall County, WV Chevron	MD Reference:	Air RKB @ 1294.000usft (Highlands 8)
Site:	Longworth	North Reference:	True
Well:	M16H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Longworth 16H As Drilled		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(117.266)	(-90.188)	(usft)	(usft)		
- Shape									
Longworth 16H KOP	0.000	0.000	5,829.01 6	117.266	-90.188	493,226.788	1,623,995.752	39.8476954	80.7270365°W
- actual wellpath hits target center									
- Point									
Longworth 16H BHL	0.000	0.000	6,487.82 0	4,502.312	-3,602.960	497,659.392	1,620,543.183	39.8597330	80.7395500°W
- actual wellpath hits target center									
- Point									
Longworth 16H LP	0.000	0.000	6,539.60 9	652.771	-484.607	493,767.629	1,623,608.683	39.8491655	80.7284413°W
- actual wellpath hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
6,650.250	6,504.000	Top of Marcellus@6504' TVD		-1.0000		

Design Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)		
5,835.000	5,829.016	117.266	-90.188	KOP=5835' MD/ 5829' TVD	
6,942.000	6,539.609	652.771	-484.607	LP/Deepest Point of Well=6942' MD/ 6540' TVD	
11,875.000	6,487.935	4,485.572	-3,588.763	Final Survey=11875' MD/ 6488' TVD	
11,897.000	6,487.820	4,502.351	-3,602.993	Projection to TD=11897' MD/ 6488' TVD	

Checked By: _____	Approved By: _____	Date: _____
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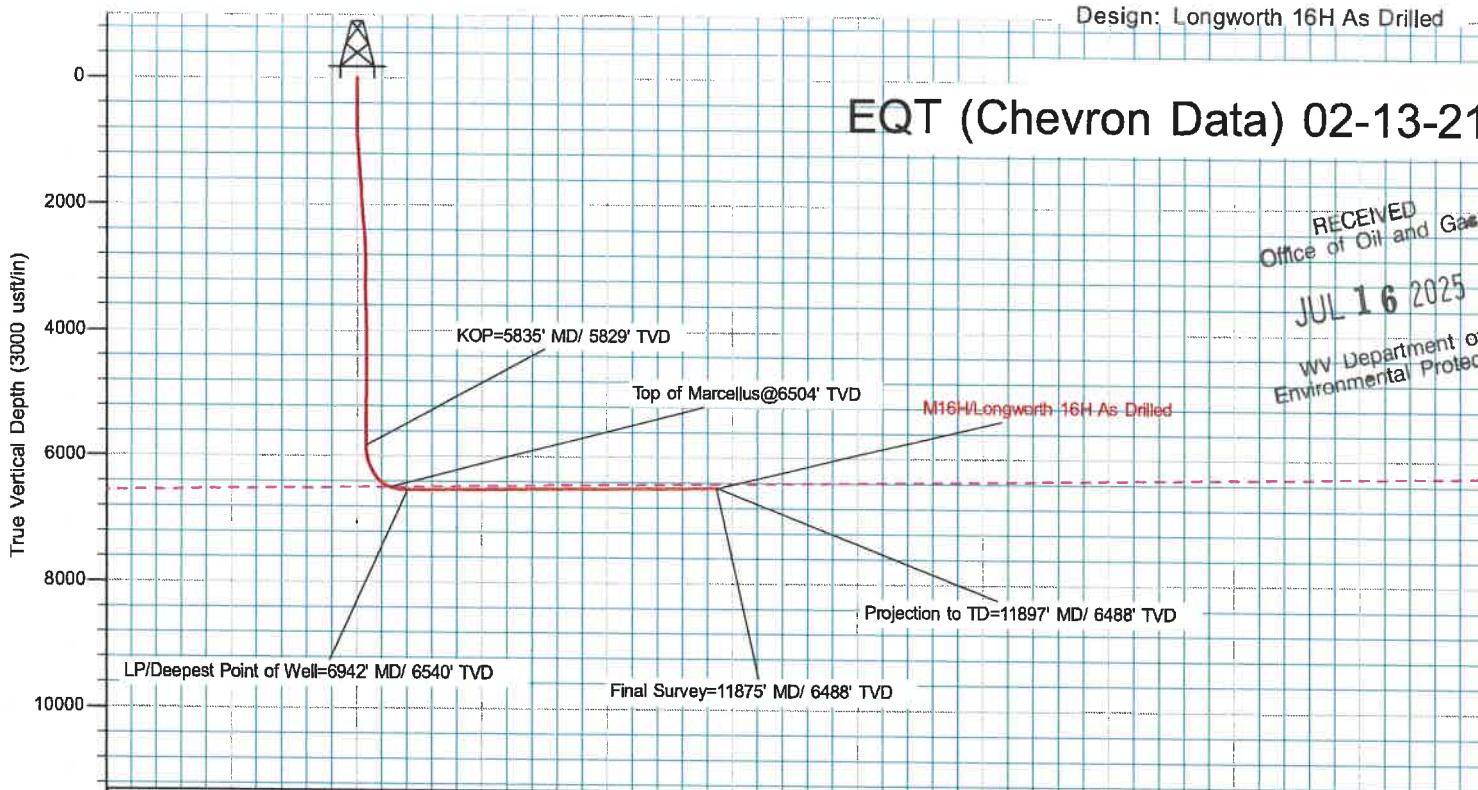
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Project: Marshall County, WV Chevron
KB Elevation= Air RKB @ 1294.000usft (Highlands 9) Site: Longworth
Ground Elevation= 1270.000 Well: M16H
All measurements were taken from KB Elevation Wellbore: OH
Design: Longworth 16H As Drilled

EQT (Chevron Data) 02-13-21

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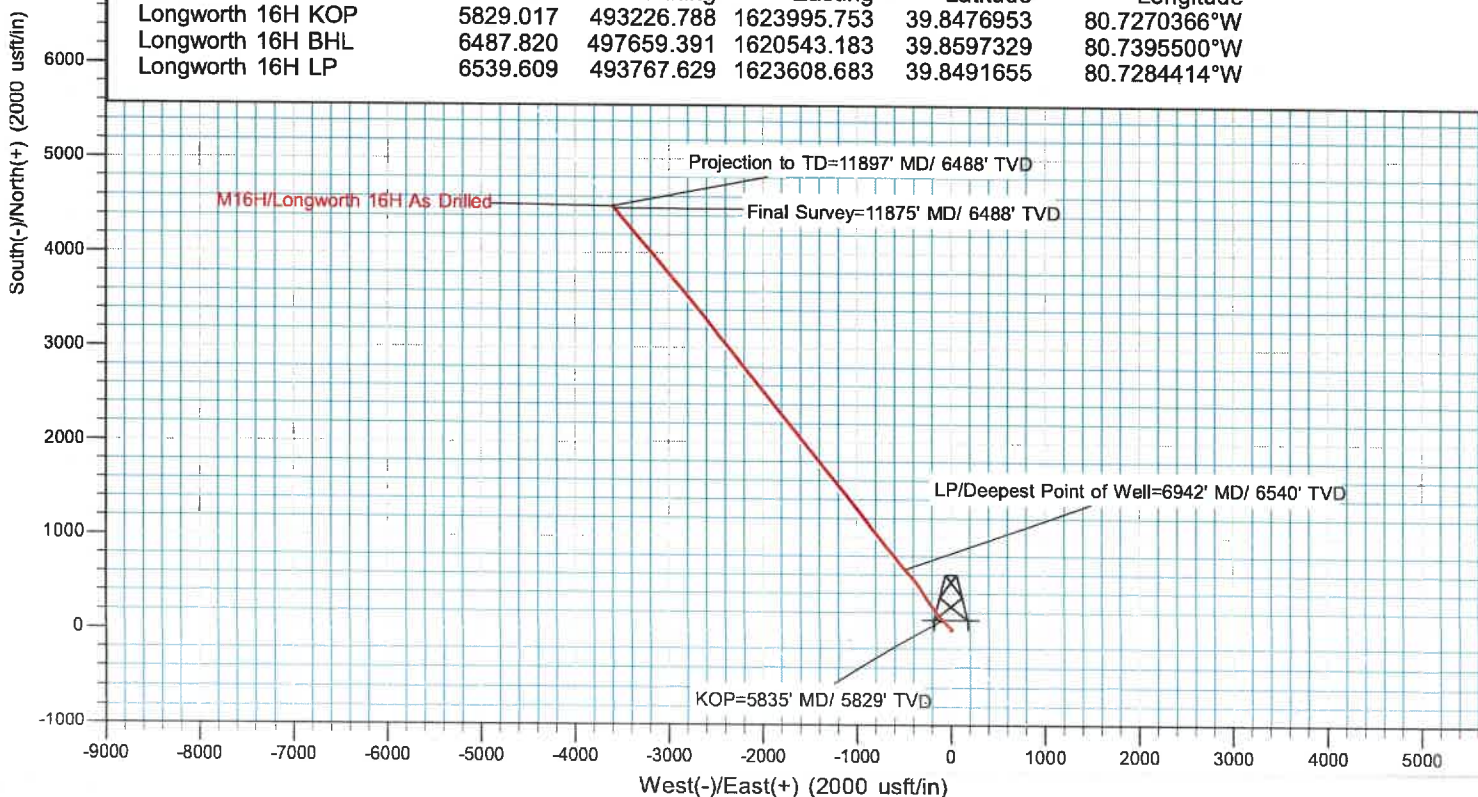
Surface Location: M16H

Ground Level: 1270.000

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.000	0.000	493108.302	1624084.331	39.8473734	80.7267154°W	

DESIGN TARGET DETAILS

Name	TVD	Northing	Easting	Latitude	Longitude
Longworth 16H KOP	5829.017	493226.788	1623995.753	39.8476953	80.7270366°W
Longworth 16H BHL	6487.820	497659.391	1620543.183	39.8597329	80.7395500°W
Longworth 16H LP	6539.609	493767.629	1623608.683	39.8491655	80.7284414°W



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Perforation Data

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Stage No.	Perforation Date	Stage Perforated From TMD Ft.	Stage Perforated To TMD Ft.	# of Perforations/Stage	Formation(s)
2	03/25/2025	11440	11349	36	Marcellus
3	03/28/2025	11321	11170	36	Marcellus
4	03/29/2025	11141	10990	36	Marcellus
5	03/29/2025	10961	10810	36	Marcellus
6	03/29/2025	10781	10630	36	Marcellus
7	03/29/2025	10601	10450	36	Marcellus
8	03/30/2025	10421	10270	36	Marcellus
9	03/30/2025	10241	10090	36	Marcellus
10	03/30/2025	10061	9910	36	Marcellus
11	03/31/2025	9881	9730	36	Marcellus
12	03/31/2025	9701	9550	36	Marcellus
13	04/01/2025	9521	9370	36	Marcellus
14	04/02/2025	9341	9190	36	Marcellus
15	04/02/2025	9161	9010	36	Marcellus
16	04/02/2025	8981	8830	36	Marcellus
17	04/02/2025	8801	8650	36	Marcellus
18	04/03/2025	8621	8470	36	Marcellus
19	04/03/2025	8441	8290	36	Marcellus
20	04/04/2025	8261	8110	36	Marcellus
21	04/04/2025	8081	7930	36	Marcellus
22	04/05/2025	7901	7750	36	Marcellus
23	04/05/2025	7721	7570	36	Marcellus
24	04/05/2025	7541	7390	36	Marcellus
25	04/05/2025	7361	7210	36	Marcellus
26	04/06/2025	7181	7030	36	Marcellus
27	04/06/2025	7001	6850	36	Marcellus
28	04/06/2025	6821	6670	36	Marcellus

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Stimulation Data

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Stage #	Stimulation Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
1	03/24/2025	99	7831	6297	3691	302012	6719.000	
2	03/28/2025	101	8288	5954	4610	300141	5890.000	
3	03/29/2025	101	8495	6075	4418	450237	8704.000	
4	03/29/2025	98	8270	5755	4651	450133	8723.000	
5	03/29/2025	100	8438	5722	4616	450169	8740.000	
6	03/29/2025	100	8453	5412	4900	450093	8733.000	
7	03/30/2025	101	8507	5868	4806	450476	8661.000	
8	03/30/2025	100	8144	5575	4826	450243	8754.000	
9	03/30/2025	101	8340	5735	4831	450079	8674.000	
10	03/31/2025	100	8478	5861	4981	450076	8687.000	
11	03/31/2025	100	8164	5747	5069	450144	8676.000	
12	04/01/2025	100	8251	5380	4879	450064	8670.000	
13	04/02/2025	100	8220	5052	5109	450035	8687.000	
14	04/02/2025	100	8127	5195	4943	450158	8734.000	
15	04/02/2025	101	7691	4171	5100	450209	8760.001	
16	04/02/2025	100	7779	5639	5468	451269	8750.000	
17	04/03/2025	101	7699	5427	5125	450002	8718.000	
18	04/03/2025	100	8137	6077	4991	450018	8716.000	
19	04/04/2025	101	8062	6029	5156	450079	8724.000	
20	04/04/2025	79	8766	5739	5070	450162	10188.000	
21	04/05/2025	98	7589	5876	4715	450156	8682.000	
22	04/05/2025	99	7671	6025	4929	450042	8693.000	
23	04/05/2025	100	7492	5959	4945	454307	8711.000	
24	04/05/2025	99	7923	6020	4848	450076	8650.000	
25	04/06/2025	99	7894	5613	4524	450214	8664.000	
26	04/06/2025	99	7790	5980	5068	450142	8567.000	
27	04/06/2025	99	7628	5793	5040	450071	8636.000	
28	04/06/2025	98	7456	6127	4863	453176	8678.000	

09/26/2025

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	03/24/2025
Job End Date:	04/21/2025
State:	West Virginia
County:	Marshall
API Number:	47-051-02083-00-00
Operator Name:	EQT Production
Well Name and Number:	Longworth A 16H
Latitude:	39.847368
Longitude:	-80.726709
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6540
Total Base Water Volume (gal)*:	10087938.0327157
Total Base Non Water Volume:	0



Water Source	Percent
--------------	---------

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Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	EQT	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	87.13749	None
Sand (Proppant)	EQT	Proppant					
			Silica Substrate	14808-60-7	100.00000	12.74603	None
Clearal 268	ChemStream	Biocide					
			Water	7732-18-5	80.00000	0.00880	None
StimSTREAM FR 9800	ChemStream	Friction Reducer					
			ALKANES, C12-26-BRANCHED AND LINEAR	90622-53-0	40.00000	0.00572	None
StimSTREAM FR 9800	ChemStream	Friction Reducer					
			ACRYLAMIDE-CHLORIDE SALT OF TRIMETHYLAMMONIO-ETHYL ACRYLATE COPOLYMER	69418-26-4	40.00000	0.00572	None

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Enviro-Syn HCR-7000- WL	Fluid USA, Inc.	Synthetic Acid					
			FLUID-Acid-00001	Proprietary	20.00000	0.00231	None
StimSTREAM FR 9800	ChemStream	Friction Reducer					
			Water	7732-18-5	15.00000	0.00080	None
Enviro-Syn HCR-7000- WL	Fluid USA, Inc.	Synthetic Acid					
			FLUID-Amine-00001	Proprietary	10.00000	0.00058	None
Clearal 268	ChemStream	Biocide					
			Glutaraldehyde	111-30-8	20.00000	0.00055	None
StimSTREAM FR 9800	ChemStream	Friction Reducer					
			ETHOXYLATED ALCOHOLS (C12-16)	68551-12-2	5.00000	0.00009	None
StimSTREAM SC-398	ChemStream	Scale Inhibitor					
			AA/ATBS Co-polymer	9003-05-8	5.00000	0.00002	None
Clearal 268	ChemStream	Biocide					
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00001	None
Clearal 268	ChemStream	Biocide					
			Quaternary Ammonium Compounds	68424-85-1	3.00000	0.00001	None
Clearal 268	ChemStream	Biocide					
			Ethanol	64-17-5	1.50000	0.00000	None
StimSTREAM SC-398	ChemStream	Scale Inhibitor					
			AA/Maleic Anhydride Co- polymer	9003-04-7	1.00000	0.00000	None

Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS

* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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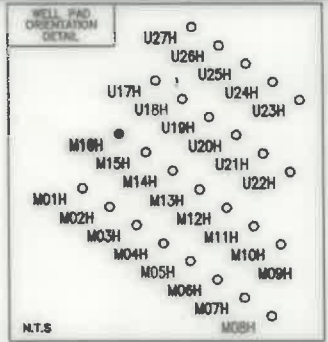
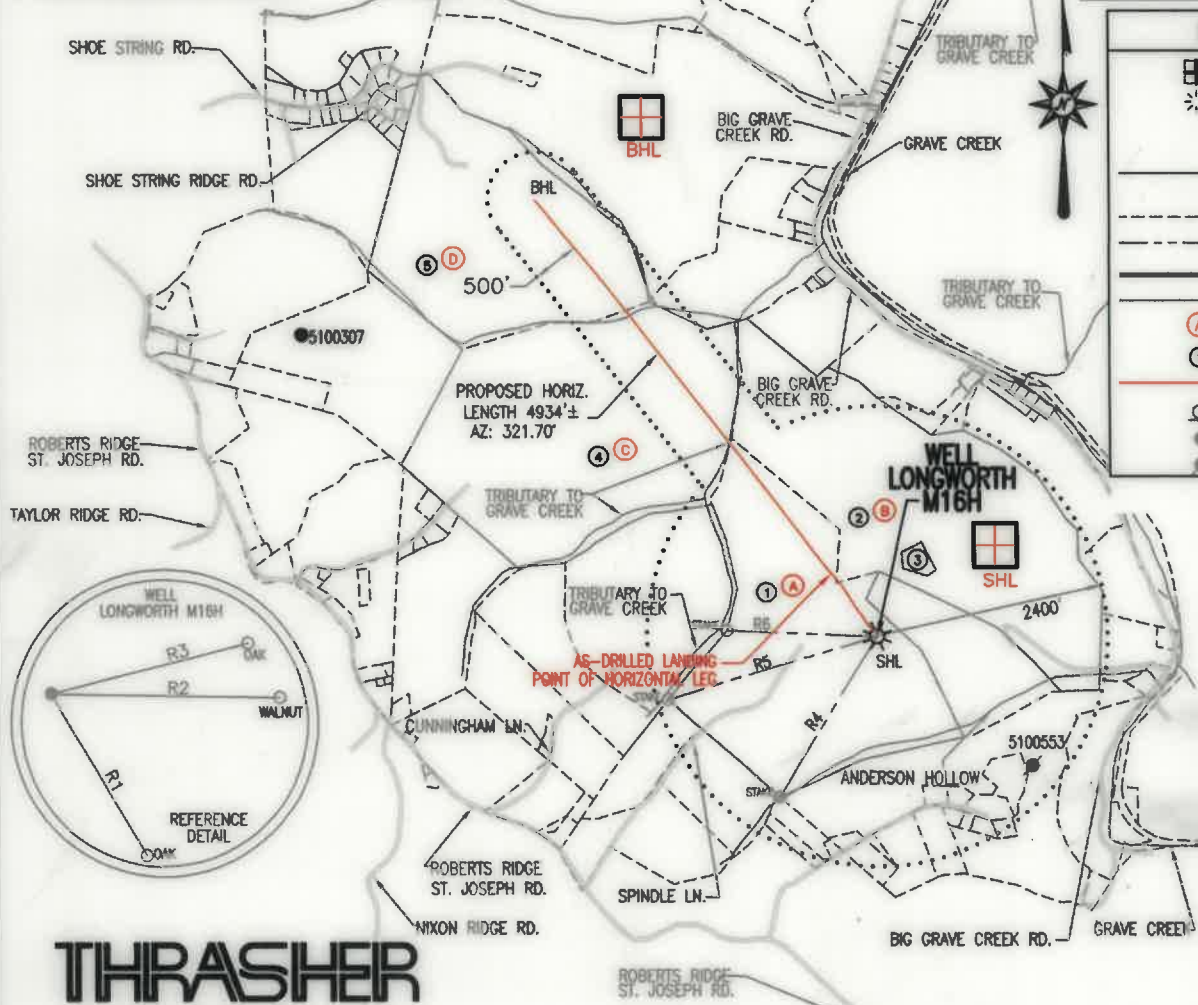
LINE	BEARING	DISTANCE
R1	S 30°42'43" E	238.32'
R2	S 89°07'10" E	291.46'
R3	N 75°23'08" E	259.49'
R4	S 31°24'31" W	1963.52'
R5	S 73°03'45" W	2283.32'
R6	N 87°45'09" W	1565.80'

BHL is located on topo map 5,588 feet south of Latitude: 39° 52' 30"
SHL is located on topo map 10,063 feet south of Latitude: 39° 52' 30"

AS-DRILLED PLAT

NOTES:

- There are no water wells or developed springs within 250' of proposed well.
- Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
- There are no native trout streams within 300' of proposed well.
- Proposed well is greater than 1000' from surface groundwater intake or public water supply.
- It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted herein. The location of the boundary lines, as shown, are based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.
- There are no existing buildings within 625' of proposed well.



LEGEND

- TOPO MAP POINT
- WELL
- ALL ARE POINTS UNLESS OTHERWISE NOTED.
- MINERAL TRACT BOUNDARY
- PARCEL LINES
- WELL REFERENCE
- ROAD
- STREAM CENTER LINE
- LESSORS
- SURFACE OWNERS
- AS-DRILLED
- GAS WELLS
- EXISTING WELLS
- PLUGGED WELLS

AS-DRILLED LOCATIONS
UTM 17-NAD83(M)
SURFACE HOLE LOCATION (SHL)
N:4410853.11
E:523379.37
LANDING POINT (LP)
N:4411051.96
E:523231.49
BOTTOM HOLE LOCATION (BHL)
N:4412221.00
E:522277.75

THRASHER

THE THRASHER GROUP, INC.
600 WHITE OAKS BLVD.
BRIDGEPORT, WV 26330
PHONE 304-624-4108

SEE PAGE 2 FOR SURFACE OWNERS AND LESSORS

FILE #: LONGWORTH M16H - AS-DRILLED
DRAWING #: LONGWORTH M16H - AS-DRILLED
SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: 1/2500
PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Signed: *Joseph H. Lowther*

R.P.E.

L.L.S.: P.S. No. 2346



PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304

DATE: FEBRUARY 23, 2021

OPERATOR'S WELL #: LONGWORTH M16H - AS-DRILLED

API WELL #: 47 51 02083
STATE COUNTY PERMIT

Well Type: ☐ Oil ☐ Waste Disposal ☒ Production ☐ Deep ☒ Gas ☐ Liquid Injection ☐ Storage ☒ Shallow

WATERSHED: MIDDLE GRAVE CREEK-GRAVE CREEK ELEVATION: 1295'

COUNTY/DISTRICT: MARSHALL / CLAY QUADRANGLE: GLEN EASTON, WV 7.5'

SURFACE OWNER: GRAHAM H. LONGWORTH JR. ACREAGE: 123.589±

OIL & GAS ROYALTY OWNER: GRAHAM H. LONGWORTH JR. ACREAGE: 539.594±

DRILL ☒ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR STIMULATE ☒ PLUG OFF OLD FORMATION ☐
PERFORATE NEW FORMATION ☐ PLUG & ABANDON ☐ CLEAN OUT & REPLUG ☐ OTHER CHANGE ☒

(SPECIFY): AS-DRILLED PLAT

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,488'± TMD: 11,897'±

WELL OPERATOR: EQT CHAP LLC DESIGNATED AGENT: JOSEPH C. MALLOW

Address: 400 WOODCLIFF DRIVE Address: 115 PROFESSIONAL PLACE, PO BOX 280

City: CANONSBURG State: PA Zip Code: 15317 City: BRIDGEPORT State: WV Zip Code: 26330

LONGWORTH
M16H
PAGE 2 OF 2
AS-DRILLED

	LESSOR	DIST-TM/PAR
A	GRAHAM H. LONGWORTH JR. ET AL	4-11/1
B	GRAHAM H. LONGWORTH JR. ET AL	4-12/16
	SHERI L. EVRAETS FAMILY TRUST	
	LISA NICEWARNER	
	JULIA RODGERS	
	KEITH FRIESE	
	MARK FRIESE	
	ANTHONY FRIESE	
	JAMES FRIESE	
C	BRETT A. ANDREWS ET UX	4-12/19
	JMK IREV TRST	4-12/4
D	PURPLEBURGH VENTURES LLC	
	MARCELUS TX MINERAL PRTNRS LTD	

	SURFACE OWNER	DIST-TM/PAR
1	GRAHAM H. LONGWORTH JR.	4-11/1
2	DANIEL C. LONGWORTH	4-12/16
3	DANIEL C. SR. AND JEANNETTE L. LONGWORTH	4-12/16.1
4	CODY M. JARRETT	4-12/19
5	MERLE L. CHAPLIN ET UX	4-12/4

AS-DRILLED LOCATIONS
UTM 17-WAD83(M)
SURFACE HOLE LOCATION (SHL)
N:4410853.11
E:523379.37
APPROX LANDING POINT (LP)
N:4411051.96
E:523231.49
BOTTOM HOLE LOCATION (BHL)
N:4412221.00
E:522277.75

09/26/2025

FEBRUARY 23, 2021

THRASHER

THE THRASHER GROUP, INC.
600 WHITE OAKS BLVD.
BRIDGEPORT, WV 26330
PHONE 304-624-4108