

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

RECEIVED  
Office of Oil and Gas

JUN 14 2022

WV Department of  
Environmental Protection

API 47 - 051 - 02080 County Marshall District Clay  
Quad Glen Easton Pad Name Longworth Field/Pool Name N/A  
Farm name Graham H. Longworth Jr. Well Number Longworth M13H  
Operator (as registered with the OOG) EQT CHAP LLC  
Address 400 Woodcliff Drive 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 4,410,845.57 Easting 523,390.81  
Landing Point of Curve Northing 4,410,845.75 Easting 523,391.18  
Bottom Hole Northing 4,410,874.84 Easting 523,423.67

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)  
\_\_\_\_\_  
\_\_\_\_\_

Date permit issued 09/17/2018 Date drilling commenced 12/26/2018 Date drilling ceased 03/16/2019

Date completion activities began \_\_\_\_\_ Date completion activities ceased \_\_\_\_\_

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

REVIEWED

Reviewed by:

09/09/2022

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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"	629'	NEW	J-55 54.5#	N/A	Y
Coal							
Intermediate 1							Y
Intermediate 2							
Intermediate 3							
Production							
Tubing							
Packer type and depth set							

Comment Details No issues during cement job.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (GL)	WOC (hrs)
Conductor		N/A	N/A	N/A	N/A	0	8+
Surface	CLASS A	520	15.6	1.20	624	0	8
Coal							
Intermediate 1						0	8
Intermediate 2							
Intermediate 3							
Production							8+
Tubing							

Drillers TD (ft) 2151' Loggers TD (ft) N/A

Deepest formation penetrated Big Injun Plug back to (ft) N/A

Plug back procedure \_\_\_\_\_

Kick off depth (ft) N/A

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

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 \_\_\_\_\_





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Drilling Contractor \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Logging Company \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Logging Company \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Drilling Contractor \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Well # Longworth M13H Final Formations API# 47-051-02080

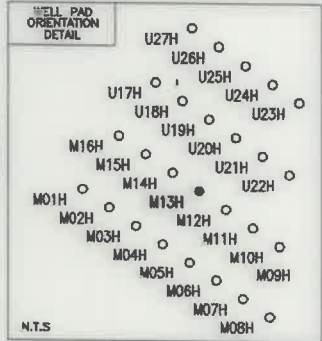
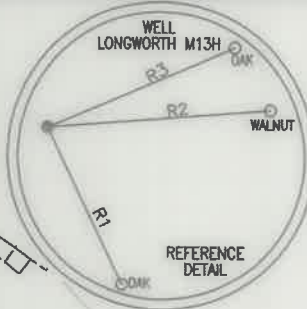
Formation Name	Drill Top MD (ftGRD)	Drill Top (TVD) (ftGRD)	Drill Btm MD (ftGRD)	Drill Btm (TVD) (ftGRD)
Sand/Shale	1	1	584	584
Waynesburg Coal	584	584	584	584
Sand/Shale	584	584	854	854
Pittsburgh Coal	854	854	859	859
Sand/Shale	859	859	1,873	1,867
Big Lime	1,873	1,867	2,101	2,093
Big Injun	2,101	2,093	2,151	2,142



LINE	BEARING	DISTANCE
R1	S 25°13'18" E	198.43'
R2	N 85°18'00" E	255.13'
R3	N 66°59'22" E	232.42'
R4	S 73°55'40" W	2311.60'
R5	N 86°53'54" W	1604.10'
R6	N 50°33'59" W	2294.08'

BHL is located on topo map 10,021 feet south of Latitude: 39° 52' 30"  
 SHL is located on topo map 10,068 feet south of Latitude: 39° 52' 30"

	SURFACE OWNER	DIST-TM/PAR
1	GRAHAM H. LONGWORTH JR.	4-11/1
	LESSOR	DIST-TM/PAR
A	GRAHAM H. LONGWORTH JR. ET AL	4-11/1

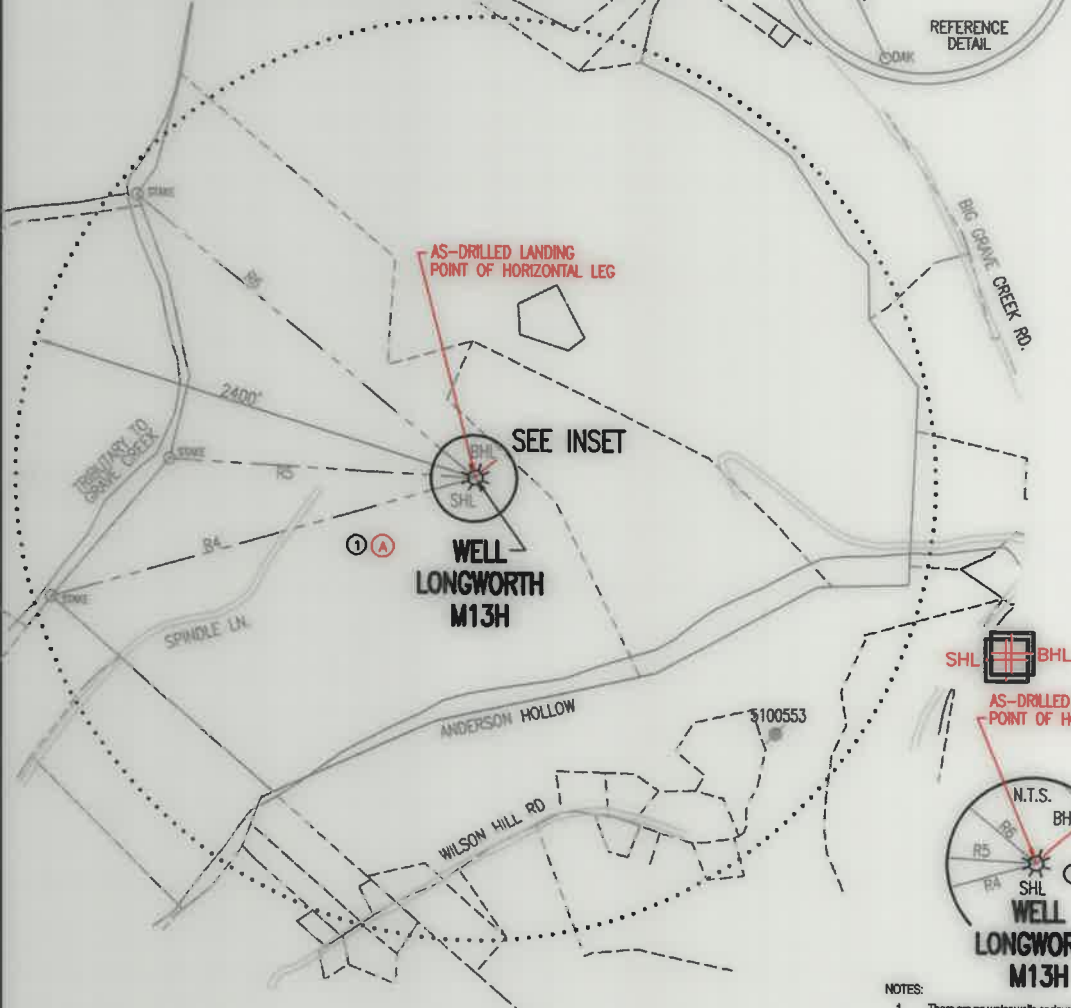


**LEGEND**

- TOPO MAP POINT
- WELL
- ALL ARE POINTS UNLESS OTHERWISE NOTED.
- MINERAL TRACT BOUNDARY
- PARCEL LINES
- WELL REFERENCE
- ROAD
- STREAM CENTER LINE
- (A) - LESSORS
- (1) - SURFACE OWNERS
- AS-DRILLED

**GAS WELLS**

- EXISTING WELLS
- PLUGGED WELLS



AS-DRILLED LOCATIONS
UTM 17-WAD83(N)
<b>SURFACE HOLE LOCATION (SHL)</b>
N:4410845.57
E:523390.81
<b>APPROX LANDING POINT (LP)</b>
N:4410845.754
E:523391.185
<b>BOTTOM HOLE LOCATION (BHL)</b>
N:4410874.844
E:523423.672

- 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 hereon. 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.

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

**AS-DRILLED PLAT**

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



FILE #: LONGWORTH M13H - AS-DRILLED  
 DRAWING #: LONGWORTH M13H - AS-DRILLED  
 SCALE: 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY: 1/2500  
 PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

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



DATE: DECEMBER 28, 2021  
 OPERATOR'S WELL #: LONGWORTH M13H - AS-DRILLED  
 API WELL #: 47 STATE 51 COUNTY 2080 PERMIT

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

WATERSHED: MIDDLE GRAVE CREEK-GRAVE CREEK ELEVATION: 1294.18'

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: 123.589± 09/09/2022

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: 2,166'± TMD: 2,175'±

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

Address: 400 WOODCLIFF DRIVE Address: 427 MIDSTATE DRIVE

City: CANONSBURG State: PA Zip Code: 15317 City: CLARKSBURG State: WV Zip Code: 26301

BHL is located on topo map 5,069 feet west of Longitude: 80° 42' 30"  
 SHL is located on topo map 5,124 feet west of Longitude: 80° 42' 30"