



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, S.E.
Charleston, WV 25304
(304) 926-0450
fax: (304) 926-0452

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Wednesday, August 5, 2020
WELL WORK PLUGGING PERMIT
Vertical Plugging

EQT PRODUCTION COMPANY
625 LIBERTY AVE., SUITE 1700

PITTSBURGH, PA 15222

Re: Permit approval for GARRISON 1810
47-033-01086-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. Please be advised that form WR-38, Affidavit of Plugging and Filling Well, is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin
Chief

Operator's Well Number: GARRISON 1810
Farm Name: LUSTER & PAULINE CAROT⁺
U.S. WELL NUMBER: 47-033-01086-00-00
Vertical Plugging
Date Issued: 8/5/2020

Promoting a healthy environment.

PERMIT CONDITIONS

West Virginia Code § 22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
3. Well work activities shall not constitute a hazard to the safety of persons.
4. This well is under a consent order and must be plugged within two years of the date of issuance of this permit.

WW-4B
Rev. 2/01

- 1) Date May 19, 2020
- 2) Operator's
Well No. 657056 Myrtle R Garrison #1810
- 3) API Well No. 47-033 - 01086 P

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) Well Type: Oil ___ / Gas X / Liquid injection ___ / Waste disposal ___ /
(If "Gas, Production ___ or Underground storage ___) Deep ___ / Shallow X

5) Location: Elevation 1204' Watershed Cunningham Creek
District Eagle - Outside County Harrison Quadrangle Wallace 7.5'

6) Well Operator EQT Production Company 7) Designated Agent Joseph C. Mallow
Address 400 Woodcliff Drive Address 115 Professional Place
Canonsburg PA 15317 Bridgeport WV 26330

8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Sam Ward Name HydroCarbon Well Service
Address PO Box 2327 Address PO Box 995
Buckhannon, WV 26201 Buckhannon WV 26201

10) Work Order: The work order for the manner of plugging this well is as follows:

See Attachment for details and procedures.

RECEIVED
Office of Oil and Gas

MAY 22 2020

WV Department of
Environmental Protection

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector SPD Warratt Date 5/20/2020

PLUGGING PROGNOSIS

Garrison #1810 (657056)
 API# 47-033-01086
 District; Eagle
 Harrison County, WV

BY: J. Horvath
 DATE: 5/20/2020

CURRENT STATUS:

TD @ 3620
Elevation @ 1293'

1 1/4" csg @ 333' (160sks)
 8 5/8" csg @ 1588' (60sks.)
 4 1/2" csg @ 3620' (80 sks) (cem top 1256)

Fresh Water @ 25'
 Saltwater @ None reported
 Oil Show @ None reported
 Gas Shows @ None reported
 Coal @ 275-281, 298-305
 Perforations @ See attached sheet

RECEIVED
 Office of Oil and Gas

MAY 22 2020

WV Department of
 Environmental Protection

1. Notify inspector, **Sam Ward 304-389-7583**, 24 hours prior to commencing operations.
2. TIH check TD @ or below 3650', circ. 6% gelled water, followed by 200' CIA cem plug, 3651' to 3461'. (Perfs from 3565' - 3593'). WOC 8hrs and then tag TOC. **ADD CEMENT IF NEEDED.**
3. TOOH w/tbg to 2477', set 175' CIA cem plug from 2427' to 2252'. WOC 8 hrs., Tag TOC (Perfs 2377-2302). **ADD CEMENT IF NEEDED.**
4. TOOH w/tbg to 1769', Set 100' CIA cem plug 1769' to 1669 (perfs 1719-1704')
5. TOOH w/tbg free point 4 1/2" csg, cut csg @ free point. TOOH 4 1/2" csg. (appro. 1000')
6. Set 100' CIA cement plug 50' in/out of casing cut. Perforate all saltwater, freshwater, coal, oil and gas shows below cut. Do not omit any plugs
7. TIH w/tbg to 1050', set 100' CIA cement plug 1050' to 950' (approx. 4 1/2 csg cut.)
8. 8 5/8" set @ free point and set a 100' CIA cement plug @ 600' to 500'. TOOH w/csg
9. TIH to 383' Set 383' CIA cement plug 383' to surface.
10. Erect monument with API#, date plugged, company name.
11. Reclaim road, location to WV-DEP specifications.

SPW
 5/20/2020

RECEIVED
West Virginia Division of
Environmental Protection

MAR 03 1995

Permitting
Office of Oil & Gas

27-Oct-94
API # 47- 33-01086 F

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas

Well Operator's Report of Well Work

Farm name: CAROTHERS, GEORGE Operator Well No.: GARRISON #1810

LOCATION: Elevation: 1,293.00 Quadrangle: WALLACE

District: EAGLE County: HARRISON
Latitude: 8100 Feet South of 39 Deg. 27Min. 30 Sec.
Longitude 1120 Feet West of 80 Deg. 22 Min. 30 Sec.

Company: CARNEGIE NATURAL GAS CO.
800 REGIS AVE
PITTSBURGH, PA 15236-0000

Agent: DOUGLAS R. NAY

Inspector: TIM BENNETT
Permit Issued: 11/02/94
Well work Commenced: 11-9-94
Well work Completed: 12-8-94
Verbal Plugging
Permission granted on:
Rotary Cable Rig
Total Depth (feet)
Fresh water depths (ft)
Salt water depths (ft)
Is coal being mined in area (Y/N)?
Coal Depths (ft):

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Size			
NO ADDITIONAL PIPE RUN IN WELL			

OPEN FLOW DATA

Producing formation 50' and 30' Pay zone depth (ft) 2306-237

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/
 Final open flow CO-MINGLED MCF/d Final open flow _____ Bbl/
 Time of open flow between initial and final tests _____ Hour
 Static rock Pressure 305 psig (surface pressure) after 48 Hour

Second producing formation BIG INJUN Pay zone depth (ft) 1704-171

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/
 Final open flow CO-MINGLED MCF/d Final open flow _____ Bbl/
 Time of open flow between initial and final tests _____ Hour
 Static rock Pressure 305 psig (surface pressure) after 48 Hour

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATE INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WEL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: CARNEGIE NATURAL GAS CO.

By: Douglas R. Nay
Date: 2/17/95

API# 47-033-1086 P
WELL# GARRISON 1810

1. SET ALPHA PLUG @ 2845'
2. PERFORATED SQUEEZE HOLES (4) @ 2830'
3. CIRCULATE CEMENT (315 SKS) TO BRING TOP TO 1958'
4. SET PLUG @ 1900'
5. PERFORATE SQUEEZE HOLES (4) @ 1875'
6. CIRCULATE CEMENT (50 SKS) TO BRING TOP TO 1256'
7. DRILLED OUT CEMENT AND TOP PLUG TO 2830'
8. FRACTURED WELL

FRAC DATA

TYPE: ENERGIZED WATER

<u>FRACTURED</u>	<u>DEPTH</u>	<u>SHOTS</u>	
1ST STAGE	2302 - 2377	14	336 Gal. HCL 50 SKS 80/100 SAND 250 SKS 20/40 SAND 342 BBL GELLED WATER 65,000 SCF (N2)
2ND STAGE	1704 - 1719	12	500 GAL. HCL 50 SKS 80/100 SAND 350 SKS 20/40 SAND 385 BBL GELLED WATER 85,000 SCF (N2)

FLOWED BACK WELL, KNOCKED OUT FRAC PLUGS AND BAFFLES TO ORIGINAL T.D. 3651'



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

Oil and Gas Division

WELL RECORD B

RECEIVED

OCT 11 1977

OIL & GAS DIVISION
DEPT. OF MINES

Quadrangle Clarksburg NW

Permit No. HAR-1086

Rotary X Oil _____
Cable _____ Gas X
Recycling _____ Comb. _____
Water Flood _____ Storage _____
Disposal _____ (Kind)

Company <u>Carnegie Natural Gas Company</u>	Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Address <u>3904 Main St., Munhall, Pa. 15120</u>	Size			
Farm <u>Myrtle R. Garrison et al</u> Acres <u>30</u>	20-16			
Location (waters) <u>Cunningham Run</u>	Cond.			
Well No. <u>2-1810</u> Elev. <u>1293'</u>	<u>13-10" 11-3/4</u>	<u>333'</u>	<u>333'</u>	<u>160 sacks</u>
District <u>Eagle</u> County <u>Harrison</u>	<u>9 5/8</u>			
The surface of tract is owned in fee by <u>George Carothers</u>	<u>8 5/8</u>	<u>1588'</u>	<u>1588'</u>	<u>60 sacks</u>
Address <u>Rt. #1, Shinnston, W. Va.</u>				
Mineral rights are owned by <u>Myrtle R. Garrison Hrs</u>	<u>5 1/2</u>			
Address <u>Shinnston, W. Va.</u>	<u>4 1/2</u>	<u>3620'</u>	<u>3620'</u>	<u>80 sacks</u>
Drilling Commenced <u>July 26, 1977</u>	<u>3</u>			
Drilling Completed <u>August 6, 1977</u>	<u>2</u>			
Initial open flow <u>184,000</u> cu. ft. _____ bbls.	Liners Used			
Final production <u>622,000</u> cu. ft. per day _____ bbls.				
Well open _____ hrs. before test <u>1360</u> RP.				

Well treatment details:

Attach copy of cementing record.

Fractured Balltown Sand.

Perforated: 3565-3593' - 14 holes.

590 barrels of water- 10,000# of 80-100 Sand, 30,000# of 20-40 Sand

500 gallons of HCL 15% Acid to breakdown.

Coal was encountered at _____ Feet _____ Inches
Fresh water _____ Feet _____ Salt Water _____ Feet _____
Producing Sand _____ Depth _____

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Red Rock			0	10		
Lime			10	50		Fresh water - 25'
Red Rock			50	60		
Shale			60	70		
Sand			70	168		
Shale			168	210		
Sand			210	275		
Coal			275	281		
Sand			281	298		
Coal			298	305		
Shale			305	355		
Sand			355	390		
Shale			390	426		
Sand			426	445		
Red Rock-Shale			445	495		
Red Rock			495	550		
Shale			550	580		
Red Rock			580	603		
Sand			603	608		
Shale			608	631		
Sand			631	685		
Shale-Sand			685	700		
Shale			700	730		
Sand			730	770		

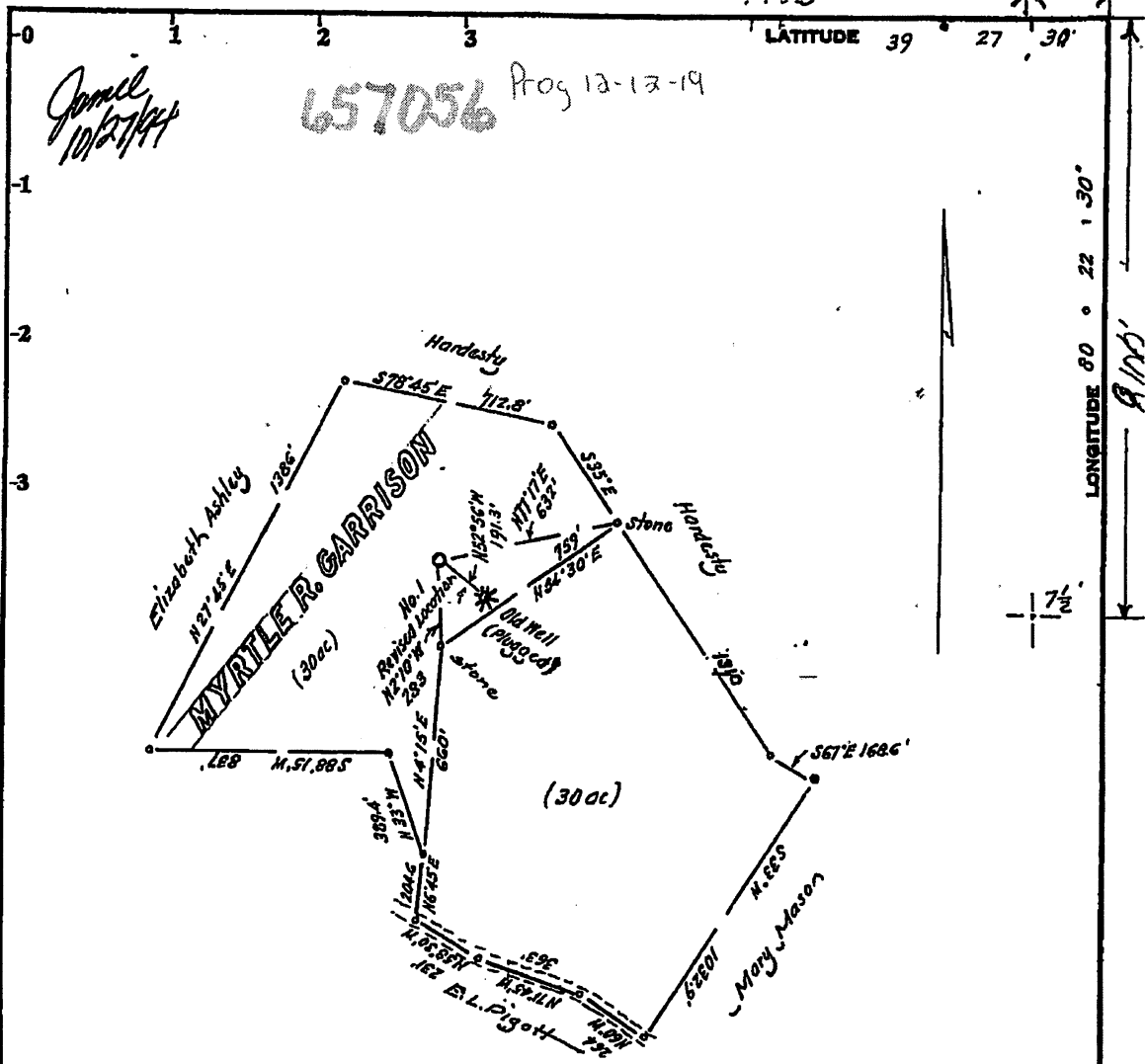
(over)

* Indicates Electric Log tops in the remarks section.

HAR-1086

Formation	Color	Hard or Soft	Top Feet 3	Bottom Feet	Oil, Gas or Water	Remarks
shale			770	781		
sand			781	840		
sand-Shale			840	940		
sand			940	965		
shale			965	1058		
sand			1058	1088		
shale			1088	1095		
sand			1095	1120		
shale			1120	1240		
sand			1240	1280		
shale			1280	1330		
sand			1330	1355		
shale			1355	1365		
sand			1365	1462		
red Rock			1462	1498		
sand			1498	1574		
red Rock			1574	1586		
lime			1586	1666		
sand			1666	1758		
shale			1758	2310		
sand			2310	2320		
shale			2320	2350		
red Rock			2350	2358		
shale			2358	2378		
sand			2378	2408		
red Rock			2408	2415		
sand			2415	2515		
shale			2515	2525		
sand			2525	2560		
shale			2560	2690		
sand			2690	2696		
shale			2696	2797		
sand-Shale			2797			
Total Depth				3650		

Date OCT. 7, 19 77APPROVED CARNEGIE NAT. GAS CO. OwnerBy Robert L. [Signature]
(Title)



Minimum Error of Closure 1 in 200

Source of Elevation Elev. J.B. Cunningham No. 1808-991

Fracture.....
 New Location..... Revised
 Drill Deeper.....
 Abandonment.....

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

Map No. _____ Signed: W. S. [Signature]
 Squares: N S E W

Company Garnegie Natural Gas Co.
 Address PO Box 387, Moundsville, W.V. 26041
 Farm Myrtle R. Garrison
 Tract _____ Acres 30 Lease No. 17330
 Well (Farm) No. 2220 Serial No. 1810
 Elevation (Spirit Level) 1293
 Quadrangle Wallace 7 1/2'
 County Harrison District Eagle
 Engineer W. S. [Signature]
 Engineer's Registration No. 1277
 File No. _____ Drawing No. _____
 Date June 7, 1977 Scale 1" = 500'

STATE OF WEST VIRGINIA
 Division of Environmental Protection
 Office of Oil & Gas
 Moundsville, W.V.
WELL LOCATION MAP
Old Well No. 47-033-01086 F
 + Denotes location of well on United States Topographic Maps, scale 1 to 25,000 latitude and longitude lines being represented by border lines as shown.
 - Denotes one inch spaces on border line of original tracing.

WW-4A
Revised 6-07

1) Date: May 7, 2020
2) Operator's Well Number
657056 Garrison #1810

3) API Well No.: 47 - 033 - 01086

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Luster & Pauline Carothers</u>	Name _____
Address <u>3431 Cunningham Rd</u>	Address _____
<u>Shinnston, WV 26431</u>	
(b) Name <u>Francis R Carothers (ACCESS OWNER)</u>	(b) Coal Owner(s) with Declaration
Address <u>14 Starr Rd</u>	Name <u>Francis R Carothers</u>
<u>Uncasville, CT 06382</u>	Address <u>14 Starr Rd</u>
	<u>Uncasville, CT 06382</u>
(c) Name _____	Name _____
Address _____	Address _____
6) Inspector <u>Sam Ward</u>	(c) Coal Lessee with Declaration
Address <u>PO Box 2327</u>	Name _____
<u>Buckhannon, WV 26201</u>	Address _____
Telephone <u>304-389-7583</u>	

RECEIVED
Office of Oil and Gas
MAY 22 2020
WV Department of
Environmental Protection

TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side However, you are not required to take any action at all

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief

Commonwealth of Pennsylvania - Notary Seal
Olivia Pishoneri, Notary Public
Allegheny County
My commission expires October 25, 2023
Commission number 1359968
Member, Pennsylvania Association of Notaries

Well Operator EQT Production Company

By: John Zavatchan

Its: Project Specialist IV

Address 400 Woodcliff Drive
Canonsburg PA 15317

Telephone (724) 746-9073

Subscribed and sworn before me this 7th day of May, 2020
[Signature] Notary Public
My Commission Expires October 25, 2023

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

WW-9
(5/16)

API Number 47 - 033 - 01086
Operator's Well No. 657056 Garrison #1810

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name EQT Production Company OP Code 306686

Watershed (HUC 10) Cunningham Creek Quadrangle Wallace 7.5'

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a pit be used? Yes No

ANY WELL EFFLUENT WILL BE CONTAINED
IN TANKS BEFORE DISPOSING OFF SITE.

If so, please describe anticipated pit waste: _____

Will a synthetic liner be used in the pit? Yes No If so, what ml.? _____

JMM

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

Will closed loop system be used? If so, describe: _____

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. _____

-If oil based, what type? Synthetic, petroleum, etc. _____

Additives to be used in drilling medium? _____

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. _____

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) _____

-Landfill or offsite name/permit number? _____

RECEIVED
Office of Oil and Gas

MAY 22 2020

WV Department of
Environmental Protection

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on April 1, 2016, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature _____

Company Official (Typed Name) John Zavaichan

Company Official Title Project Specialist IV

Subscribed and sworn before me this 1st day of May, 20 20

[Signature]

Notary Public

My commission expires October 25, 2023

Commonwealth of Pennsylvania - Notary Seal
Olivia Pishoneri, Notary Public
Allegheny County
My commission expires October 25, 2023
Commission number 1359968
Member, Pennsylvania Association of Notaries

Proposed Revegetation Treatment: Acres Disturbed 1± Prevegetation pH _____

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type (10-20-20) or equivalent

Fertilizer amount 1/3 ton lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Red Fescue	40	Red Fescue	15
Aslike Clover	5	Aslike Clover	5
Annual Rye	15		

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

RECEIVED
Office of Oil and Gas

Plan Approved by: SEP Warrick

MAY 22 2020

Comments: _____

WV Department of
Environmental Protection

Title: OOG Inspector Date: 5/20/2020

Field Reviewed? () Yes (X) No

EQT Production Water plan
Offsite disposals

Waste Management - Meadowfill Landfill

Rt. 2, Box 68 Dawson Drive
Bridgeport, WV 26330
304-326-6027
Permit #SWF-1032-98
Approval #100785WV

Waste Management - Northwestern Landfill

512 E. Dry Road
Parkersburg, WV 26104
304-428-0602
Permit #SWF-1025 WV-0109400
Approval #100833WV

RECEIVED
Office of Oil and Gas

MAY 22 2020

WV Department of
Environmental Protection

Topo Quad: Wallace 7.5'

Scale: 1" = 2000'

County: Harrison

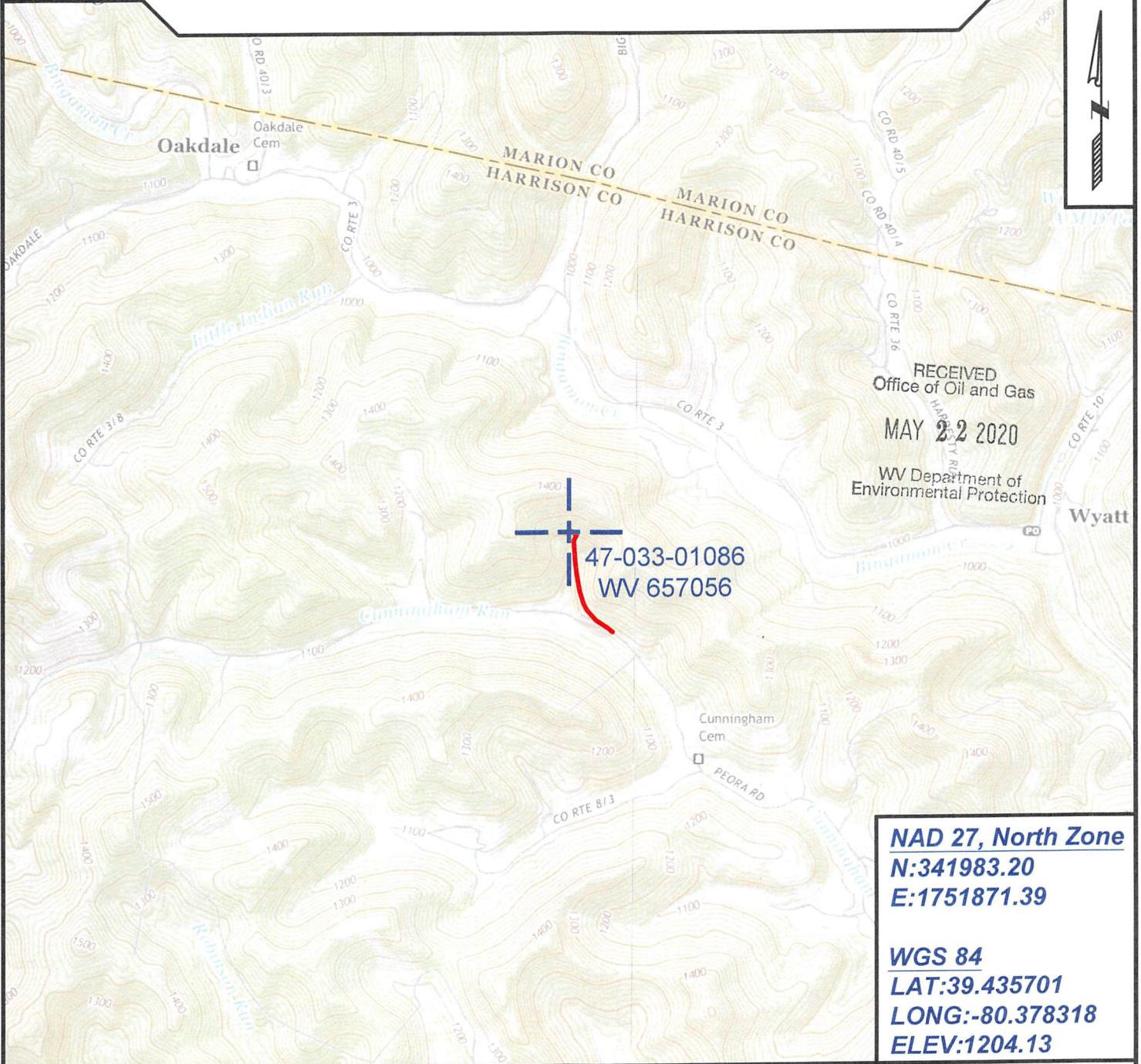
Date: May 06, 2020

District: Eagle-Outside

Project No: 70-36-00-08

47-033-01086 WV 657056 (Myrtle R. Garrison #1810)

Topo



47-033-01086
WV 657056

RECEIVED
Office of Oil and Gas
MAY 22 2020
WV Department of
Environmental Protection

NAD 27, North Zone
N:341983.20
E:1751871.39

WGS 84
LAT:39.435701
LONG:-80.378318
ELEV:1204.13



SURVEYING AND MAPPING SERVICES PERFORMED BY:

ALLEGHENY SURVEYS, INC.

1-800-482-8606
237 Birch River Road
Birch River, WV 26610
PH: (304) 649-8606
FAX: (304) 649-8608

PREPARED FOR:

EQT Production Company

400 Woodcliff Drive
Canonsburg, PA 15317

WW-7
8-30-06



West Virginia Department of Environmental Protection
Office of Oil and Gas
WELL LOCATION FORM: GPS

API: 47-033-01086 WELL NO.: WV 657056 (Myrtle R. Garrison #1810)

FARM NAME: Myrtle R. Garrison

RESPONSIBLE PARTY NAME: EQT Production Company

COUNTY: Harrison DISTRICT: Eagle-Outside RECEIVED
Office of Oil and Gas

QUADRANGLE: Wallace 7.5' MAY 22 2020

SURFACE OWNER: Luster & Pauline Carothers WV Department of
Environmental Protection

ROYALTY OWNER: Carl Bandy (Attorney in Fact for Heirs of Winnie J. Yost), et al.

UTM GPS NORTHING: 4365313

UTM GPS EASTING: 553501 GPS ELEVATION: 367 m (1204 ft)

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

Survey grade GPS _____ : Post Processed Differential _____
Real-Time Differential _____
Mapping Grade GPS X : Post Processed Differential X
Real-Time Differential _____

4. **Letter size copy of the topography map showing the well location.**

I the undersigned, hereby certify this data 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 Office of Oil and Gas.


Signature

PS #2180
Title

5/14/2020
Date



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, S.E.
Charleston, WV 25304
(304) 926-0450
fax: (304) 926-0452

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Wednesday, August 5, 2020
WELL WORK PLUGGING PERMIT
Vertical Plugging

EQT PRODUCTION COMPANY
625 LIBERTY AVE., SUITE 1700

PITTSBURGH, PA 15222

Re: Permit approval for 2434
47-085-03964-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. Please be advised that form WR-38, Affidavit of Plugging and Filling Well, is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin
Chief

Operator's Well Number: 2434
Farm Name: VERNON C. THOMAS
U.S. WELL NUMBER: 47-085-03964-00-00
Vertical Plugging
Date Issued: 8/5/2020

Promoting a healthy environment.

PERMIT CONDITIONS

West Virginia Code § 22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
3. Well work activities shall not constitute a hazard to the safety of persons.
4. This well is under a consent order and must be plugged within two years of the date of issuance of this permit.

1) Date May 4, 2020
2) Operator's
Well No. 602434 J A Thomas #2434
3) API Well No. 47-085 - 03964 P

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) Well Type: Oil ___ / Gas X / Liquid injection ___ / Waste disposal ___ /
(If "Gas, Production ___ or Underground storage ___) Deep ___ / Shallow X

5) Location: Elevation 917' Watershed Sugar Run
District Clay County Ritchie Quadrangle Pennsboro 7.5'

6) Well Operator EQT Production Company 7) Designated Agent Joseph C. Mallow
Address 400 Woodcliff Drive Address 115 Professional Place
Canonsburg PA 15317 Bridgeport WV 26330

8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Michael Goff Name HydroCarbon Well Service
Address 1723 Auburn Road Address PO Box 995
Pullman, WV 26421 Buckhannon WV 26201

10) Work Order: The work order for the manner of plugging this well is as follows:
See Attachment for details and procedures.

RECEIVED
Office of Oil and Gas
MAY 11 2020
WV Department of
Environmental Protection

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector Michael Goff Date 5/5/20

PLUGGING PROGNOSIS

Thomas, J.A. # 2434 (602434)
 Ritchie Co. WV
 District, Clay
 API # 47-085- 03964

BY: Craig Duckworth
 DATE: 01/08/2020

CURRENT STATUS:

TD @ 1964'
Elevation @ 934'

10" csg @ 210'
 8 1/4" csg @ 1333'
 6 5/8" csg @ 1742'
 3" csg @ 1875' (Packer @ 1702' with 174' of 3" below packer)

Fresh Water @ 65', 865'-895'
 Saltwater @ 1305'-1330'
 Coal @ None Reported
 Oil Show @ None Reported
 Gas shows @ 1805', 1868'

1. Notify State Inspector, **Michael Goff 304-549-9823**, 48 hrs. prior to commencing operations.
2. TIH wireline, check TD and locate 6 5/8" packer.
3. Attempt to release packer @ 1702' and TOOH 3" and packer. If unable to release packer contact EQT Plugging Specialist and state inspector before proceeding to next step.
4. TIH wireline, cut 3" @ 1700', TOOH 3".
5. TIH to 1900', spot 30 bbl. of 6% gelled water followed by a 300' C1A cement plug 1900' - 1600'. (packer @ 1702' and 6 5/8" csg seat).
6. WOC hrs., Tag TOC, add additional C1A cement if necessary.
7. Free point 6 5/8" casing, cut casing @ free point. TOOH 6 5/8" csg.
8. TIH set a 100' C1A cement plug 50' in/out of casing cut. Perforate all freshwater, saltwater, coal, oil and gas shows below cut. Do not omit any plugs.
9. TOOH to 1400', set a 150' C1A cement plug 1400' to 1250' (6 5/8" csg seat).
10. Free point 8 1/4" csg, cut casing @ free point. TOOH 8 1/4" csg.
11. TIH set a 100' C1A cement plug 50' in/out of casing cut. Perforate all freshwater, saltwater, coal, oil and gas shows below cut. Do not omit any plugs.

RECEIVED
 Office of Oil and Gas
 MAY 11 2020
 WV Department of
 Environmental Protection

12. TOOH to 1000', set 200' CIA cement plug 1000' to 800' (Elevation @ 934' & FW @ 865'-895').
13. TOOH to 250', set a 250' CIA cement plug 250' to surface (FW @ 65').
14. Erect monument with API#, company name, & date plugged
15. Reclaim location and road to WV-DEP specifications.

RECEIVED
Office of Oil and Gas
MAY 11 2020
WV Department of
Environmental Protection

MAG
5/5/20



47-085-039649

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

WELL RECORD

Permit No. _____ Oil or Gas Well "GAS"
(MIND)

Company Pittsburgh & West Va Gas Company.
Address Clarksburg, West Va.
Farm J. A. Thomas Acres _____
Location (waters) West Union S/W. 4-1-2
Well No. 2434 Elev. 934' VA
District Clay County Ritchie
The surface of tract is owned in fee by _____
Address _____
Mineral rights are owned by _____
Address _____
Drilling commenced September 6th, 1911
Drilling completed November 21, 1911
Date Shot From _____ To _____
With _____
Open Flow /10ths Water in _____ Inch
/10ths Merc. in _____ Inch
Volume _____ Cu. Ft.
Rock Pressure _____ lbs. _____ hrs.
Oil _____ bbls., 1st 24 hrs.
Fresh water _____ feet _____ feet
Salt water _____ feet _____ feet

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16			Kind of Packer
18			
10	216'	216'	Size of
8 1/2	1335'	1335'	
6 3/4	1742'	1742'	Depth set
5 3/16			
8			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED _____ SIZE _____ No. Ft. _____ Date _____

GOAL WAS ENCOUNTERED AT _____ FEET _____ INCHES

_____ FEET _____ INCHES _____ FEET _____ INCHES

_____ FEET _____ INCHES _____ FEET _____ INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Clay	Red	Soft	0	20			
Slate	White	"	20	40			
Sand	"	Hard	40	80			
Slate	Dark	Soft	80	95	Water	65'	
"	White	Hard	95	100			
Red Rock	Red	Soft	100	205			
Slate	White	Hard	205	219			
Sand	"	"	219	240			
Slate	Red	Soft	240	290			
Slate	White	"	290	310			
Slate	Red	"	310	390			
Slate	White	"	390	440			
Slate	Red	"	440	470			
Slate	Black	Hard	470	513			
Slate	Red	Soft	513	523			
Slate	White	Soft	523	625			
Slate	Red	"	625	700			
Slate	White	Hard	700	750			
Little Dunkard	Gray	"	750	800			
Slate	Black	Soft	800	809			
Slate	White	Soft	809	815			
Slate	Red	Soft	815	865	Water	865-895'	
Big Dunkard	Gray	Hard	865	895			
Slate	Black	Soft	895	915			
"	White	"	915	945			
1st. Gas Sand	"	Hard	945	965			
Slate	"	Soft	965	1000			
2nd. Gas Sand	"	Hard	1000	1063			
Slate	"	Soft	1063	1095			
1st. Salt Sand	"	Hard	1095	1142			
Slate	Black	Soft	1142	1210			
2nd. Salt Sand	White	Hard	1210	1285			
Slate	"	Soft	1285	1287			
3rd. Salt Sand	Brown	Hard	1287	1302			
Slate	White	Soft	1302	1305			
Sand	"	Hard	1305	1330	Water	1305-1330'	
Slate	Black	Soft	1330	1350			
Sand	Gray	Hard	1350	1395			
Skate	Black	Soft	1395	1465			

47-085-03964P

WW-4A
Revised 6-07

1) Date: April 30, 2020
2) Operator's Well Number
602434 J A Thomas #2434
3) API Well No.: 47 - 085 - 03964

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Vernon C Thomas</u>	Name _____
Address <u>800 Ashton Rd</u>	Address _____
<u>Ashton, MD 20861</u>	_____
(b) Name <u>John & Helen Bair (ACCESS OWNER)</u>	(b) Coal Owner(s) with Declaration
Address <u>985 Sugar Run</u>	Name <u>Vernon C Thomas</u>
<u>Pennsboro, WV 26415</u>	Address <u>800 Ashton Rd</u>
(c) Name _____	<u>Ashton, MD 20861</u>
Address _____	Name _____
_____	Address _____
_____	_____
6) Inspector <u>Michael Goff</u>	(c) Coal Lessee with Declaration
Address <u>1723 Auburn Road</u>	Name _____
<u>Pullman, WV 26421</u>	Address _____
Telephone <u>304-549-9823</u>	_____

TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.

Well Operator EQT Production Company
 By: Erin Spine *[Signature]*
 Its: Supervisor - Subsurface Permitting
 Address 400 Woodcliff Drive
Canonsburg PA 15317
 Telephone (724) 271-7380

RECEIVED
Office of Oil and Gas
MAY 11 2020
WV Department of
Environmental Protection

Subscribed and sworn before me this 30th day of April, 2020
Rebecca Shrum
 My Commission Expires March 9, 2024

Commonwealth of Pennsylvania - Notary Seal
 Rebecca Shrum, Notary Public
 Beaver County
 My commission expires March 9, 2024
 Commission number 1267706
 Member, Pennsylvania Association of Notaries

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyoffier@wv.gov.

WW-9
(5/16)

47-085-03964

API Number 47 - 085 - 03964
Operator's Well No. 602434 J A Thomas #2434

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name EQT Production Company OP Code 306686

Watershed (HUC 10) Sugar Run Quadrangle Pennsboro 7.5'

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a pit be used? Yes No

ANY WELL EFFLUENT WILL BE CONTAINED IN TANKS UNTIL DISPOSED OF OFF SITE

If so, please describe anticipated pit waste: Formation Fluids

Will a synthetic liner be used in the pit? Yes No If so, what ml.? _____

JWM

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

Will closed loop system be used? If so, describe: _____

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. _____

-If oil based, what type? Synthetic, petroleum, etc. _____

Additives to be used in drilling medium? _____

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. _____

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) _____

-Landfill or offsite name/permit number? _____

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on April 1, 2016, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature [Signature]

Company Official (Typed Name) Erin Spine

Company Official Title Supervisor - Subsurface Permitting

RECEIVED
Office of Oil and Gas
MAY 11 2020
WV Department of Environmental Protection

Subscribed and sworn before me this 30th day of April, 2020

[Signature]

Notary Public

My commission expires March 9, 2024

Commonwealth of Pennsylvania - Notary Seal
Rebecca Shrum, Notary Public
Beaver County
My commission expires March 9, 2024
Commission number 1267706
Member, Pennsylvania Association of Notaries

Proposed Revegetation Treatment: Acres Disturbed 1± Prevegetation pH _____

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type (10-20-20) or equivalent

Fertilizer amount 1/3 ton lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Red Fescue	40	Red Fescue	15
Aslike Clover	5	Aslike Clover	5
Annual Rye	15		

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Michael Doff

Comments: Seed & mulch any disturbed areas. E-n-s controls installed and maintained as necessary.

Title: Oil & Gas Inspector Date: 5/5/20

Field Reviewed? Yes No

47-085-03964P

EQT Production Water plan

Offsite disposals

Waste Management - Meadowfill Landfill

Rt. 2, Box 68 Dawson Drive
Bridgeport, WV 26330
304-326-6027
Permit #SWF-1032-98
Approval #100785WV

Waste Management - Northwestern Landfill

512 E. Dry Road
Parkersburg, WV 26104
304-428-0602
Permit #SWF-1025 WV-0109400
Approval #100833WV

RECEIVED
Office of Oil and Gas
MAY 11 2020
WV Department of
Environmental Protection

Topo Quad: Pennsboro 7.5' Scale: 1" = 200'

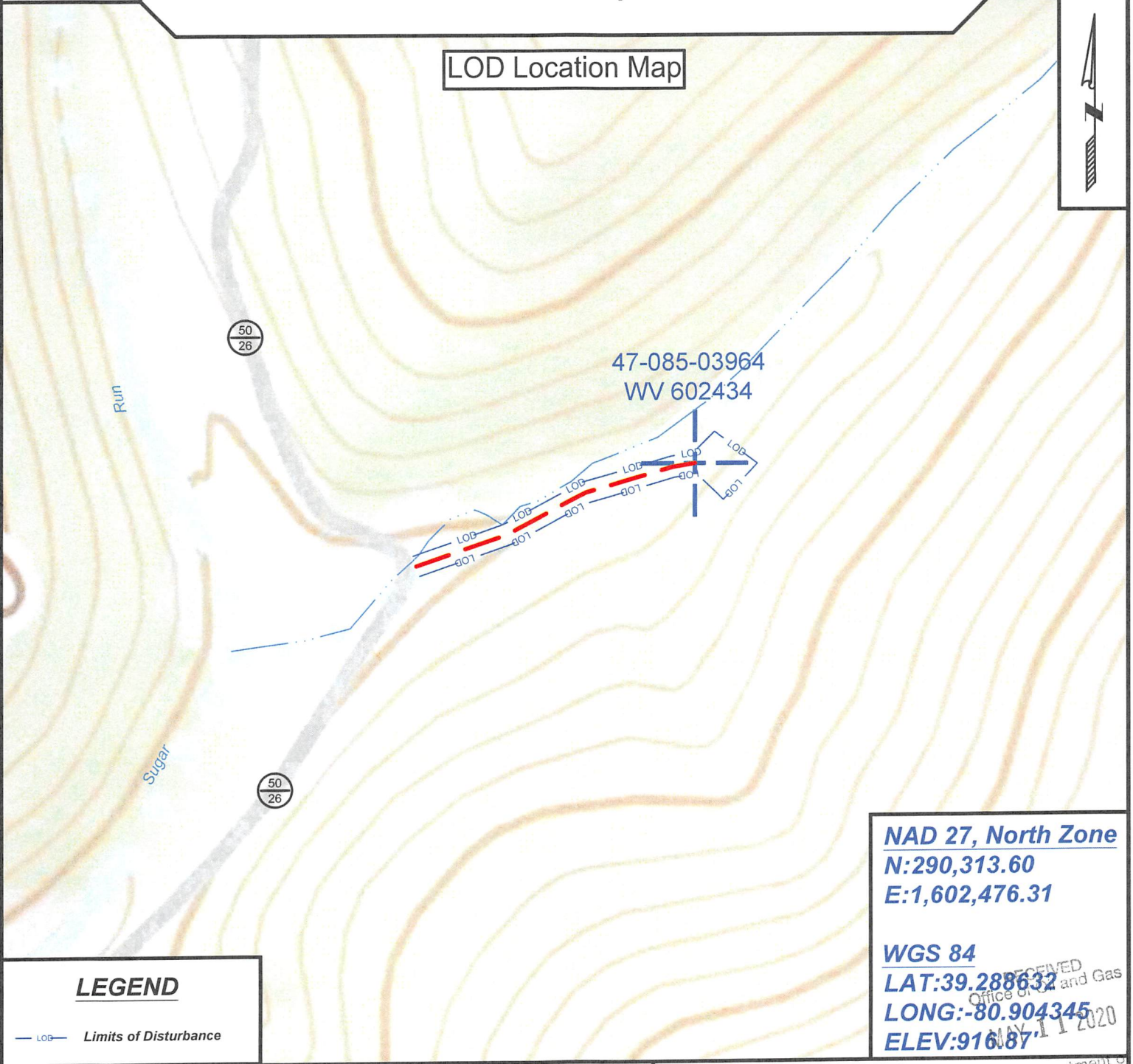
County: Ritchie Date: February 17, 2020

District: Clay Project No: 68-38-00-08

47-085-03964 WV 602434 (J. A. Thomas #2434)

Topo

LOD Location Map



NAD 27, North Zone
N:290,313.60
E:1,602,476.31

WGS 84
LAT:39.288632
LONG:-80.904345
ELEV:916.87

RECEIVED
Office of Land and Gas
MAY 11 2020

WV Department of Environmental Protection

LEGEND

Limits of Disturbance



SURVEYING AND MAPPING SERVICES PERFORMED BY:
ALLEGHENY SURVEYS, INC.

1-800-482-8606
237 Birch River Road
Birch River, WV 26610
PH: (304) 649-8606
FAX: (304) 649-8608

PREPARED FOR:

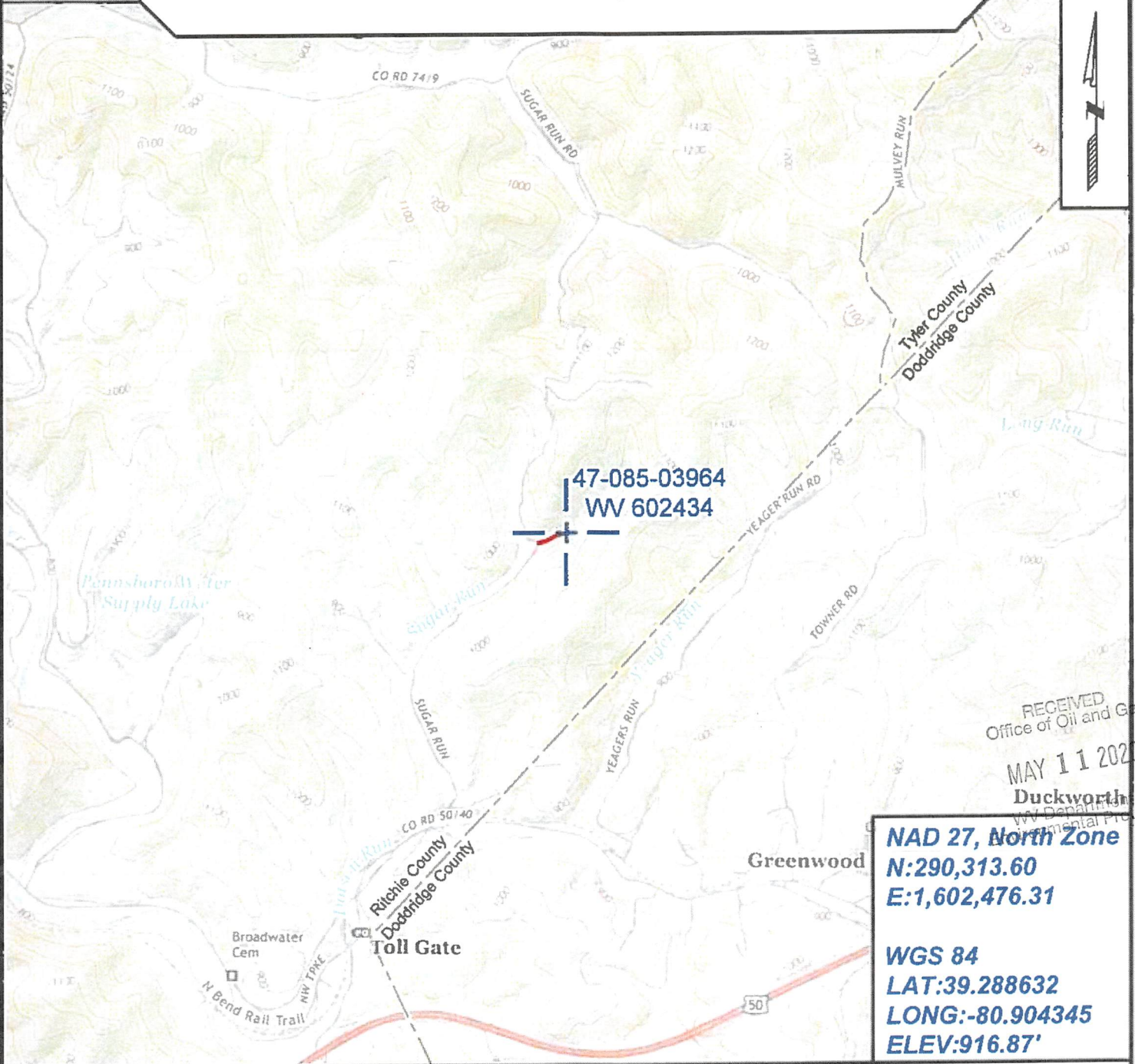
EQT Production Company

400 Woodcliff Drive
Canonsburg, PA 15317

Topo Quad: <u>Pennsboro 7.5'</u>	Scale: <u>1" = 2000'</u>
County: <u>Ritchie</u>	Date: <u>February 17, 2020</u>
District: <u>Clay</u>	Project No: <u>68-38-00-08</u>

47-085-03964 WV 602434 (J. A. Thomas #2434)

Topo



47-085-03964
WV 602434

RECEIVED
Office of Oil and Gas

MAY 11 2020

Duckworth
WV Department of Environmental Protection

NAD 27, North Zone
N:290,313.60
E:1,602,476.31

WGS 84
LAT:39.288632
LONG:-80.904345
ELEV:916.87'



SURVEYING AND MAPPING SERVICES PERFORMED BY:

ALLEGHENY SURVEYS, INC.

1-800-482-8606
237 Birch River Road
Birch River, WV 26610
PH: (304) 649-8606
FAX: (304) 649-8608

PREPARED FOR:

EQT Production Company

400 Woodcliff Drive
Canonsburg, PA 15317

MAG
5-5-20

WW-7
8-30-06



West Virginia Department of Environmental Protection
Office of Oil and Gas
WELL LOCATION FORM: GPS

API: 47-085-03964 WELL NO.: WV 602434 (J. A. Thomas #2434)

FARM NAME: J. A. Thomas

RESPONSIBLE PARTY NAME: EQT Production Company

COUNTY: Ritchie DISTRICT: Clay

QUADRANGLE: Pennsboro 7.5'

SURFACE OWNER: Vernon C. Thomas

ROYALTY OWNER: Vernon C. Thomas

UTM GPS NORTHING: 4348812

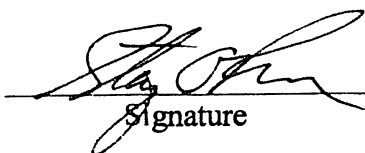
UTM GPS EASTING: 508249 GPS ELEVATION: 279m (917ft)

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:
Survey grade GPS _____ : Post Processed Differential _____
Real-Time Differential _____
Mapping Grade GPS X : Post Processed Differential X
Real-Time Differential _____

4. **Letter size copy of the topography map showing the well location.**

I the undersigned, hereby certify this data 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 Office of Oil and Gas.


Signature

PS # 2180
Title

2/17/2020
Date

RECEIVED
Office of Oil and Gas
MAY 11 2020
WV Department of
Environmental Protection