



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, February 5, 2020
WELL WORK PLUGGING PERMIT
Vertical Plugging

EQT PRODUCTION COMPANY
625 LIBERTY AVE., SUITE 1700

PITTSBURGH, PA 15222

Re: Permit approval for 6078
47-091-00164-00-00

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: 6078
Farm Name: GRAGG
U.S. WELL NUMBER: 47-091-00164-00-00
Vertical Plugging
Date Issued: 2/5/2020

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47-091-00164P

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 under the terms of that agreement.

47-091-00164P

WW-4B
Rev. 2/01

1) Date January 15, 2020
2) Operator's
Well No. W.G. Gragg #1
3) API Well No. 47-091-00164

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 1149' Watershed Hustead Fork
District Booths Creek County Taylor Quadrangle Rosemont

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 Kenneth Greynolds Name _____
Address 613 Broad Run Road Address _____
Jane Lew, WV 26378

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

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Office of Oil and Gas
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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 *Kenneth Greynolds* Date 1-23-20

PLUGGING PROGNOSIS

Gragg, W.G. #1 (606078)
 API# 47-091-00164
 District, Booths Creek
 Taylor County, WV

BY: Craig Duckworth
 DATE: 01/10/2020

CURRENT STATUS:

TD @ 2200'
Elevation @ ~1,149'

10" casing @ 242'
 8 1/4" casing @ 676'
 6 5/8" casing @ 960'
 3" tubing @ 2200' (packer @1535')

Fresh Water @ None Reported
 Saltwater @ None Reported
 Oil Show @ None Reported
 Gas shows @ 1573', 2048'
 Coal @ None Reported
 Shot Record; 40qts. @ 50 Foot Sand

1. Notify inspector, **Kenneth Greynolds, @ 304-206-6613**, 24 hrs. prior to commencing operations.
2. Check TD @ or below, 2100', spot 25 bbl. of 6% gelled water followed by a 200' C1A cement plug, 2100' to 1900'. WOC 8 hrs., TAG TOC, add additional C1A cement if necessary.
3. TOOH to 1530', set 100' C1A cement plug 1530' to 1450'. (3" packer @1535' & gas show @ 1573').
4. TOOH to 1000', set 100' C1A cement plug, 1000' to 900', (6 5/8" csg seat @ 960').
5. Free point 6 5/8" casing, cut casing @ free point. TOOH casing.
6. Set 100' C1A 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 to 700' set 100' C1A cement plug, 700' to 600'. (8 1/4" csg seat @ 676').
8. Free point 8 1/4" casing, cut casing @ free point. TOOH casing.
9. Set 100' C1A cement plug 50' in/out of casing cut. Perforate all saltwater, freshwater, coal, oil and gas shows below cut. Do not omit any plugs.
10. TIH to 250', set 250' C1A cement plug 250' to 0' (10" csg seat @ 242').
10. Free point 10" casing, cut casing @ free point. TOOH casing.
12. * Note, if unable to cut and pull 10" casing, perforate 10" casing with 3 holes each @ 100', 75', & 50'. Set 100' C1A cement plug 100' to surface.
13. Erect monument with API#, date plugged, company name, and company 6-digit ID#.
14. Reclaim location and road to WV-DEP specifications.

CUT & POOH W/ 3" TUBING ABOVE 1535'. SET 100' C1A PLUG ACROSS CASING CUT.

Q/M/M
 FREEPOINT 10"
 FIRST.

11
 10

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606078

Active X

Pgh. & West Va Gas Company - Well No. 6078

RECORD OF W. B. GROGG WELL NO.1

<u>Formation</u>	<u>Top.</u>	<u>Bottom.</u>	<u>Gas Found Depth</u>	<u>Remarks.</u>
Conductor	15			Well completed May 28th, 1914.
Sand	5	500		
Sand	760	810		
Big Lime	935	1025		
Big Injun	1025	1115		
Fifty Foot	1500	1725	1573	
Fifth Sand	1820	1860		
Bayard	2046	2091	2048	

Total Depth ----- 2200

10" Casing 242 feet
 8-1/4" " 676 "
 8-5/8" " 960 "
 3" Tubing 2200 "
 Packet set at 1535

Shot Record:
 40 Quarts - 50 Foot Sand.

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47-091-00164P

N: 639-14263

COMPANY

Record of Well No. 6078 Located on W. B. Gregg Farm 19
South Creek District Taylor County West Va State
 Division OP District No. _____ Drilled under well Order _____
 Well built by _____ Began _____ 19 _____ Completed _____ 19 _____
 Well drilled by _____ Began _____ 19 _____ Completed May 28 1914
 Depth of Well 2200 feet Size of Hole _____ Producing Gas

Purchased from Comet Oil & Gas Co. June 1 - 1935

GASSED WITH			REMARKS
AMOUNT	SIZE	KIND	
242'	10"	Casing	
676'	8 1/2"	"	
960'	6 3/8"	"	
2200'	3"	tubing	Cacker set at 1535 ft.

GENERAL VEINS

FORMATIONS

FORMATION	COLOR	OPEN OR CLOSE HARD OR SOFT	TOP	BOTTOM	REMARKS GAS-OIL-WATER (THICKNESS OF PAY)
<u>wood</u>			<u>760</u>	<u>818</u>	
<u>g. limestone</u>			<u>935</u>	<u>1025</u>	
<u>limestone</u>			<u>1025</u>	<u>1115</u>	
<u>red shale</u>			<u>1520</u>	<u>1785</u>	<u>Gas 1073</u>
<u>shale</u>			<u>1820</u>	<u>1960</u>	
<u>red shale</u>			<u>2046</u>	<u>2091</u>	<u>" 2048</u>
<u>red shale</u>			<u>2200</u>		

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WW-4A
Revised 6-07

1) Date: January 15, 2020
2) Operator's Well Number
W. G. Gragg #1
3) API Well No.: 47 - 091 - 00164

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>See Attached</u>	Name _____
Address _____	Address _____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>See Attached</u>
(c) Name _____	Address _____
Address _____	Name _____
Address _____	Address _____
6) Inspector <u>Kenneth Greynolds</u>	(c) Coal Lessee with Declaration
Address <u>613 Broad Run Road</u>	Name _____
<u>Jane Lew, WV 26378</u>	Address _____
Telephone <u>304-206-6613</u>	Address _____

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 Pishioneri, 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 - Permitting
 Address 400 Woodcliff Drive
Canonsburg PA 15317
 Telephone 724-746-9073

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Office of Oil and Gas

Subscribed and sworn before me this 15th day of January 2020
Olivia Pishioneri Notary Public

My Commission Expires October 25, 2023

JAN 24 2020
WV Department of Environmental Protection

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.

47-091-00164

606078 W.G. Gragg #1

Owner(s) (Surface and Access)

John Alcorn
779 Gregg Road
Bridgeport, WV 26330

Coal Owner(s)

John Alcorn
779 Gregg Road
Bridgeport, WV 26330

Arch Coal Inc.
1 City Place Drive
Suite 300
St. Louis, MO 63141

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47-091-00164P

WW-9
(5/16)

API Number 47 - 091 - 00164
Operator's Well No. W.G. Gragg #1

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) Hustead Fork Quadrangle Rosemont

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

If so, please describe anticipated pit waste: Formation Fluids

Will a synthetic liner be used in the pit? Yes No If so, what ml.? 20 ml

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) John Zavatchan
Company Official Title Project Specialist - Permitting

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WV Department of
Environmental Protection

Subscribed and sworn before me this 15th day of January, 2020

[Signature] Notary Public

My commission expires October 25, 2023

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

Form WW-9

Operator's Well No. _____

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: [Signature]

Comments: RECEIVED RESEED + MULCH 1/23/20

Title: OIL & GAS INSPECTOR

Date: 1-23-20

Field Reviewed? Yes No

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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

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Topo Quad: Rosemont 7.5' Scale: 1" = 500'

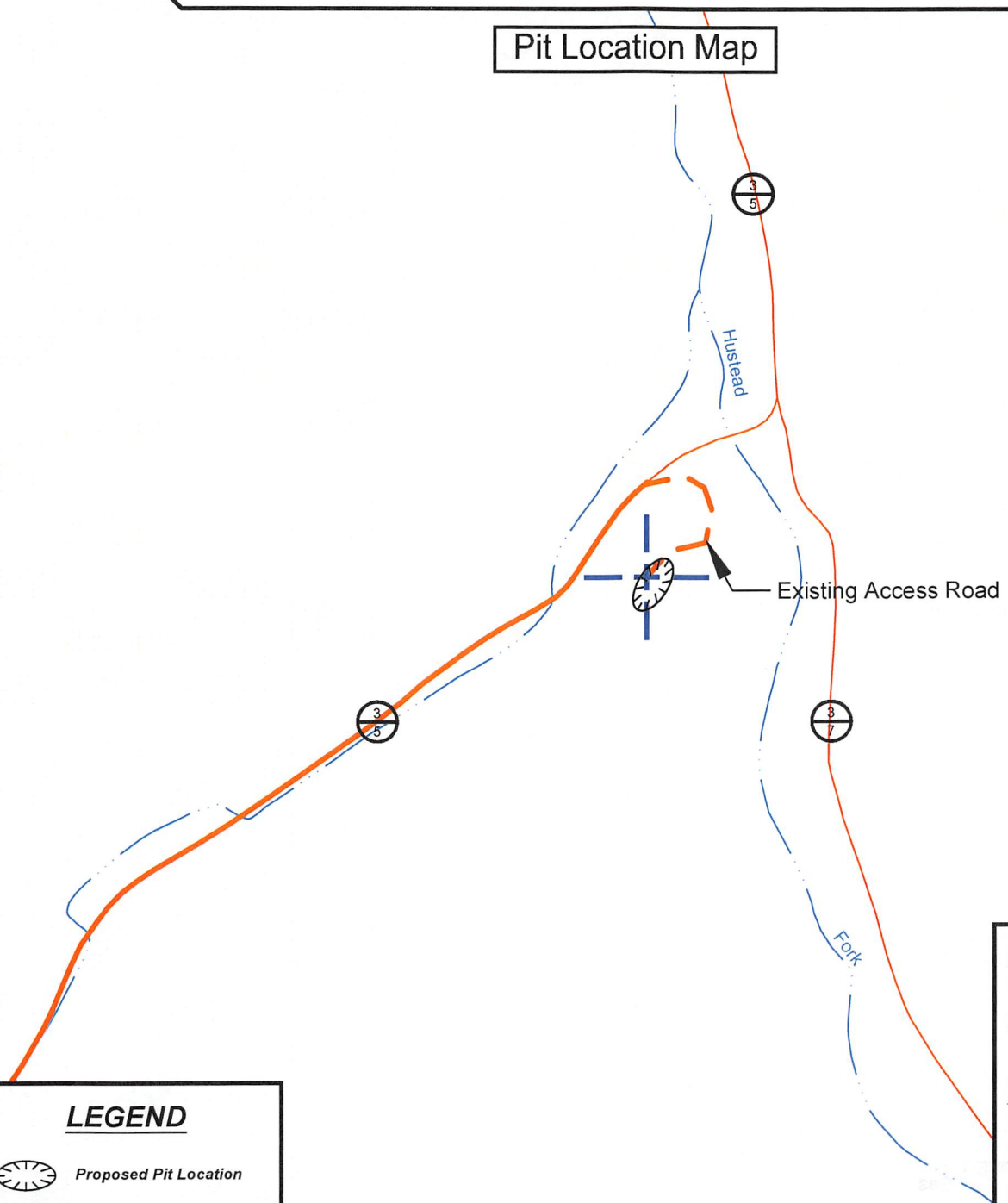
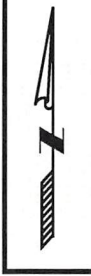
County: Taylor Date: November 7, 2019

District: Booths Creek Project No: 206-13-00-16

Highway

WV 606078 47-091-00164 (W. G. Gragg #1)

Pit Location Map



NAD 27, North Zone
N:312,622.60
E:1,813,279.16

WGS 84
LAT:39.356539
LONG:-80.160140
ELEV:1148.56

LEGEND

Proposed Pit Location



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: Rosemont 7.5' Scale: 1" = 200'

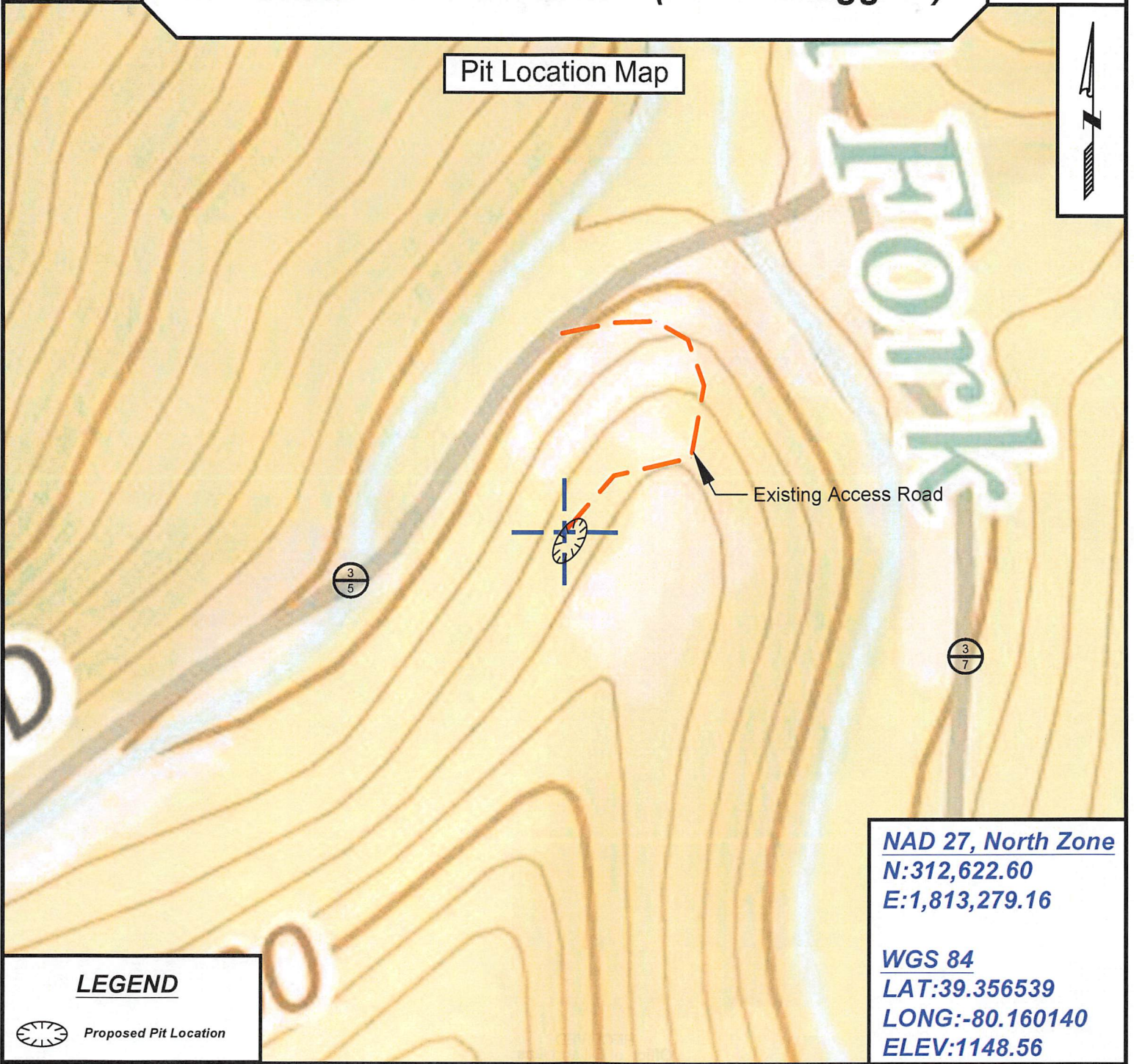
County: Taylor Date: November 7, 2019

District: Booths Creek Project No: 206-13-00-16

WV 606078 47-091-00164 (W. G. Gragg #1)

Topo


Pit Location Map



NAD 27, North Zone
N:312,622.60
E:1,813,279.16

WGS 84
LAT:39.356539
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LEGEND

 Proposed Pit Location



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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: Rosemont 7.5'

Scale: 1" = 200'

County: Taylor

Date: November 7, 2019

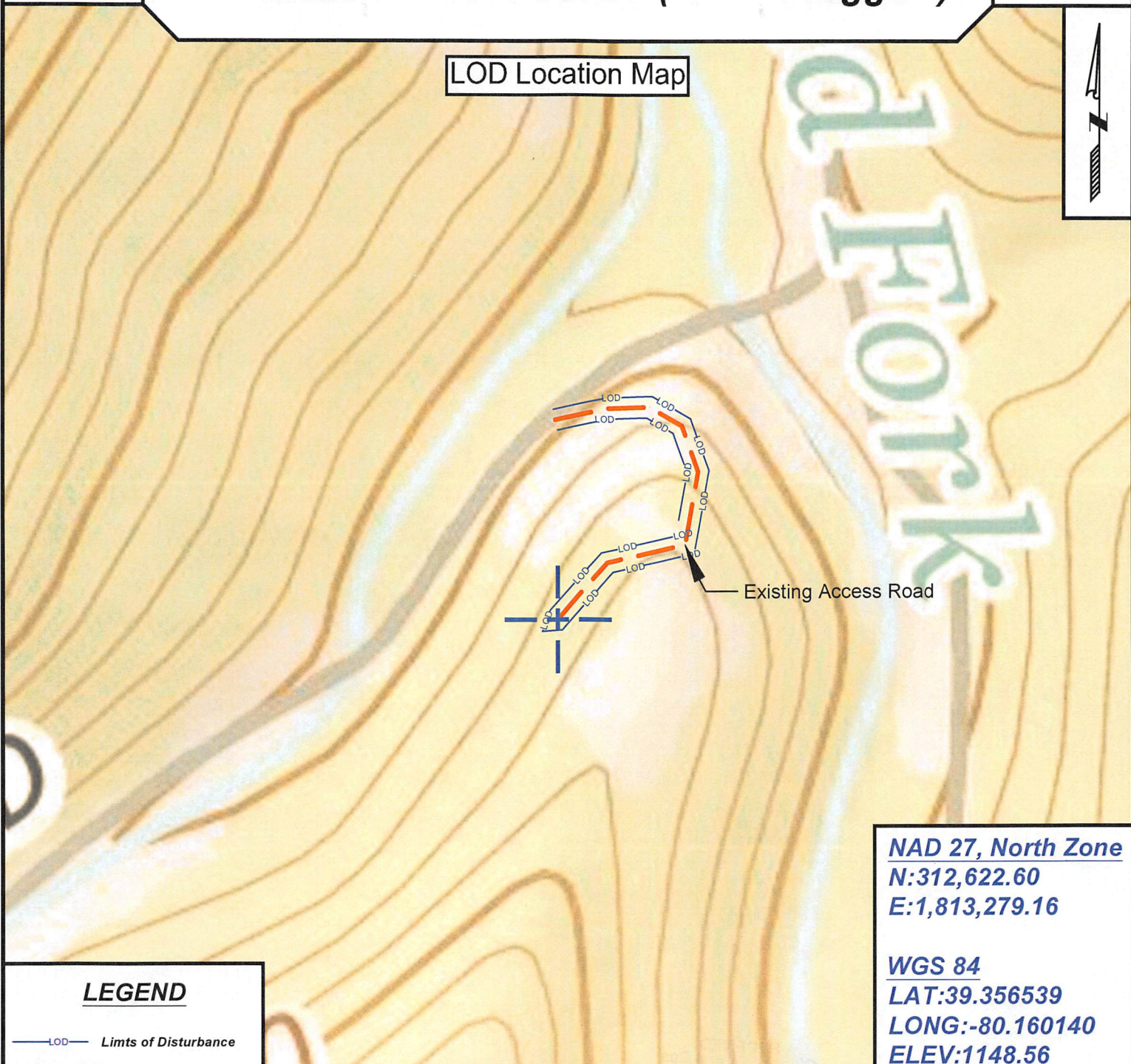
District: Booths Creek

Project No: 206-13-00-16

WV 606078 47-091-00164 (W. G. Gragg #1)

Topo

LOD Location Map



NAD 27, North Zone
N:312,622.60
E:1,813,279.16

WGS 84
LAT:39.356539
LONG:-80.160140
ELEV:1148.56

LEGEND

— LOD — 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

47-091-00164P

Topo Quad: Rosemont 7.5' Scale: 1" = 2000'

County: Taylor Date: November 7, 2019

District: Booths Creek Project No: 206-13-00-16

WV 606078 47-091-00164 (W. G. Gragg #1)

Topo



NAD 27, North Zone
N:312,622.60
E:1,813,279.16

WGS 84
LAT:39.356539
LONG:-80.160140
ELEV:1148.56



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: 47-091-00164 WELL NO.: WV 606078 (W. G. Gragg #1)

FARM NAME: W. B. Gragg

RESPONSIBLE PARTY NAME: EQT Production Company

COUNTY: Taylor DISTRICT: Booths Creek

QUADRANGLE: Rosemont 7.5'

SURFACE OWNER: John Alcorn

ROYALTY OWNER: EQT Production Company, et al.

UTM GPS NORTHING: 4356680

UTM GPS EASTING: 572359 GPS ELEVATION: 350m (1149ft)

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:

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

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

- 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]
Signature

PS# 2100
Title

1/13/2020
Date

WV Department of
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