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west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Friday, November 30, 2018  
WELL WORK PERMIT  
Vertical / Plugging

EQT PRODUCTION COMPANY  
625 LIBERTY AVE., SUITE 1700

PITTSBURGH, PA 15222

Re: Permit approval for D.H. Cox W-18  
47-103-00650-00-00

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.

Please be advised that form WR-35, Well Operators Report of Well Work 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

A handwritten signature in blue ink, appearing to read 'James A. Martin', is written over the printed name and title.

Operator's Well Number: 18  
Farm Name: COX, D.  
U.S. WELL NUMBER: 47-103-00650-00-00  
Vertical Plugging  
Date Issued: 11/30/2018

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## 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

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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.

WW-4B  
Rev. 2/01

CK # 24974  
9-19-18  
\$200.00  
A Permit

- 1) Date September 17, 20 18  
2) Operator's  
Well No. 451591 DH Cox W-18  
3) API Well No. 47-103 - 00650

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 843 Watershed Upper Run  
District Grant County Wetzel Quadrangle Pine Grove
- 6) Well Operator EQT Production Company 7) Designated Agent Jason Ranson  
Address 2400 Ansys Drive- Suite 200 Address 120 Professional Place  
Canonsburg PA 15317 Bridgeport WV 26330
- 8) Oil and Gas Inspector to be notified 9) Plugging Contractor  
Name Derek Haught Name HydroCarbon Well Service  
Address PO Box 85 Address PO Box 995  
Smithville WV 26178 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.**

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

Work order approved by inspector [Signature] Date 9-27-18

## PLUGGING PROGNOSIS

451951  
 D.H.Cox W-18  
 API# 47-103-00650  
 District, Grant  
 Wetzel County, WV

BY: R Green  
 DATE: 08/20/18

**CCURRENT STATUS:**

**TD @ 2640'**  
**Elevation @ 843'**

10" casing @ 80'  
 8 1/4" casing @ 1056'  
 6 5/8" casing @ 1558'  
 5 3/16" casing @ 2100'

**Fresh Water** None Reported  
**Saltwater@** None Reported  
**Gas Show @** None Reported  
**Oil shows @** None reported  
**Coal @** 535'

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WV DEPARTMENT OF  
 ENVIRONMENT & NATURAL RESOURCES

1. Notify inspector, Derek Haught @ 304-206-7613, 24 hours prior to commencing operations.
2. TIH and check TD @ or below 2600'.
3. TIH and spot 40 bbl. of 6% gelled water, followed by a 600' C1A cement plug. 2600' to 2000' (5 3/16" casing seat). WOC 8 hrs. Tag TOC, add additional C1A cement if necessary.
4. Free point 5 3/16" casing, cut casing @ free point. TOOH 5 3/16" casing.
5. 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.
6. TOOH to 1600' set a 200' C1A cement plug 1600' to 1400' (6 5/8" casing seat).
7. Free point 6 5/8" casing, cut casing @ free point. TOOH 6 5/8" casing.
8. 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 1100', set a 350' C1A cement plug, 1100' to 750' (Elevation, and 8 1/4" casing seat).
10. Free point 8 1/4" casing, cut casing @ free point. TOOH 8 1/4" casing.
11. 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.
12. TIH wireline, perforate 10" casing with 6 holes @ 70'.
13. TIH to 350' set a 350' C1A cement plug 350' to surface.
14. Erect monument with API#, date plugged, company name.
15. Reclaim location and road to WV-DEP specifications.

Well No. 2  
 Grant District Wolfe Farm, \_\_\_\_\_ Acres.  
 \_\_\_\_\_ County \_\_\_\_\_ State.  
 Rig Commenced Sept 23 1897 } Emery Contractor.  
 Rig Completed " 28 1897 }  
 Drilling Commenced Oct 10 1897 } Geo J. Gale Contractor.  
 Drilling Completed Dec 18 1897 }



FORMATION.	TOP.	REMARKS.	BOTTOM.
Cond.	16		
<del>W. Range</del>	<del>5</del>		
8 1/4 "	1056		
6 5/8 "	1558		
5 1/16 "	2100		
Ogk Coal	535		540
Dickard Sand	1050		1100
Salt "	1350		1530
Little Lime	1650		1690
Concil Cave	1690		1700
Big Sand	1700		1750
" Iron	1750		1990
Red Rock	2400		2500
Tordyn	2590		
1st L.	2630		
2d "	2630		
Total Depth			2640

Note: A good record must show the formation from top to bottom of well.

103-0650  
 API #

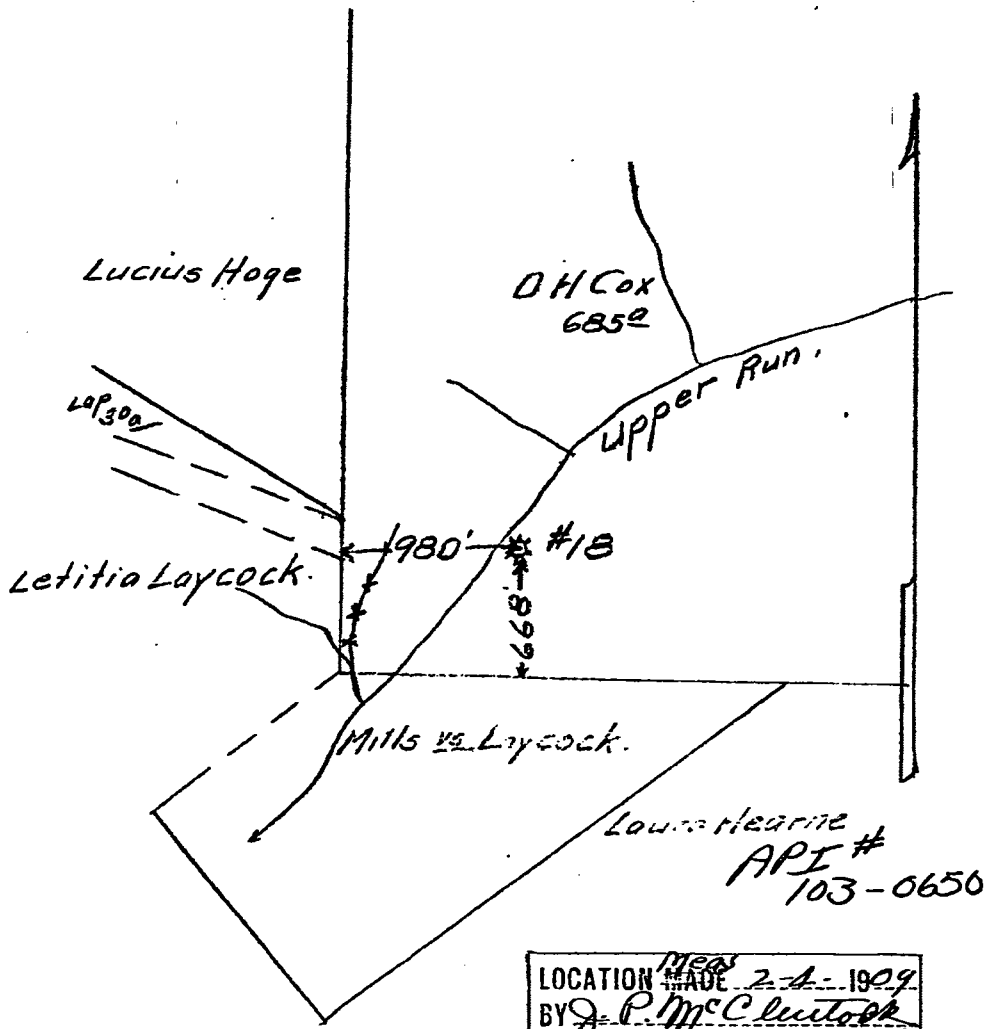
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 WV Department of  
 Environmental Protection

Hope Natural Gas Co.

LOCATION FOR WELL No. 18

Pine Grove DISTRICT.

On DH Cox Farm, on waters of Upper Run  
Grant District, Wetzel County, West Virginia.  
 Lease No. 528 Acres Range: N. 8 S. E. W. 1  
 Scale. 1"=800' Made Feb-4-1909



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 Environmental Protection

LOCATION MADE Meas 2-4-1909  
 BY J. P. McClintock  
 As per plat. Except as noted  
 On Field Map ..... 19  
 Returned to Pittsburg ..... 19

RESERVE:.....  
 .....  
 .....  
 SPECIAL INSTRUCTIONS:.....  
 .....  
 .....

WW-4A  
Revised 6-07

1) Date: September 17 2018  
 2) Operator's Well Number  
451591 D H Cox W-18  
 3) API Well No.: 47 - 103 - 00650

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

<p>4) Surface Owner(s) to be served:</p> <p>(a) Name <u>See Attached</u>                  Address _____                  _____</p> <p>(b) Name _____                  Address _____                  _____</p> <p>(c) Name _____                  Address _____                  _____</p>	<p>5) (a) Coal Operator</p> <p>Name _____                  Address _____                  _____</p> <p>(b) Coal Owner(s) with Declaration</p> <p>Name <u>See Attached</u>                  Address _____                  _____</p> <p>(c) Coal Lessee with Declaration</p> <p>Name _____                  Address _____                  _____</p>
<p>6) Inspector</p> <p>Name <u>Derek Haught</u>                  Address <u>PO Box 85</u>  <u>Smithville WV 26178</u>                  Telephone <u>(304) 206-7613</u></p>	<p>SEP 20 2018                  WV DEPARTMENT OF ENVIRONMENTAL PROTECTION</p>

**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  
 Its: Regional Land Supervisor  
 Address 2400 Ansys Drive, Suite 200  
Canonsburg PA 15317  
 Telephone (304) 848-0035



Subscribed and sworn before me this 17 day of September 2018  
Rebecca L. Wanstreet Notary Public  
 My Commission Expires 4-7-2020

**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](mailto:depprivacyofficer@wv.gov).

47-103-00650

451591 D.H. Cox W-18

**Owner(s) (Surface and Access)**

Lil Ann Bell  
432 A W. 36<sup>th</sup> Street EXT  
Shadyside OH 43947

**Coal Owner(s):**

CNX Land LLC  
CNX Center  
Consol Energy Drive  
1000 Consol Energy Drive  
Canonsburg PA 15317

CNX Gas Company LLC  
Consol Energy Drive  
1000 Consol Energy Drive  
Canonsburg PA 15317

Shiben Estates Inc.  
PO Box 246  
New Martinsville WV 26155

**Potential Water Owner(s):**

Georgia Ann Smith  
PO Box 355  
Pine Grove WV 26419

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WV Division  
Environmental Protection



WW-9  
(5/16)

API Number 47 - 103 - 00650  
Operator's Well No. 451591 WH Cox W-18

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

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SEP 26 2018

WVA Department of  
Environmental Protection

Operator Name EQT Production Company OP Code 306686  
Watershed (HUC 10) Upper Run Quadrangle Pine Grove

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) Erin Spine  
Company Official Title Regional Land Supervisor

Subscribed and sworn before me this 17 day of September, 2018

[Signature]

Notary Public

My commission expires 4-7-2020



Form WW-9

Operator's Well No. 451591 DH Cox W-18

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	<u>40</u>	Red Fescue	<u>15</u>
Aslike Clover	<u>5</u>	Aslike Clover	<u>5</u>
Annual Rye	<u>15</u>		

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: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Title: Oil + Gas Inspector Date: 9-27-18

Field Reviewed?  Yes  No

<b>EQT Production Water plan</b> <b>Offsite disposals</b>
--

**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: Pine Grove 7.5'

Scale: 1" = 200'

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County: Wetzel

Date: July 25, 2018

SEP 26 2018

District: Grant

Project No: 40-34-00-09

WV Department of  
Environmental Protection

# 47-103-00650 WV 451591 (D. H. Cox W-18)

Topo

## Pit Location Map


47-103-00650  
WV 451591

Proposed Well  
Access Road

**NAD 27, North Zone**  
**N:384284.01**  
**E:1680710.76**

**WGS 84**  
**LAT:39.549642**  
**LONG:-80.632134**  
**ELEV:843.27**

### 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**

2400 Ansys Drive,  
Canonsburg, PA 15317

Topo Quad: Pine Grove 7.5'

Scale: 1" = 500'

County: Wetzel

Date: July 25, 2018

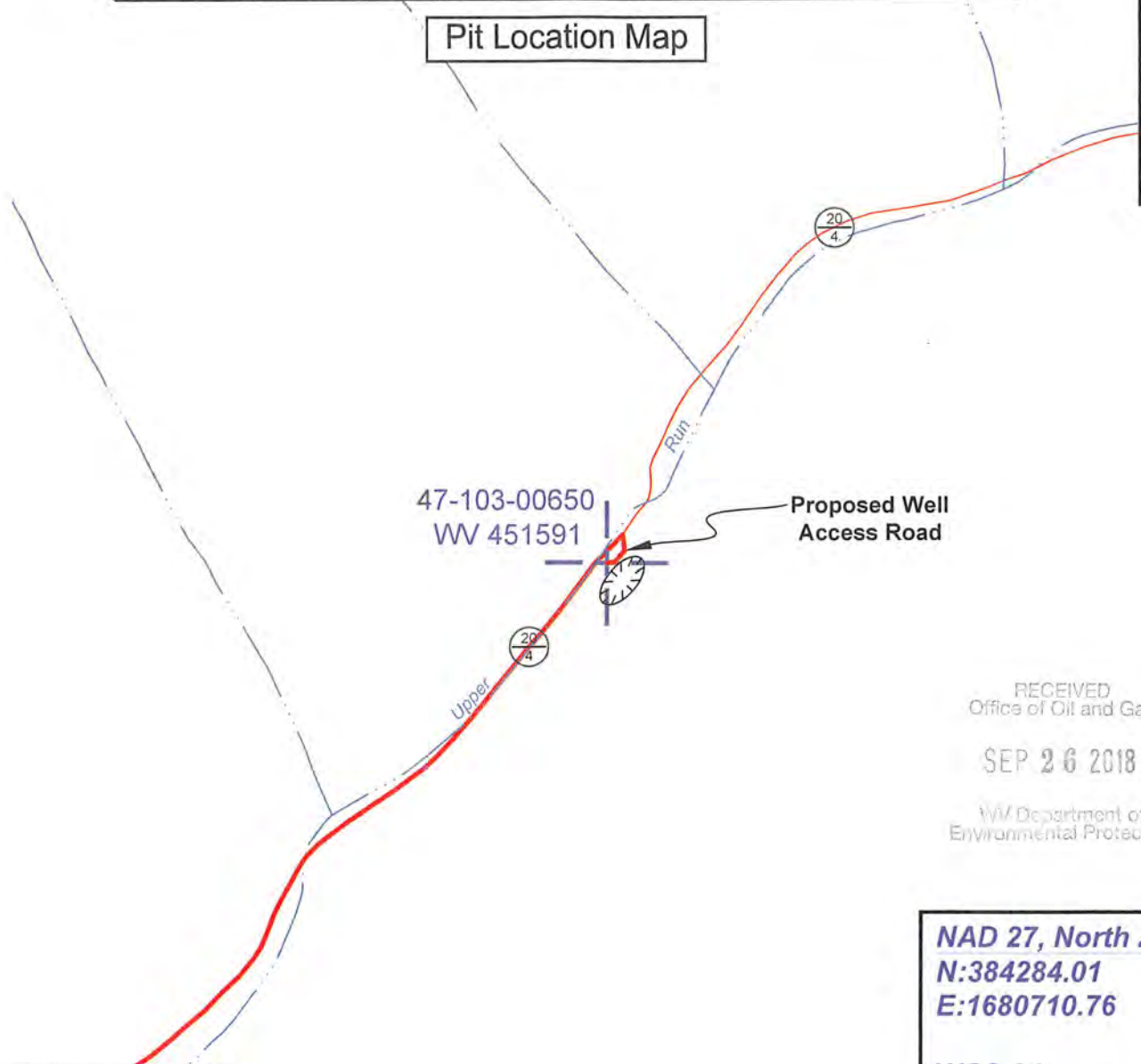
District: Grant

Project No: 40-34-00-09

Highway

**47-103-00650 WV 451591 (D. H. Cox W-18)**

Pit Location Map



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WV Department of  
Environmental Protection

**NAD 27, North Zone**  
**N:384284.01**  
**E:1680710.76**

**WGS 84**  
**LAT:39.549642**  
**LONG:-80.632134**  
**ELEV:843.27**

**LEGEND**

 Proposed Pit Location



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**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**

2400 Ansys Drive,  
Canonsburg, PA 15317

Topo Quad: Pine Grove 7.5'

Scale: 1" = 2000'

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Office of Oil and Gas

County: Wetzel

Date: July 25, 2018

SEP 26 2018

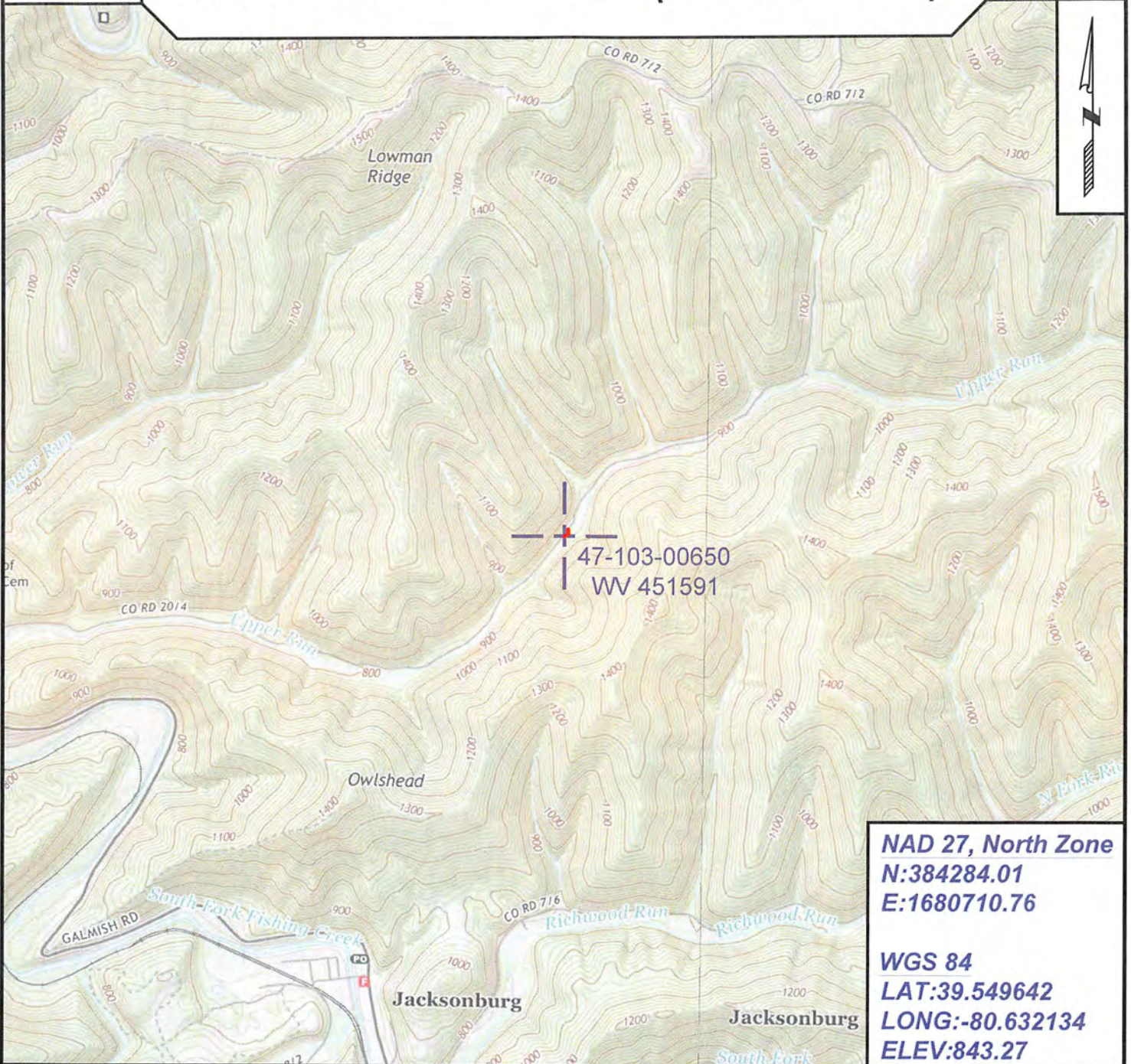
District: Grant

Project No: 40-34-00-09

WV Department of  
Environmental Protection

# 47-103-00650 WV 451591 (D. H. Cox W-18)

Topo



**NAD 27, North Zone**  
**N:384284.01**  
**E:1680710.76**

**WGS 84**  
**LAT:39.549642**  
**LONG:-80.632134**  
**ELEV:843.27**



SURVEYING AND MAPPING SERVICES PERFORMED BY:  
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 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**  
 2400 Ansys 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: 47-103-00650 WELL NO.: WV 451591 (D. H. Cox W-18)

FARM NAME: D. H. Cox

RESPONSIBLE PARTY NAME: EQT Production Company

COUNTY: Wetzel DISTRICT: Grant

QUADRANGLE: Pine Grove 7.5'

SURFACE OWNER: Lil Ann Bell

ROYALTY OWNER: Shiben Estates Inc.

UTM GPS NORTHING: 4377838

UTM GPS EASTING: 531606 GPS ELEVATION: 257 m (843 ft)

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SEP 20 2018

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Environmental Protection

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:

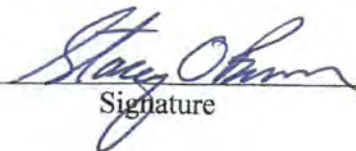
1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

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

7/27/18  
Date