



 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

Thursday, April 25, 2019
 WELL WORK PLUGGING PERMIT
 Vertical Plugging

EQT PRODUCTION COMPANY
 625 LIBERTY AVE., SUITE 1700

PITTSBURGH, PA 15222

Re: Permit approval for A. HART 20
 47-103-02304-00-00

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: A. HART 20
 Farm Name: WEST VIRGINIA, STATE OF
 U.S. WELL NUMBER: 47-103-02304-00-00
 Vertical Plugging
 Date Issued: 04/25/2019

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.

47-103-02304P

WW-4B
Rev. 2/01

1) Date October 8, 2018
2) Operator's 04/26/2019
Well No. 518477 A Hart #20
3) API Well No. 47-103 - 02304

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 871 Watershed Buffalo Run
District Grant County Wetzel Quadrangle Center Point

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 11-6-18

04/26/2019

PLUGGING PROGNOSIS

Hart #20 (518477)
 API# 47-103-02304
 District, Grant
 Wetzel County, WV

BY: Craig Duckworth
 DATE: 10/08/18

CCURRENT STATUS:

TD @ 7195'
Elevation @ 876'

20" csg @ 60' (CTS)
 13 3/8" csg @ 295' (CTS with 270 sks)
 8 5/8" csg @ 2331' (CTS)
 5 1/2" csg @ 7158' (Cemented with 155 sks)

Perforations @ 6910' to 6958', 7084' to 7125'

Fresh Water @ None Reported
 Gas Show @ None Reported
 Oil Show @ None reported
 Coal @ None Reported

Derek Haught 304-206-7613

1. Notify inspector, ~~Craig Blevins 304-382-5933~~, 24 hours prior to commencing operations.
2. Check annuls of all casing strings for any pressure, gas leaking, or bubbling water in cellar, etc. before starting plugging operations, if any gas is detected on any annuls. notify EQT supervisor before proceeding.
3. TIH and check TD @ or below 7100'.
4. TIH and spot 100 bbl. of 6% gelled water. followed by a 600' C1A cement plug. 7100' to 6500'. WOC 8 hrs. Tag TOC. add additional C1A cement if necessary.
5. TIH with gauge ring to 6400', set a 5 1/2" CIBP @ 6400'.
6. TIH to CIBP set a 500' C1A cement plug from 6400' to 5900'.
7. Free point 5 1/2" csg. cut csg @ free point using a jet cutter, TOOH 5 1/2" csg. *Perf. @ 5100' - 5800' cmt.*
8. Set a 200' C1A cement plug 100' in/out of csg cut. Perforate all freshwater, saltwater, coal, oil and gas shows below cut. Do not omit any plugs. *6% gel between all plugs*
9. TOOH to 3200' set a 300' C1A cement plug 3200' to 2900'. (8 5/8" csg seat.). *3950' - 3750' cmt.*
10. TIH w/tbg gel hole with 6% gel from 2900' to 1750'
11. TOOH to 1750' set a 200' C1A cement plug 1750' to 1550' (Saltwater @ 1670' est).
12. TIH w/tbg gel hole with 6% gel from 1550' to 1000'
13. TOOH to 1000' set a 200' C1A cement plug 1000' to 800'. (Elevation @ 876').
14. TIH w/tbg gel hole with 6% gel from 1000' to 400'
15. TOOH to 400' set a 400' C1A cement plug 400' to surface.
16. Erect monument with API#, date plugged, company name.
17. Reclaim location and road to WV-DEP specifications.

C.D.
 4/25/19

2/2/19

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas

Well Operator's Report of Well Work

Farm name: HART Operator Well No.: 20

LOCATION: Elevation: 876' Quadrangle: CENTER POINT

District: GRANT County: WETZEL
Latitude: 4.720' Feet South of 39 Deg. 30 Min. Sec.
Longitude 1.770' Feet West of 80 Deg. 37 Min. 30 Sec.

Company: TRANS ENERGY INC.

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: P.O. BOX 393 ST. MARYS, WV 26170				
Agent: Loren Bagley	20"	60'	60'	TO SURFACE
Inspector: David Scranage				
Date Permit Issued: 11/01/2007				
Date Well Work Commenced: 11/29/07	13 3/8	295.8	295.8	To Surface
Date Well Work Completed: 03/26/08				270sks/6BBL return
Verbal Plugging:				
Date Permission granted on:	8 5/8	2331.51'	2331.51'	To Surface
Rotary Cable Rig				
Total Depth (feet): 7195'				
Fresh Water Depth (ft.):	5 1/2 P110 20lb.		7158'	155 SKS to 5600'
Salt Water Depth (ft.):				DV @ 2977' TOP CEMENT 2,284'
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): <u>N/A</u>				

OPEN FLOW DATA

Producing formation MARCELLUS Pay zone depth (ft) 6830-7125
Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d
Final open flow 4,000 MCF/d Final open flow Bbl/d
Time of open flow between initial and final tests Hours
Static rock Pressure 2900 psig (surface pressure) after Hours

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

Signed: _____
By: Loren I. Bagley V.P.
Date: _____

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103-02304

Well Name	Hart # 20		
Elev.	876'		
Fm Name	FM Top	FM Bot	Notes
Gordon	2,754	2798	
4 th Sand	2,843	2850	
5 th Sand	2,992	3,006	
Bayard	3,080	3,095	
Warren	3,432	3,585	
Balltown	3,887	3,890	
1 st Riley	4,444	4,516	
2 nd Riley	4,618	4,668	
Benson	5,092	5,099	
Elk	5,412	5,456	
Hamilton	6,176	6,365	
Top Marcellus	6,960	6,986	
Cherry Valley	6,986	7,080	
Low Marcellus	7,080	7,134	
Top Onondaga	7,134		
<u>Stage 1</u>			
Perfs	7,084 - 7,125		
	367,000# Sand	9,961 BBL H2O	
<u>Stage 2</u>			
Perfs	6,910 - 6,958		
	382,000 # Sand	8,794 BBL H2O	

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OCT 17 2018
WV Department of Environmental Protection

WW-4A
Revised 6-07

1) Date: October 8, 2018
2) Operator's Well Number
518477 A Hart #20
3) API Well No.: 47 - 103 - 02304

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 _____
6) Inspector <u>Derek Haught</u>	(c) Coal Lessee with Declaration
Address <u>PO Box 85</u>	Name _____
<u>Smithville WV 26178</u>	Address _____
Telephone <u>(304) 206-7613</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: Regional Land Supervisor
 Address 2400 Ansys Drive, Suite 200
Canonsburg PA 15317
 Telephone (304) 848-0035

Subscribed and sworn before me this 11 day of October 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.

47-103-02304

518477 A. Hart #20

Owner(s) (Surface and Access)

State of West Virginia)
Department of Natural Resources
Capitol Complex Bldg. #3 Room 643
Charleston WV 25305

Coal Owner(s)

Reserve Coal Properties Company)
CNX Center Attn: Don Puligo
1000 Consol Energy Dr.
Canonsburg PA 15317

CNX Gas Company LLC)
1000 Consol Energy Dr.
Canonsburg PA 15317

Potential Water Owner(s):

N/A

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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) Buffalo Run Quadrangle Center Point

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 _____)

DMH
11-6-18

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 *Erin Spine*

Company Official (Typed Name) Erin Spine

Company Official Title Regional Land Supervisor

Subscribed and sworn before me this 11 day of October, 20 18

Rebecca L. Wanstreet Notary Public

My commission expires 4-7-2020



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: _____

Title: Dill + Ges Inspector Date: 11-6-18

Field Reviewed? Yes 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

Topo Quad: Center Point 7.5' Scale: 1" = 500'

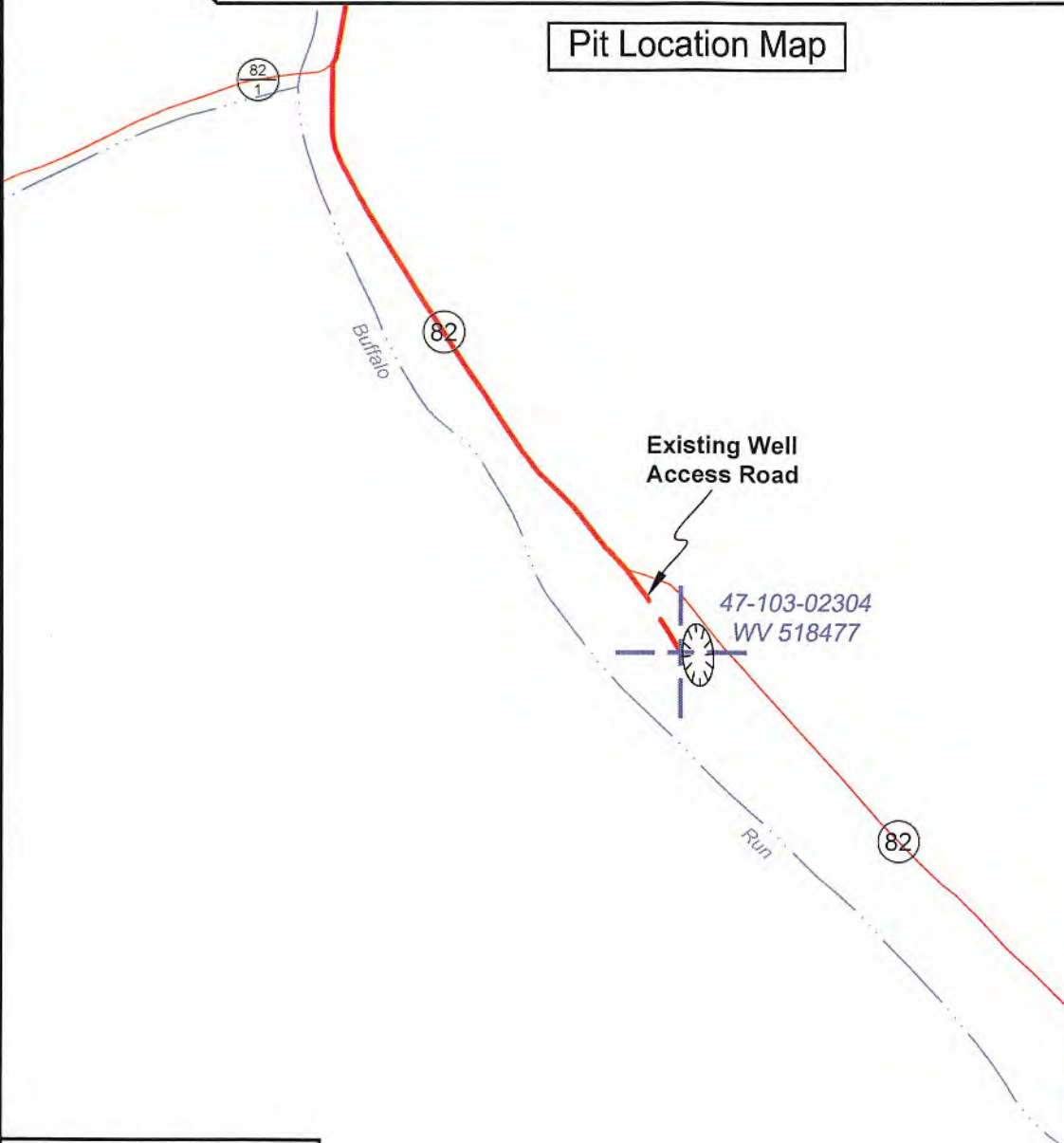
County: Wetzel Date: September 4, 2018

District: Grant Project No: 40-34-00-09

Highway

47-103-02304 WV 518477 (A. Hart #20)

Pit Location Map




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NAD 27, North Zone
N:361512.29
E:168061.03

WGS 84
LAT:39.487126
LONG:-80.631190
ELEV:870.93'

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

47-103-02304P

04/26/2019

Topo Quad: Center Point 7.5' Scale: 1" = 200'

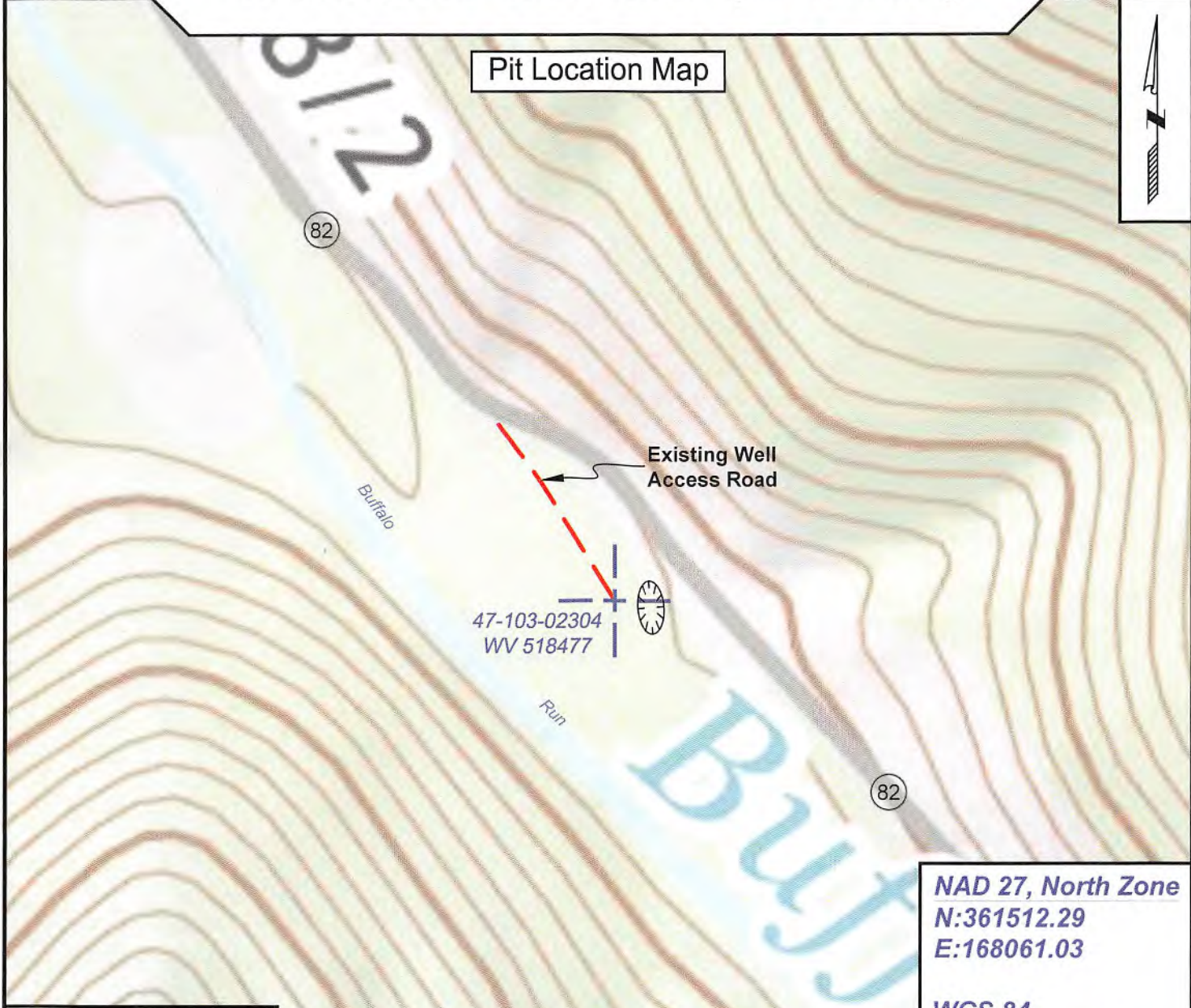
County: Wetzel Date: September 4, 2018

District: Grant Project No: 40-34-00-09

47-103-02304 WV 518477 (A. Hart #20)

Topo

Pit Location Map




NAD 27, North Zone
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E:168061.03

WGS 84
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LEGEND

 Proposed Pit Location



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PH: (304) 649-8606
FAX: (304) 649-8608

PREPARED FOR:
WV Department of Environmental Protection
EQT Production Company
2400 Ansys Drive
Canonsburg, PA 15317

EQT Production Water plan Offsite disposals
--

Waste Management - Meadowfill Landfill

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

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Topo Quad: Center Point 7.5'

Scale: 1" = 2000'

County: Wetzel

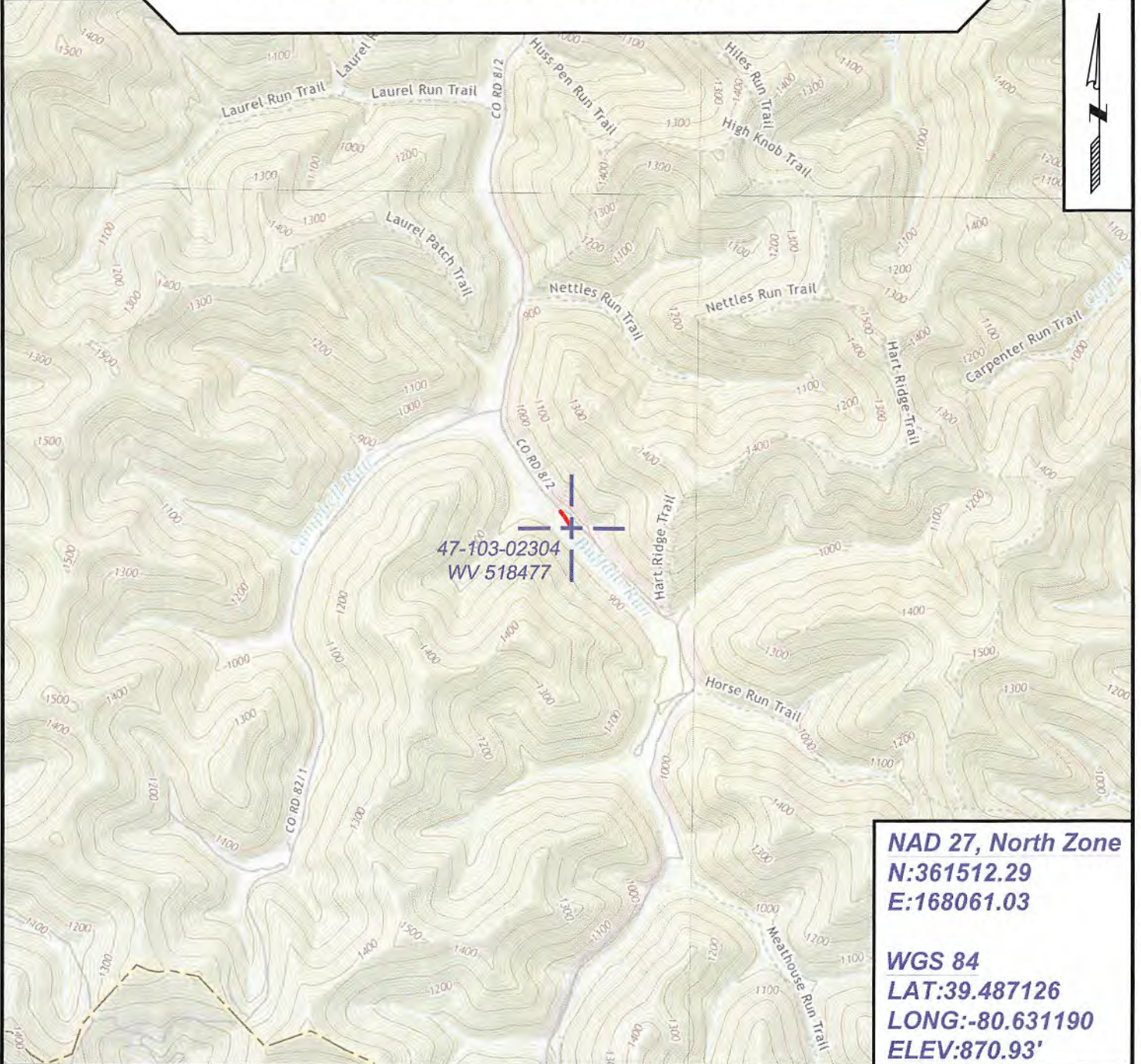
Date: September 4, 2018

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Project No: 40-34-00-09

47-103-02304 WV 518477 (A. Hart #20)

Topo



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PREPARED FOR:

EQT Production Company

2400 Ansys Drive
 Canonsburg, PA 15317

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WW-7
8-30-06



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

API: 47-103-02304 WELL NO.: WV 518477 (A. Hart #20)

FARM NAME: A. Hart

RESPONSIBLE PARTY NAME: EQT Production Company

COUNTY: Wetzel DISTRICT: Grant

QUADRANGLE: Center Point 7.5'

SURFACE OWNER: State of West Virginia Department of Natural Resources

ROYALTY OWNER: J. A. & M. Oil and Gas Company

UTM GPS NORTHING: 4370901

UTM GPS EASTING: 531716 GPS ELEVATION: 265 m (871 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]
Signature

PS # 2180
Title

9/4/18
Date

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