



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 9523
47-049-00405-00-00

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: 9523
Farm Name: REBECCA J. CRANDALL
U.S. WELL NUMBER: 47-049-00405-00-00
Vertical Plugging
Date Issued: 8/5/2020

Promoting a healthy environment.

H

47-049-00405P

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.

1) Date May 4, 2020
2) Operator's
Well No. 453481 E I Talkington W-9523
3) API Well No. 47-049 - 00405 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 1229' Watershed Dunkard Mill Run
District Lincoln County Marion Quadrangle Grant Town 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.

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

Work order approved by inspector *Samuel Reynolds* Date 5-6-20

PLUGGING PROGNOSIS

453481
 E.I. Talkington
 Marion Co. WV
 District, Lincoln
 API # 47-049-00405

BY: R. Green
 DATE: 1/6/20

CURRENT STATUS:

TD @ 2948'
Elevation @ 1229'

10" casing @ 540' (Grouted with 90 sks cement)
 8 1/4" casing @ 1488' (Pulled)
 6 5/8" casing @ 1754'
 5 3/16" casing @ 2735'
 2" tubing @ 2948' (Set on 2" X 5 3/16" packer @ 2788')

Fresh Water @ None Reported
 Coal @ 145'-150', 415'-420', 520'-529'
 Saltwater @ 1445'
 Oil Show @ None Reported
 Gas shows @ 1272', 1953', 2391', & 2903'

XEN (RF) NO 403 304-202-6613

1. Notify State Inspector, **Sam Ward 304-389-7583**, 48 hrs. prior to commencing operations.
2. TIH wireline, check TD and locate 5 3/16" packer.
3. Attempt to release 2" X 5 3/16" packer and TOO H tubing and packer. If unable to release packer and TOO H tubing, contact EQT supervisor and state inspector before proceeding to next step.
4. TIH wireline, cut 2" tubing @ 2788', TOO H 2" tubing.
- ★ 5. TIH to 2788', spot 35 bbl. of 6% gelled water followed by a 200' CIA cement plug 2788' - 2588'. (packer @ 2788' and 5 3/16" casing seat).
6. WOC hrs., Tag TOC, add additional CIA cement if necessary.
7. Free point 5 3/16" casing, cut casing @ free point. TOO H 5 3/16" casing.
8. TIH set a 100' CIA 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. TOO H to 1800', set a 100' CIA cement plug 1800' to 1700' (6 5/8" casing seat).
10. Free point 6 5/8" casing, cut casing @ free point. TOO H 6 5/8" casing.

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★ NEED TO COVER GAS SHOW @ 2391' w/ A MINIMUM 100' PLUG.

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.
12. TOOH to 1550', set 400' C1A cement plug 1550' to 1150' (8 1/4" casing seat 7 elevation).
13. TOOH to 600', set a 600' C1A cement plug 600' to surface.
14. Erect monument with API#, company name, & date plugged
15. Reclaim location and road to WV-DEP specifications.

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Form 645 Rev. 9523

HOPE NATURAL GAS COMPANY

MONONGAHELA WEST PENN PUBLIC SERVICE CO.

9523 N-7-E-21

GAS DEPT
WELL RECORD

WELL No. 9523
Well No. 95

Map No. _____ Well #1 Drilled on E. I. Talkington Farm of 35 Acres situate in
Lincoln Dist. of Marion County—State W. Va. Lease No. 184

RIG		WELL	
Commenced		Location Made	
Completed		Commenced Drilling September 28, 1917	
Contractor		Completed " January 24, 1918	
Work Order No.		Contractor	
		Drillers	

ROCK FORMATION	TOP	BOTTOM	REMARKS	PRESSURE AND VOLUME		
Conductor Fairview Coal	145	150		1 Minute	30	Lbs.
Mapletown Coal	415	420		2 "	47	"
Pittsburgh Coal	520	529		3 "	58	"
Little Dunkard	900	920		4 "	65	"
Gas Sand	1252	1300 Gas	- 1272	5 "	68	"
1st Salt Sand	1340	1370		10 "	77	"
2nd Salt Sand	1420	1550 Water	-1445	15 "		"
Maxton Sand				30 "	102	"
Little Lime	1726	1746		1 Hour		"
Pencil Cave	1746	1750		24 "	120	"
Big Lime	1750	1840		Rock		"
Big Injun	1840	1973 Gas	- 1953	Size of Tubing	2	Inch
Berea				Size of Casing		"
Gantz Sand	2377	2410 Gas	- 2391	Vol. by Water	42/10 in 2"	"
50 ft. Sand	2430	2460		" " Mercury		"
30 Ft. Sand	2500	2545		" " Pressure		"
Gordon Stray	2735	2745		Open Flow	310,000 Cu. Ft. per Day	"
Gordon Sand	2750	2780		CONNECTED TO MAIN LINE		"
4th Sand	2800	2810		Jan. 24, 1918		"
* 5th Sand	2899	2922 Gas	-2903-2910	Length of Line		Feet
Hayard Sand				Size of Line		Inch
E izabeth				DISCONNECTED FROM LINE		"
Speuchley				R		"
Bradford				Notified Lessor		"
				Abandoned		"
* Main Producing sand				Repacked	June 13, 1942	"
				With	Feet	Tubing

Total Depth 2948 (Steel Line) Feet at \$ _____ per Foot \$

CASING RECORD

	SIZE	CHANGED		PUT IN WELL		PULLED		LEFT IN WELL		TRANSFERRED		LEFT AT WELL	
		Feet	Inches	Feet	Inches	Feet	Inches	Feet	Inches	Feet	Inches	Feet	Inches
Casing	10"			540				540	(In 18" hole)				
"	8 1/2"			1488		1488		1488	REMOVED 1917-O.C.S.				
"	6-5/8"			1754				1754					
"	5-3/16"			2735				2735					
Tubing	2"			2948				2948	No change in tubing when cleaned out June 13, 1942.				

10" Casing Cemented in Well 10-28-18 by L. N. Snoderly Company Employee

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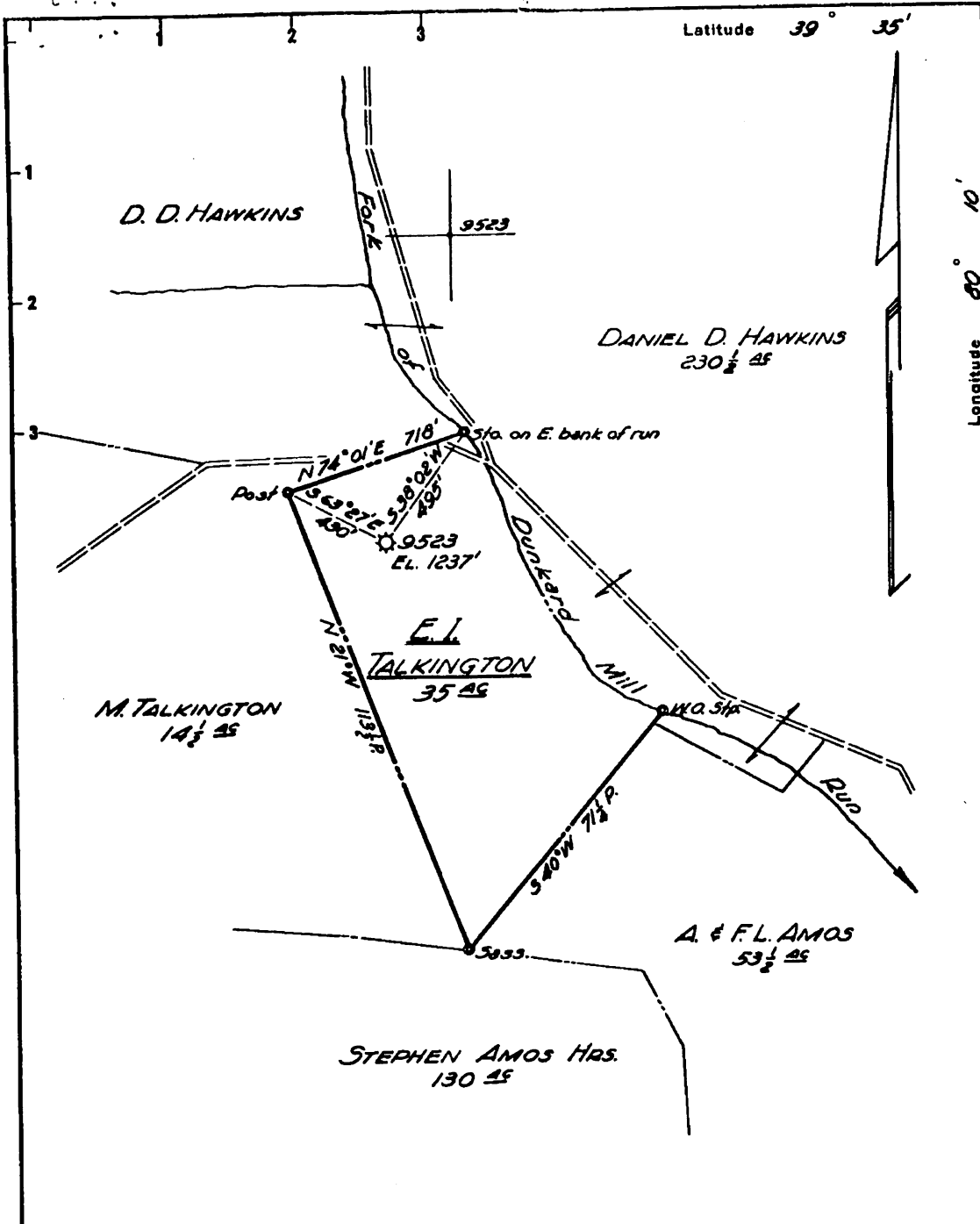
WELL 3523 PACKER				WELL SHOT			
KIND	SIZE	FEET SET AT	DATE	BY	QUARTS	DEPTH	DATE
Anchor	5-3/16" x 2"	2788	2-16-18	M. T. Co.	12	2904-10	2-12-18
				M. T. Co.	30	2904-10	June 1942
No packer on 6-5/8" or 5-3/16" casing (Time Bomb and Tamp Shot)							
No change in Packer location when cleaned out							
June 1942 (187 ft. of Anchor)							

HISTORY OF WELL

10/26/17--Thirty sacks cement and sixty sacks sand used in cementing 10" casing. Sand and Cement mixed and run through 2" pipe to bottom of 16" hole outside of 10" casing.

6/13/42 - Production from this well had fallen off to such an extent that it was deemed advisable to clean out. Preceding bailing reports showed mud and cavings in bottom of hole. Moved in rig and work was started early in May. Job completed June 13. Production was increased from 22,172 cu.ft. to 108,576 cu.ft. per day. (Well was shot with 30 quart time bomb shot in 5th Sand. This helped decidedly. Ran same 2" tubing back in well and set packer at same location 2788'.

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New Location
 Drill Deeper
 Abandonment

Map Sh. 27; N-7, E-21; F.B. 1129, P.34.

Company HOPE NATURAL GAS CO.
 Address CLARKSBURG, W. VA.
 Farm E. I. TALKINGTON
 Tract _____ Acres 35 Lease No. 61826
 Well (Farm) No. _____ Serial No. 9523
 Elevation (Spirit Level) 1237'
 Quadrangle BLACKSVILLE
 County MARION District LINCOLN
 Engineer Guy H. Bradley
 Engineer's Registration No. 2425
 File No. _____ Drawing No. _____
 Date _____ Scale 1" = 30 P.

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
 FILE NO. 779C-405

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.

- Denotes one inch spaces on border line of original tracing.

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WW-4A
Revised 6-07

1) Date: April 30, 2020
2) Operator's Well Number
453481 E | Talkington W-9523
3) API Well No.: 47 - 049 - 00405

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: (a) Name Rebecca J Crandall, Address 378 Bethel Rd, Fairview, WV 26570, (b) Name, Address, (c) Name, Address
5) (a) Coal Operator Name, Address, (b) Coal Owner(s) with Declaration Name Talkington Heirs, c/o Circuit Court of Marion Co, Address 1615 Columbia Dr, Fairmont, WV 26554, (c) Coal Lessee with Declaration Name, Address
6) Inspector Sam Ward, Address PO Box 2327, Buckhannon, WV 26201, Telephone 304-389-7583

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: Supervisor - Subsurface Permitting
Address 400 Woodcliff Drive, Canonsburg PA 15317
Telephone (724) 271-7380

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

Rebecca Shrum

Notary Public

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

My Commission Expires March 9, 2024

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.

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) Dunkard Mill Run Quadrangle Grant Town 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 MUST BE CONTAINED IN TANKS BEFORE DISPOSING OFF SITE. gwm

If so, please describe anticipated pit waste: Formation Fluids

Will a synthetic liner be used in the pit? Yes No If so, what 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 Supervisor - Subsurface Permitting

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

[Signature]
Notary Public

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

My commission expires March 9 2024

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: RECLAIM, RESEED + MULCH ASAP

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WV Department of Environmental Protection

Title: OIL & GAS INSPECTOR Date: 5-6-20

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

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47-049-00405 P

Topo Quad: Grant Town 7.5'

Scale: 1" = 2000'

County: Marion

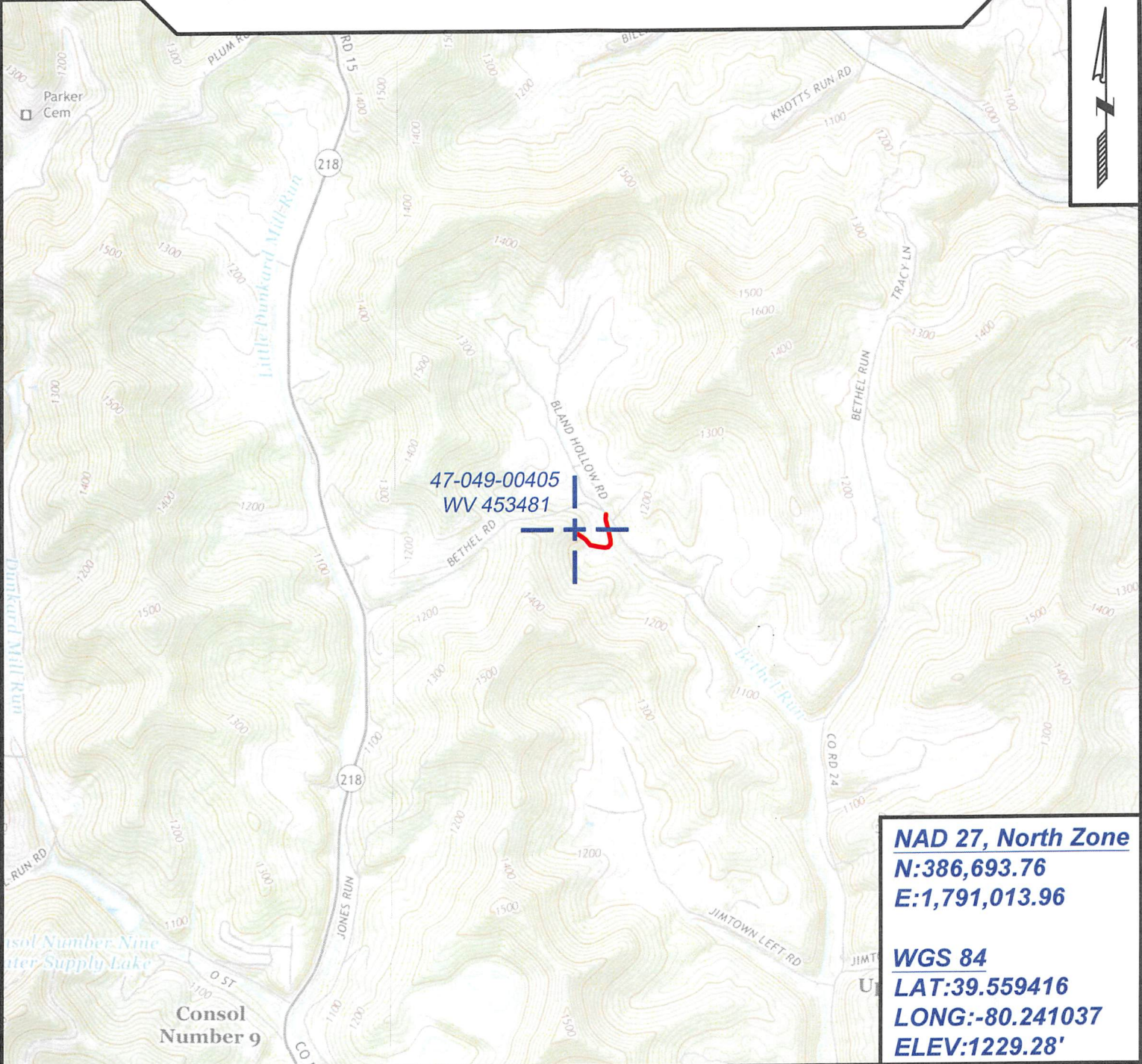
Date: February 17, 2020

District: Lincoln

Project No: 74-18-00-08

WV 453481 47-049-00405 (E. I. Talkington W-9523)

Topo



47-049-00405
WV 453481

NAD 27, North Zone
N:386,693.76
E:1,791,013.96

WGS 84
LAT:39.559416
LONG:-80.241037
ELEV:1229.28'

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



