



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

Harold D. Ward, Cabinet Secretary
www.dep.wv.gov

Tuesday, December 20, 2022
WELL WORK PLUGGING PERMIT
Vertical Plugging

COLUMBIA GAS TRANSMISSION, LLC
1700 MACCORKLE AVENUE SE
CHARLESTON, WV 25314

Re: Permit approval for 7427
47-083-00109-00-00

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: 7427
Farm Name: USA
U.S. WELL NUMBER: 47-083-00109-00-00
Vertical Plugging
Date Issued: 12/20/2022

Promoting a healthy environment.

12/23/2022

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.

chk#
34693
\$100⁰⁰

4708300109P

- 1) Date 05.23, 2022
- 2) Operator's Well No. Glady 7427
- 3) API Well No. 47-083-00109

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 X) Deep X / Shallow ___

5) Location: Elevation 3126' Watershed McCray Creek
District Dry Fork County Randolph Quadrangle Glady, WV

6) Well Operator Columbia Gas Transmission LLC 7) Designated Agent Maria Medvedeva
Address 1700 MacCorklle SE Address 1700 MacCorklle SE
Charleston, WV 25314 Charleston, WV 25314

8) Oil and Gas Inspector to be notified Name Gayne Knitowski
Address PO Box 108
Gormanian, WV 26720

9) Plugging Contractor Name Next Lvl Energy, LLC
Address 736 W Ingomar Rd, Units 268
Ingomar, PA 15127-6613

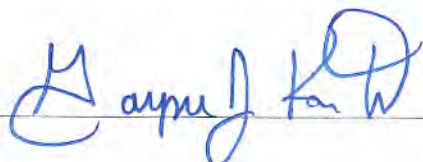
10) Work Order: The work order for the manner of plugging this well is as follows:

Refer to enclosed:

- 1) Well job plan.
- 2) Prior to P&A wellbore schematic.
- 3) Proposed P&A wellbore schematic.

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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  Date 9/30/2022

12/23/2022

4708300109F

WELL JOB PLAN		STS Well Engineering & Technology		PAGE 3	DATE JOB PREPARED: 3/18/2022
Objective: Plug and Abandon				LAST PROFILE UPDATE:	
TITLE: Plug and Abandon				WORK TYPE: MOD	
FIELD: Gladly	WELL: 7427				
STAT: WV	SHL (Lat/Long): 38.84568 -79.65541			API: 47-083-00109-0000	
TWP: Dry Fork	BHL (Lat/Long): 38.84568 -79.65541			CNTY: Randolph	

PROCEDURE

NOTE: All cement used will be Class A, slurry weight 15.6 ppg, slurry yield 1.18 cuft/sk. All spacers will be 6% Bentonite gel. Restricted Field Fab WH, wellhead connection 2" 11-1/2V, no annular access. *MAX USE CLASS L IF NEEDED.*

- 1 Obtain State well work permit. EM&CP, pipeline crossing evaluation, call before you dig, etc. Prepare site specific SPCC. *JNM*
- 2 Notify landowner.
- 3 Obtain General Work Permit and Wellsite Review & Turnover Form from Operations.
- 4 Notify Reservoir Engineering & Geosciences (REG) of intent to take well out of service.
- 5 Notify environmental inspector prior to beginning work. If required, notify State/Federal regulatory agencies prior to beginning work.
- 6 Prepare access road and well site. Install ECD's per EM&CP.
- 7 Document initial casing pressures.
- 8 Kill well with 8.1 ppg viscosified fluid. Speahead 10bbbls of LCM pill ahead.
- 9 Unscrew 7x2 swage and install API 7-1/16" 5K x 7" 8rd STC companion flange + 7-1/16" 5K gate valve.
- 10 Obtain CBL from TD to 500' above cement top - cement top should be around 5000' based on volumetric fill-up calculation. Provide WET engineer a copy. Results of the CBL will dictate how to abandon the 7" casing.
- 11 Dig around base of wellhead to uncover casing tops and remove cement if present.
- 12 Load / top 7 x 10 annuli with 8.1ppg kill fluid. Top off 10 x 13 annulus with FW. Document volumes.
- 13 MIRU service rig.
- 14 NU 7-1/16" Cameron 5K BOPE (blind/shear + pipe + annular). Need kill and choke outlets below blind/shear.
- 15 Function and pressure test BOPE to low (250 psig) and high (3000 psig).
- 16 TIH with 6.125" steel tooth roller-cone bit and clean to hard TD - note that original TD is 6930' but it was plugged back to 6640' in 1959, with no record of plug-back material. TOOH, remove bit.

If the CBL in step 10 indicates good (as or near calculated) cement coverage behind the 7" casing, proceed with below steps, otherwise proceed with step 35 -

- 17 RIH open-ended, install balanced cement plug from TD to 5800', clean tubulars, and spot 6% gel to depth of cement top behind the 7" casing (per CBL).
- 18 WOC minimum 8 hours and tag cement. If top of plug is deeper than 6000' then install second balanced cement plug.
- 19 Install 7" CIDBP above cement plug.
- 20 Top off 7" with kill fluid and perform 100 psig pressure test to verify integrity of BP.
- 21 Top off annuli with fluid again.
- 22 If annulus appears static / stable, ND BOPs.
- 23 Free-point and cut / pull all 7" csg that is free.
- 24 Install 6% gel to 100' below 7" stub then cement plug(s) from 100' below 7" stub to surface.
- 25 Grout all annuli as deep as possible.
- 26 RDMO service rig.
- 27 Erect monument per state regulations. Reclaim location and lease road.
- 28 P&A complete.
- 29 Notify REG / WE&T / Project controller that project is in-service.
- 30 Prepare/submit Notice of Well Status Change.

If the CBL in step 10 indicates poor cement coverage behind the 7" casing, proceed with below steps -

- 35 RIH open-ended, install balanced cement plug from TD to the top of cement behind 7" casing, PU above cement top, reverse circulate to clean tubulars. Pull 10 joints, close pipe rams and WOC minimum of 8 hrs.
- 36 Install 7" CIDBP above cement plug.
- 37 Top off 7" with kill fluid and perform 500 psig pressure test to verify integrity of BP.
- 38 Top off annuli with fluid again. Plumb annuli to flowback with adjustable choke.
- 39 Perforate 7" csg above CIBP and attempt to circulate to surface or establish injection.
* Consult with WE&T engineer on results.

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PREPARED BY: Maria Medvedeva	REVIEWED BY: James Amos	APPROVED: Brent Criser
PREP DATE: 3/18/2022		<i>MDIC 9/30/22</i>

12/23/2022

WELL JOB PLAN		STS Well Engineering & Technology		PAGE 4	DATE JOB PREPARED: 3/18/2022
Objective: Plug and Abandon				LAST PROFILE UPDATE:	
TITLE: Plug and Abandon				WORK TYPE: MOD	
FIELD: Glady	WELL: 7427				
STAT: WV	SHL (Lat/Long):	38.84568	-79.65541	API: 47-083-00109-0000	
DIST/TWP: Dry Fork	BHL (Lat/Long):	38.84568	-79.65541	CNTY: Randolph	

MANAGEMENT OF CHANGE (MOC) DETAILS

- 40A If circulation to surface established, circulate kill weight fluid until good kill density fluid is returned. Consult with WE&T engineer to confirm steps:
- > RIH with sliding-sleeve style cement retainer on work string
 - > Set retainer above perfs
 - > Establish circulation
 - > Squeeze cement behind 7" casing with pre-determined cement volume that occupies no more annular volume than that required to place top of cement at 950'.
 - > Disengage from retainer, reverse circulate to clean tubulars, and TOH.
 - > WOC 24 hours.
 - > Obtain CBL.
- 40B If no circulation to surface, but injection established, consult with WE&T engineer to confirm procedure:
- > RIH with sliding-sleeve style cement retainer on work string
 - > Set retainer above perfs
 - > Establish injection
 - > Disengage from retainer and spot cement at bottom of work string
 - > Squeeze cement behind 7" casing with pre-determined cement volume that occupies no more annular volume than that required to place top of cement at 950'.
 - > Disengage from retainer, reverse circulate to clean tubulars, and TOH.
 - > WOC 24 hours.
 - > Obtain CBL.
- 40C If circulation / injection is not established, perforate (per WE&T engineer) and repeat process above.
* Note that during steps above cement plugs must be installed across all perf zones.

The process above will require communication with WE&T engineer to determine a plan of action.

- 41 ND BOPE.
42 Release all annular pressure and top off.
43 Wireline freepoint and cut / pull all 7" casing that is free.
44 TIH with work string and install balanced cement plugs from top of last cement plug to surface.
45 Close BOP (if installed), and WOC (minimum 6 hrs).
46 ND BOPE, if installed, and remainder of wellhead.
47 Grout all annuli as deep as possible.
48 RDMO service rig.
49 Erect monument per state regulations. Reclaim location and lease road.
50 P&A complete.
51 Notify REG / WE&T / Project controller that project is in-service.
52 Prepare/submit Notice of Well Status Change.

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PREPARED BY: Maria Medvedeva	REVIEWED BY: James Amas	APPROVED: Brent Criser
PREP DATE: 3/18/2022		MDK 9/30/22

~ not to scale ~

GLADY 7427

Prior to P&A
(as of 03/18/2022)

* Fresh water show at 70'
Sea level ~3226'
(Google Earth)

13-3/8" 48# csg @ 33'
(cemented, but there is no record of the amount)

10-3/4" 32# csg @ 868'
(250 sx cement, cement at surface)

Light grey fill indicates cement installed during well drilling in 1959.

Sand / Shale / Lime
0 - 5210'

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Calculated cement top estimated @ 4934'

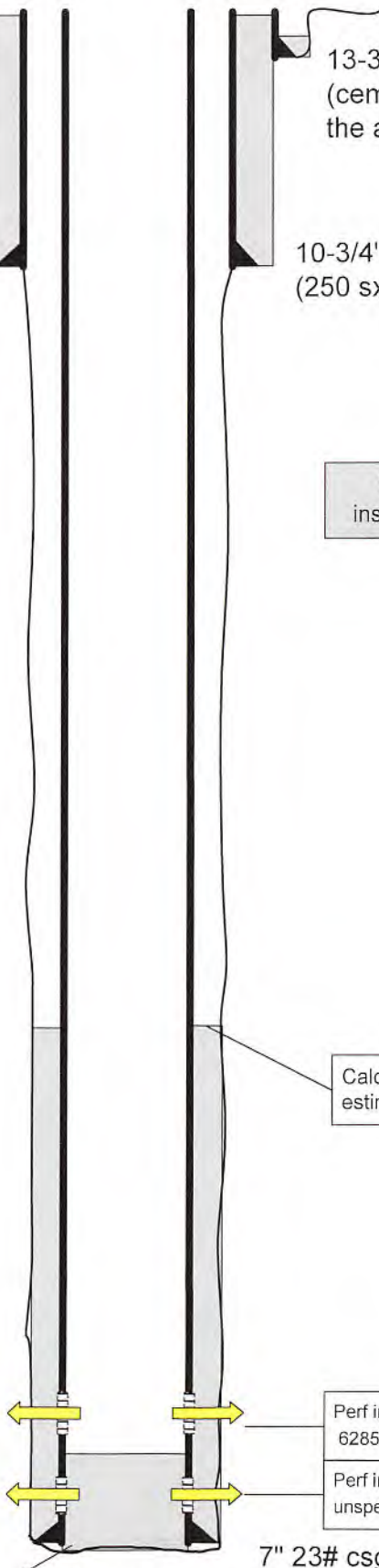
Tully Lime 5847 - 5860'

Onodaga Lime 6210 - 6260'

Huntersville Chert
6260 - 6338', 6440 - 6465'
6501 - 6652'

Oriskany 6652 - 6860'
(SW reported, plugback)

Helderberg Lime 6860 - 6930'



Perf interval in Chert,
6285 - 6567' w/ 160 shots

Perf interval in Oriskany,
unspecified in well records

7" 23# csg @ 6930'
(250 sx cement)

Plugback Oriskany to 6640'

PBTD 6640'
TD 6930'

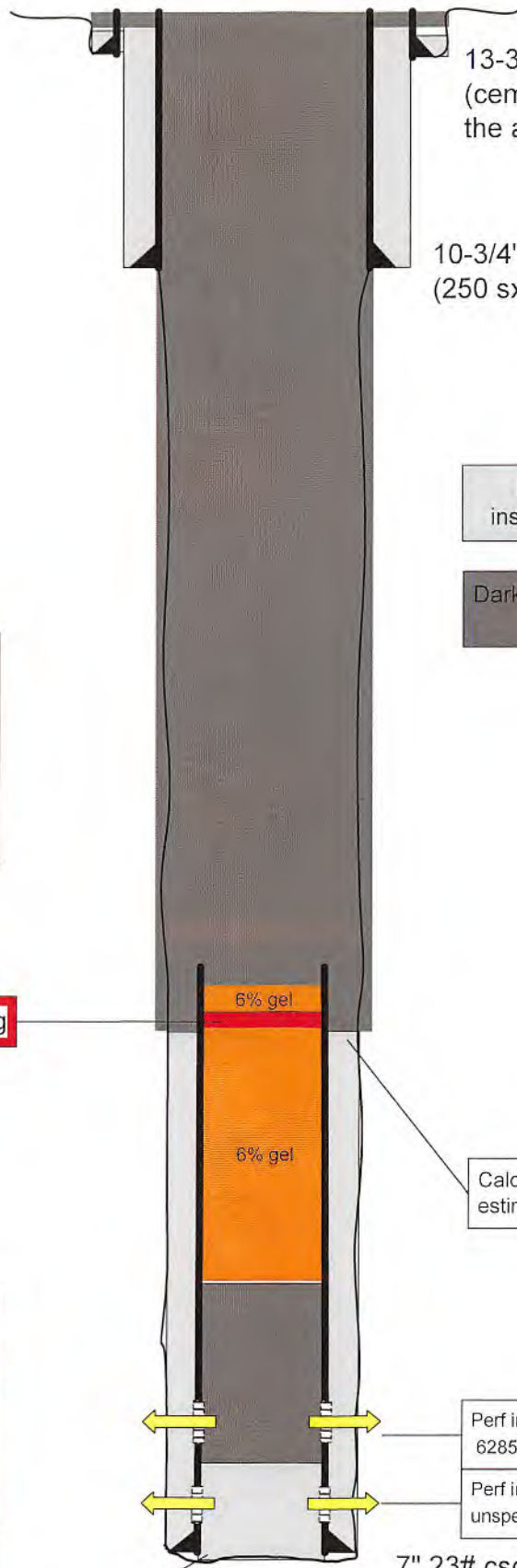
12/23/2022

~ not to scale ~

GLADY 7427 Proposed P&A (as of 03/18/2022)

* Fresh water show at 70'

Sea level ~3226'
(Google Earth)



13-3/8" 48# csg @ 33'
(cemented, but there is no record of the amount)

10-3/4" 32# csg @ 868'
(250 sx cement, cement at surface)

Light grey fill indicates cement installed during well drilling in 1959.

Dark grey fill indicates cement installed during the P&A

Sand / Shale / Lime
0 - 5210'

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Cast Iron Bridge plug

6% gel
6% gel

Calculated cement top estimated @ 4934'

Tully Lime 5847 - 5860'

Onodaga Lime 6210 - 6260'

Huntersville Chert
6260 - 6338', 6440 - 6465'
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Perf interval in Chert,
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Perf interval in Oriskany,
unspecified in well records

Plugback Oriskany to 6640'

PBTD 6640'
TD 6930'

7" 23# csg @ 6930'
(250 sx cement)

12/23/2022



4708300109P

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION 12

Quadrangle Horton SW

Permit No. Ran-109

WELL RECORD

Oil or Gas Well Gas
(KIND)

Company Columbian Carbon Company, Oper.
Address Box 873, Charleston 23, W. Va.
Farm United States of America Acres 600
Location (waters) McGray Run
Well No. K-2, GW-1310 Elev. 3224.90'
District Dry Fork County Randolph
The surface of tract is owned in fee by Director, Bureau of Land Mgmt.
Interior Bldg. Address Washington 25, D. C.
Mineral rights are owned by same

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Pac'ker
16			none
13 3/8" 48#	32'5"	32'5"	Size of
10 3/4" 32#	867'8"	867'8"	Depth set
8 1/2" 23#	6978'9"	6978'9"	Perf. top
5 3/16"			Perf. bottom
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

Drilling commenced 9-28-59
Drilling completed 10-28-59
Date Shot not 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.
WELL ACIDIZED not acidized

CASING CEMENTED _____ SIZE _____ No. Ft. _____ Date _____
see reverse side

COAL WAS ENCOUNTERED AT none FEET _____ INCHES
FEET _____ INCHES FEET _____ INCHES
FEET _____ INCHES FEET _____ INCHES

WELL FRACTURED see reverse side

RESULT AFTER TREATMENT 164,000 cu. ft. from Chert (Oriskany plugged off at 6640')
ROCK PRESSURE AFTER TREATMENT 10 days 910#
Fresh Water 70' Feet _____ Salt Water _____ Feet _____

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Sand			0	40			
Sand, Shells & Lime			40	340	F. water	70'	
Hard Sand			340	560			
Sandy Shale			560	650			
Shale			650	850			
Shale and Limestone			850	1555			
Shale and Sand			1555	1820			
Lime			1820	1980			
Shale & Lime streaks			1980	5210			
Shale			5210	6265			
Chert			6265	6345			
Chert and Shale			6345	6680			
Oriskany Sand			6680	6900			
Sand and Lime			6900	6930			
Total depth				6930'			
The following are sample determinations:							
Onondaga (brown Break at 6210')			6210	6260			
Chert			6260	6338			
Shale			6338	6440			
Chert			6440	6465			
Shale w/ Limestone streaks			6465	6501			
Chert			6501	6570			
Shale w/trace Chert			6570	6652			
Oriskany			6652	6860			
Heilderburg Lime			6860	6930			



(over)

12/23/2022



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

NOTICE OF PROPOSED LOCATION OF OIL AND GAS WELL

To THE DEPARTMENT OF MINES,
Charleston, W. Va.

Director, Bureau of Land Management
Interior Bldg., Washington 25, D. C.

Mr. Orville Eberly
510 Gallatin Bank Bldg., Uniontown, Pa.

Mr. William E. Snee
Route #2, Box #165, Belle Vernon, Pa.

South Penn Oil Co., Attn: A. J. Saxe
54 Boylston St., Bradford, Pa.

M. Hill, The Hill Bldg., Room 800,
839 17th St., N. W., Washington, D. C.

Tidewater Oil Co., Attn: K. W. Snyder
P. O. Box 1404, Houston, Texas

Columbian Carbon Company, Oper.
NAME OF WELL OPERATOR

Box 873, Charleston 23, W. Va.
COMPLETE ADDRESS

August 28, 19 59
PROPOSED LOCATION

Dry Fork District

Randolph County

Well No. K-2, GW-1310 79° 35' E. 3224.90'

United States of America Farm

600.00 ACR.

GENTLEMEN:

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee title thereto, (or as the case may be) under grant or lease dated Nov. 4, 1958

made by United States of America, to Arthur M. Hill, and recorded on the _____ day

of _____, in the office of the County Clerk for said County in Book 215, page 21.

The enclosed plat was prepared by a competent engineer and shows the proposed location of a well to be drilled for oil and gas by the undersigned well operator on the farm and in the Magisterial District and County above named, determined by survey and courses and distances from two permanent points, or land marks.

The undersigned well operator is informed and believes there are no coal operators operating beds of coal beneath said farm or tract of land on which said well is located, or within 500 feet of the boundaries of the same, who have mapped their workings and filed their maps as required by law, excepting the coal operators or coal owners (if any) above named as addressees.

The above named coal operators or coal owners (if any) are notified that any objections they may desire to make to such proposed location, or which they are required to make by Section 3 of said Code, if the drilling of a well at said proposed location will cause a dangerous condition in or about their respective coal mines, must be received by, or filed with the Department of Mines within ten days from the receipt of a copy of this notice and accompanying plat by said Department. Said coal operators are further notified that forms for use in making such objections will be furnished to them by the Department of Mines promptly on request and that all such objections must set forth as definitely as is reasonably possible the ground or grounds on which such objections are based and indicate the direction and distance the proposed location should be moved to overcome same.

(The next paragraph is to be completed only in Department's copy.)

Copies of this notice and the enclosed plat were mailed by registered mail, or delivered to the above named coal operators or coal owners at their above shown respective address _____ day _____ before, or on the same day with the mailing or delivery of this copy to the Department of Mines at Charleston, West Virginia.

Very truly yours, W. S. Moore
Columbian Carbon Company, Oper.
by: W. S. Moore, Manager of Prod.

WELL OPERATOR

Box 873
STREET

Charleston 23
CITY OR TOWN

W. Va.
STATE



Address of Well Operator

*Section 3 If no such objections be filed or be found by the department of mines, within said period of ten days from the receipt of said notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a drilling permit reciting the filing of such plat, that no objections have been made by the coal operators to the location, or found thereto by the department, and that the same is approved and the well operator authorized to proceed to drill at said location.

RAN-109 PERMIT NUMBER

Ran-109

12/23/2022

WW-4A
Revised 6-07

OK # 34693
\$100

1) Date: 05.23.2022
2) Operator's Well Number
Glady 7427
3) API Well No.: 47 - 083 - 00109

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>US Dept of Interior (managed by USFS)</u>	Name <u>Not operated</u>
Address <u>PO Box 1158</u>	Address _____
<u>Elkins, WV 26241</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name _____
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Gayne Knitowski</u>	(c) Coal Lessee with Declaration
Address <u>PO Box 108</u>	Name _____
<u>Gormanian, WV 26720</u>	Address _____
Telephone <u>304-546-8171</u>	_____

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WV Department of
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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.

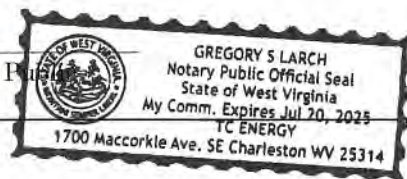
Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental 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 Columbia Gas Transmission
 By: Maria Medvedeva
 Its: Senior Wells Engineer - Well Engineering and Technology
 Address 1700 MacCorkle Ave SE
Charleston, WV 25314
 Telephone 304-410-4313

Subscribed and sworn before me this 20 day of Sept. 2022

My Commission Expires July 20, 2025

Notary Public



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.

12/23/2022

Note that this well is located in the Monongahela National Forest. The surface owner is the US Dept of Interior, and is managed by the BLM and US Forestry Service. Both parties have already approved the proposed well work per the enclosed BLM Sundry Notices and Reports on Wells dated 05/04/22, and USFS Condition of Approval dated 05/04/22. Columbia requests that the 15 day comment period be waived, and the well work permit be issued at the DEP's earliest convenience.

SURFACE OWNER WAIVER

Operator's Well Number

Glady 7427

TO SURFACE OWNERS NAMED ON PAGE WW4-A

The well operator named on page WW-4A is applying for a permit from the State to plug and abandon a well. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.
WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

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WV Department of
Environmental Protection

Time Limits and methods for filing comments. The law requires these materials to be served on or before the date the operator files his Application. You have **FIVE (5) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Comments must be in writing. Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation...".

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application For A Permit To Plug And Abandon on Forms WW-4A and WW-4B, and a survey plat.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON
ETC.

FOR EXECUTION BY A CORPORATION,

Signature

Date

Name

By

Its

Date

Signature

12/23/2022

4708300109P

Form 3160-5
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2021

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No. UNLEASED

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well

Oil Well Gas Well Other

7. If Unit of CA/Agreement, Name and/or No.
GLADY GAS STORAGE/MNF/FS/WVES39982

8. Well Name and No. /7427

2. Name of Operator COLUMBIA GAS TRANSMISSION LLC

9. API Well No. 4708300109

3a. Address 1700 MACCORKLE AVE SE, CHARLESTON, WV 3b. Phone No. (include area code)
(304) 373-2412

10. Field and Pool or Exploratory Area
GLADY/GLADY

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
OTHER/Latitude/Longitude Survey Type in A1/

11. Country or Parish, State
RANDOLPH/WV

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Short summary of the scope of work to plug and abandon Gladly 7427 observation wellbore - 1) Clean out well to hard TD. 2) Install a balanced cement plug inside the 7" casing. 3) Install a cast iron bridge plug. 4) Cut and pull 7" casing that is free. 5) Install cement plug to surface. No trees are to be cut. Location road comes off of Middle mountain road. Lease road will need gravel in spots and location will need some minor grading to level and install matting.

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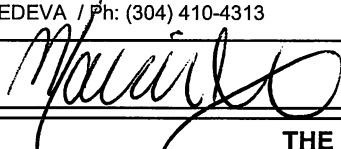
14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

MARIA MEDVEDEVA / Ph: (304) 410-4313

Sr Well Engineer Well Engineering & Technology

Title

Signature



Date

03/21/2022

THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

TREY A MITCHELL / Ph: (414) 297-4438 / Approved

Petroleum Engineer
Title

05/04/2022
Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office MILWAUKEE

Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

12/23/2022

GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area or regional procedures and practices, are either shown below, will be issued by or may be obtained from the local Federal office.

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

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Additional Information

Other description

Location of Well

0. SHL: LAT: 38.8444 / LONG: -79.6549 (TVD: 0 feet, MD: 0 feet)

BHL: LAT: 38.8444 / LONG: 79.6549 (TVD: 0 feet, MD: 0 feet)

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Environmental Protection

7427
47-083-00109
Columbia Gas Transmission LLC
May 4, 2022
Conditions of Approval

1. Contact Andrew Bushman, BLM inspector, or Daniel Hacker, BLM inspector, a minimum of 72 hours prior to starting abandoning operations.
2. A minimum of a 9 lb/gal fluid shall be between plugs.
3. BLM may direct you to test critical/questionable plugs by tagging with the working pipe string.
4. Within 30 days after you finish plugging the well, send BLM a final Sundry Notice Form 3160-5 summarizing the actual downhole work performed, the dates the work was started and completed, and the status of reclamation activities.

USFS Final Reclamation Requirements

Access Roads

- Upgrade roadways to accommodate equipment as needed.
- Vehicle travel to be confined to existing access roads.
- Existing drainage and road surface to be maintained during planned work activities.
- Upon completion of work, access roads to be restored to pre-existing condition as approved by the USFS.

Well Site

- All equipment, tanks, material, vehicles to be confined to pre-disturbed perimeter of well site. No new disturbance is allowed.
- Perform minor grading to accommodate equipment as needed.
- Apply crushed limestone on well site as needed to stabilize soils and equipment.
- Use portable toilets during plugging and abandonment activities.
- Remove all pipe/well casing to below ground level.
- Remove gathering lines associated with the well (to the transmission line) and properly seal.
- Survey and set (offset) monument marker for well bore location.
- Clean up and properly dispose of all trash generated by project.
- Ensure proper collection, storage, and disposal of all fluids off Forest Service lands.
- Remove surface structures.
- Recontour well pad to return a 2-4% cross slope and promote natural drainage.
- After reclamation, reshape and clean all ditches and dips, clean culverts on access road, reshape and repair the road surface.

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- Upon completion of reclamation, locked gates will stay in place.
- Use of best management practices for soil and erosion control measures on site. Utilize silt fence, check dams, and other control measures, as needed or directed by the U.S. Forest Service, to prevent erosion and control sediment disposition.
- All earth disturbing/recontouring activities to be completed by the end of the normal operating season (November 15th 2022 approximately).

Seed Mix

Timothy	7 lbs/acre
Kentucky Bluegrass	7 lbs/acre
Winter Wheat (6/15 – 11/15) or Spring Wheat (2/15 – 6/15)	12 lbs/acre
Annual Rye (6/15 – 11/15) or Oats (2/15 – 6/15)	14 lbs/acre
Alfalfa (pre-inoculated)	10 lbs/acre
Durana Clover (pre-inoculated)	3 lbs/acre
Mammoth Red Clover (pre-inoculated)	5 lbs/acre
Chicory	2 lbs/acre

Total seeding rate @ 60 lbs/acre

Fertilizer 10-20-10 @ 500 lbs/acre

Agriculture lime or pellets @ 3 ton/acre

Mulch – weed free straw @ 1500 lbs/acre

Misc

- Earth moving equipment to be pressure washed prior to entering Monongahela National Forest (MNF). Road vehicles to be pressure washed prior to entering MNF if there is a buildup of soil underneath or on the vehicle.

GOVERNMENT CONTACTS

Bureau of Land Management (BLM)
 Northeastern States District
 626 East Wisconsin Ave., Suite 200
 Milwaukee, Wisconsin 53202-4617

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Name	Agency/Title	Office Phone	Mobile Phone
Daniel Hacker	BLM Inspector	-	(414) 617-6697
Andrew Bushman	BLM Inspector	-	(231) 577-8778
Will Wilson	Forest Service Geologist	(304) 635-4463	-

TAM 050422

WW-4B

API No. 47-083-00109 P
Farm Name _____
Well No. Glady 7427

*Coal not operated

**INSTRUCTIONS TO COAL OPERATORS
OWNERS AND LESSEE**

The well operator named on the obverse side of WW-4 (B) is about to abandon the well described in the enclosed materials and will commence the work of plugging and abandoning said well on the date the inspector is notified. Which date shall not be less than five days after the day on which this notice and application so mailed is received, or in due course should be received by the Department of Environmental Protection Office of Oil & Gas.

This notice and application is given to you in order that your respective representatives may be present at the plugging and filling of said well. You are further notified that whether you are represented or not the operator will proceed to plug and fill said well in the manner required by Section 24, Article 6, Chapter 22 of the Code and given in detail on obverse side of this application.

NOTE: If you wish this well to be plugged according to 22-6-24(d) then as per Regulation 35CSR4-13.9 you must complete and return to this office on form OB-16 "Request by Coal Operator, Owner, or Lessee for plugging" prior to the issuance of this plugging permit.

WAIVER

The undersigned coal operator ____ / owner ____ / lessee ____ / of the coal under this well location has examined this proposed plugging work order. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: _____

By: _____

Its _____

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4708300109

Columbia Gas Transmission, LLC

1700 MacCorkle Ave., SE, Charleston, WV, USA 25314



October 14, 2022

Bureau of Land Management
626 E. Wisconsin Ave., Suite 200
Milwaukee, WI 53202-4617

Columbia Gas Transmission, LLC has applied for a permit to the WV Department of Environmental Protection – Office of Oil and Gas, to plug and abandon an existing underground natural gas storage well located on property owned by the US Dept. of Interior. The field and well ID is Glady 7427 (API 47-083-00109).

As part of the well permitting process, Columbia, the well operator, provided you a copy of all applicable permit application forms for review and record retention on 9/26/2022.

Since the initial notification, due to material availability, a different cement material may have to be utilized than originally stated for plugging operations on the reference well. We intend to use API Class A cement to the extent that it is available. If Class A is not available, we will use API Class L cement as per the approved WVDEP Variance Order No.2022-13, attached.

Regards,

Maria Medvedeva
Senior Wells Engineer
Well Engineering & Technology
Columbia Gas Transmission, LLC

E402 T59T T000 02

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

Milwaukee, WI 53202

OFFICIAL USE

Certified Mail Fee	\$4.00
Extra Services & Fees (check box, add fees as appropriate)	\$3.25
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00
Postage	\$9.90

Postmark Here: MILWAUKEE, WI 53202 OCT 14 2022

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OCT 24 2022
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www.tcenergy.com

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY												
<ul style="list-style-type: none"> Complete items 1, 2, and 3. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	<p>A. Signature X T.L.#233619 <input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) C. Date of Delivery 10-17-22</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p>												
<p>1. Article Addressed to: Bureau Land Management 626 E. Wisconsin Ave Suite 200 Milwaukee, WI 53202-4617</p>	<p>3. Service Type</p> <table border="0"> <tr> <td><input type="checkbox"/> Adult Signature</td> <td><input type="checkbox"/> Priority Mail Express®</td> </tr> <tr> <td><input type="checkbox"/> Adult Signature Restricted Delivery</td> <td><input type="checkbox"/> Registered Mail™</td> </tr> <tr> <td><input type="checkbox"/> Certified Mail®</td> <td><input type="checkbox"/> Registered Mail Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Certified Mail Restricted Delivery</td> <td><input type="checkbox"/> Signature Confirmation™</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery</td> <td><input type="checkbox"/> Signature Confirmation Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery Restricted Delivery</td> <td></td> </tr> </table>	<input type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®	<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™	<input type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery	<input type="checkbox"/> Certified Mail Restricted Delivery	<input type="checkbox"/> Signature Confirmation™	<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery	<input type="checkbox"/> Collect on Delivery Restricted Delivery	
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<input type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery												
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<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery												
<input type="checkbox"/> Collect on Delivery Restricted Delivery													
<p>2. Article Number (Transfer from service label) 7021 1970 0001 1851 2043</p>	<p>Barcode: 9590 9402 6856 1104 6535 13</p>												



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, SE
Charleston, WV 25304
Phone (304) 926-0450

Harold D. Ward, Cabinet Secretary
dep.wv.gov

**BEFORE THE OFFICE OF OIL AND GAS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE OF WEST VIRGINIA**

**IN THE MATTER OF A VARIANCE FROM)
LEGISLATIVE RULE 35CSR4)
SECTION 14.1. AND LEGISLATIVE RULE)
35CSR8 SECTION 20.1,)
RELATING TO THE CEMENTING)
OF OIL AND GAS WELLS)**

ORDER NO. 2022-13

REPORT OF THE OFFICE

In response to industry requests, the West Virginia Department of Environmental Protection, Office of Oil and Gas has reviewed the proposed use of American Petroleum Institute (API) Class L cement to be used in place of API Class A cement for well plugging.

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FINDINGS OF FACT

1. On July 28, 2022, Diversified Gas & Oil Co. (DGO) submitted a variance request from Legislative Rule 35CSR4 for the use of API Class L cement in place of API Class A cement, relating to the plugging of conventional wells.
2. Laboratory analysis submitted by DGO on July 28, 2022, indicates API Class L cement is comparable to API Class A cement and thereby satisfies the requirements of the West Virginia Code.
3. Contemporaneously, the Chief of the Office of Oil and Gas also chose to consider a variance to Legislative Rule 35CSR8 Section 20.1., for the use of API Class L cement in place of API Class A cement, relating to the plugging of horizontal wells.

4. On August 18, 2022, the Office of Oil and Gas provided public notice of acceptance of public comments on the variance consideration. During the 20-day public comment period, no comments were received.

CONCLUSIONS OF LAW

Pursuant to Article 6 and Article 6A, Chapter 22 of the Code of West Virginia, the Office of Oil and Gas has jurisdiction over the subject matter, and the persons interested therein, and jurisdiction to promulgate the hereinafter prescribed Order.

Pursuant to Legislative Rule 35CSR4, Section 18 and Legislative Rule 35CSR8, Section 14, the Chief of the Office of Oil and Gas may grant a variance from any requirement of these rules.


ORDER

It is ordered that the Class L cement product approved and monogrammed by API is approved for use in place of API Class A cement for well plugging subject to the provisions of Legislative Rule 35CSR4 and Legislative Rule 35CSR8.

Dated this, the 13th day of September, 2022.

IN THE NAME OF THE STATE OF WEST VIRGINIA

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



James Martin, Chief
Office of Oil and Gas

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WV Department of
Environmental Protection

12/23/2022

4708300109

WELL JOB PLAN		STS Well Engineering & Technology		PAGE 2	DATE JOB PREPARED: 9/22/2022
Objective: Plug and Abandon				LAST PROFILE UPDATE:	
TITLE: Plug and Abandon		WORK TYPE: MOD			
FIELD: Gladly	WELL: 7427 (OB)				
STAT: WV	SHL (Lat/Long): 38.84568	-79.65541	API: 47-083-00109-0000		
TWP: Dry Fork	BHL (Lat/Long): 38.84568	-79.65541	CNTY: Randolph		

PROCEDURE

NOTE: Cement used will be Class A, slurry weight 15.6ppg, slurry yield 1.18 cuft/sk or Class L, slurry weight 15.6ppg, slurry yield 1.14 cuft/sk, as per the approved WVDEP Variance Order No.2022-13. All spacers will be 6% Bentonite gel. Restricted Field Fab WH, wellhead connection 2" 11-1/2V, no annular access.

- 1 Obtain State well work permit, EM&CP, pipeline crossing evaluation, call before you dig, etc. Prepare site specific SPCC.
- 2 Notify landowner.
- 3 Obtain General Work Permit and Wellsite Review & Turnover Form from Operations.
- 4 Notify Reservoir Engineering & Geosciences (REG) of intent to take well out of service.
- 5 Notify environmental inspector prior to beginning work. If required, notify State/Federal regulatory agencies prior to beginning work.
- 6 Prepare access road and well site. Install ECD's per EM&CP.
- 7 Document initial casing pressures.
- 8 Kill well with 8.1 ppg viscosified fluid. Speahead 10bbbls of LCM pill ahead.
- 9 Unscrew 7x2 swage and install API 7-1/16" 5K x 7" 8rd STC companion flange + 7-1/16" 5K gate valve.
- 10 Obtain CBL from TD to 500' above cement top - cement top should be around 5000' based on volumetric fill-up calculation. Provide WET engineer a copy. Results of the CBL will dictate how to abandon the 7" casing.
- 11 Dig around base of wellhead to uncover casing tops and remove cement if present.
- 12 Load / top 7 x 10 annuli with 8.1ppg kill fluid. Top off 10 x 13 annulus with FW. Document volumes.
- 13 MIRU service rig.
- 14 NU 7-1/16" Cameron 5K BOPE (blind/shear + pipe + annular). Need kill and choke outlets below blind/shear.
- 15 Function and pressure test BOPE to low (250 psig) and high (3000 psig).
- 16 TIH with 6.125" steel tooth roller-cone bit and clean to hard TD - note that original TD is 6930' but it was plugged back to 6640' in 1959, with no record of plug-back material. TOOH, remove bit.

If the CBL in step 10 indicates good (as or near calculated) cement coverage behind the 7" casing, proceed with below steps. otherwise proceed with step 35 -

- 17 RIH open-ended, install balanced cement plug from TD to 5800', clean tubulars, and spot 6% gel to depth of cement top behind the 7" casing (per CBL).
- 18 WOC minimum 8 hours and tag cement. If top of plug is deeper than 6000' then install second balanced cement plug.
- 19 Install 7" CIDBP above cement plug.
- 20 Top off 7" with kill fluid and perform 100 psig pressure test to verify integrity of BP.
- 21 Top off annuli with fluid again.
- 22 If annulus appears static / stable, ND BOPs.
- 23 Free-point and cut / pull all 7" csg that is free.
- 24 Install 6% gel to 100' below 7" stub then cement plug(s) from 100' below 7" stub to surface.
- 25 Grout all annuli as deep as possible.
- 26 RDMO service rig.
- 27 Erect monument per state regulations. Reclaim location and lease road.
- 28 P&A complete.
- 29 Notify REG / WE&T / Project controller that project is in-service.
- 30 Prepare/submit Notice of Well Status Change.

If the CBL in step 10 indicates poor cement coverage behind the 7" casing, proceed with below steps -

- 35 RIH open-ended, install balanced cement plug from TD to the top of cement behind 7" casing, PU above cement top, reverse circulate to clean tubulars. Pull 10 joints, close pipe rams and WOC minimum of 8 hrs.
 - 36 Install 7" CIDBP above cement plug.
 - 37 Top off 7" with kill fluid and perform 500 psig pressure test to verify integrity of BP.
 - 38 Top off annuli with fluid again. Plumb annuli to flowback with adjustable choke.
 - 39 Perforate 7" csg above CIBP and attempt to circulate to surface or establish injection.
- * Consult with WE&T engineer on results.

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PREPARED BY: Maria Medvedeva	REVIEWED BY: James Amos	APPROVED: Brent Criser
PREP DATE: 9/22/2022		

12/23/2022

WELL JOB PLAN		STS Well Engineering & Technology		PAGE 3	DATE JOB PREPARED: 9/22/2022
Objective: Plug and Abandon				LAST PROFILE UPDATE:	
TITLE: Plug and Abandon		WELL: 7427 (OB)		WORK TYPE: MOD	
FIELD: Gladly	SHL (Lat/Long): 38.84568 -79.65541			API: 47-083-00109-0000	
STAT: WV	BHL (Lat/Long): 38.84568 -79.65541			CNTY: Randolph	
DIST/TWP: Dry Fork					

PROCEDURE (continued)



- 40A If circulation to surface established, circulate kill weight fluid until good kill density fluid is returned. Consult with WE&T engineer to confirm steps:
 - > RIH with sliding-sleeve style cement retainer on work string
 - > Set retainer above perfs
 - > Establish circulation
 - > Squeeze cement behind 7" casing with pre-determined cement volume that occupies no more annular volume than that required to place top of cement at 950'.
 - > Disengage from retainer, reverse circulate to clean tubulars, and TOH.
 - > WOC 24 hours.
 - > Obtain CBL
- 40B If no circulation to surface, but injection established, consult with WE&T engineer to confirm procedure:
 - > RIH with sliding-sleeve style cement retainer on work string
 - > Set retainer above perfs
 - > Establish injection
 - > Disengage from retainer and spot cement at bottom of work string
 - > Squeeze cement behind 7" casing with pre-determined cement volume that occupies no more annular volume than that required to place top of cement at 950'.
 - > Disengage from retainer, reverse circulate to clean tubulars, and TOH.
 - > WOC 24 hours.
 - > Obtain CBL
- 40C If circulation / injection is not established, perforate (per WE&T engineer) and repeat process above.
 - * Note that during steps above cement plugs must be installed across all perf zones.

The process above will require communication with WE&T engineer to determine a plan of action.
- 41 ND BOPE.
- 42 Release all annular pressure and top off.
- 43 Wireline freepoint and cut / pull all 7" casing that is free.
- 44 TIH with work string and install balanced cement plugs from top of last cement plug to surface.
- 45 Close BOP (if installed), and WOC (minimum 6 hrs).
- 46 ND BOPE, if installed, and remainder of wellhead.
- 47 Grout all annuli as deep as possible.
- 48 RDMO service rig.
- 49 Erect monument per state regulations. Reclaim location and lease road.
- 50 P&A complete.
- 51 Notify REG / WE&T / Project controller that project is in-service.
- 52 Prepare/submit Notice of Well Status Change.

PREPARED BY: Maria Medvedeva	REVIEWED BY: James Amos	APPROVED: Brent Criser
PREP DATE: 9/22/2022		

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 12/23/2022

~ not to scale ~

GLADY 7427

Prior to P&A
(as of 03/18/2022)

* Fresh water show
at 70'

Sea level ~3226'
(Google Earth)

13-3/8" 48# csg @ 33'
(cemented, but there is no record of
the amount)

10-3/4" 32# csg @ 868'
(250 sx cement, cement at surface)

Light grey fill indicates cement
installed during well drilling in 1959.

Sand / Shale / Lime
0 - 5210'

Calculated cement top
estimated @ 4934'

Tully Lime 5847 - 5860'

Onodaga Lime 6210 - 6260'

Huntersville Chert
6260 - 6338', 6440 - 6465'
6501 - 6652'

Oriskany 6652 - 6860'
(SW reported, plugback)

Helderberg Lime 6860 - 6930'

Perf interval in Chert,
6285 - 6567' w/ 160 shots

Perf interval in Oriskany,
unspecified in well records

7" 23# csg @ 6930'
(250 sx cement)

PBTD 6640'
TD 6930'

Plugback Oriskany
to 6640'

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~ not to scale ~

GLADY 7427

Proposed P&A

(as of 03/18/2022)

* Fresh water show at 70'

Sea level ~3226'
(Google Earth)

13-3/8" 48# csg @ 33'
(cemented, but there is no record of the amount)

10-3/4" 32# csg @ 868'
(250 sx cement, cement at surface)

Light grey fill indicates cement installed during well drilling in 1959.

Dark grey fill indicates cement installed during the P&A

Sand / Shale / Lime
0 - 5210'

Cast Iron Bridge plug

6% gel

6% gel

Calculated cement top estimated @ 4934'

Tully Lime 5847 - 5860'

Onodaga Lime 6210 - 6260'

Huntersville Chert
6260 - 6338', 6440 - 6465'
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Oriskany 6652 - 6860'
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Perf interval in Chert,
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Perf interval in Oriskany,
unspecified in well records

Plugback Oriskany to 6640'

PBTD 6640'
TD 6930'

7" 23# csg @ 6930'
(250 sx cement)

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SENT ADDITIONAL
ON OCTOBER 14, 2022

4708300109P

Columbia Gas Transmission, LLC
1700 MacCorkle Ave., SE, Charleston, WV, USA 25314



September 20, 2022

Bureau of Land Management
626 E. Wisconsin Ave., Suite 200
Milwaukee, WI 53202-4617

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Columbia Gas Transmission, LLC is applying for a permit to the WV Department of Environmental Protection – Office of Oil and Gas, to plug and abandon an existing underground natural gas storage well located on property owned by the US Dept. of Interior. As reference, the field and well ID is Gladly 7427 (API 47-083-00109).

As part of the well permitting process, Columbia, the well operator, is required to provide a copy of all applicable permit application forms for your review and record retention.

Note that included in the permit application is a copy of the approved Sundry Notices.

Regards,

Maria Medvedeva
Senior Wells Engineer
Well Engineering & Technology
Columbia Gas Transmission, LLC

**U.S. Postal Service™
CERTIFIED MAIL® RECEIPT**
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

MILWAUKEE, WI 53202

OFFICIAL USE

Certified Mail Fee	\$4.00
Extra Services & Fees (check box, add fee as appropriate)	\$7.75
<input type="checkbox"/> Return Receipt (hardcopy)	\$4.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00
Postage	\$8.95
Total Postage and Fees	\$14.20

Postmark Here
SEP 21 2022
MILWAUKEE, WI

9222 EPTL 2236
410 0002 7183 2236

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:
Bureau of Land Management
626 E. Wisconsin Ave. ✓
Suite 200
Milwaukee, WI 53202

2. Article Number (Transfer from service label)
7022 0410 0002 7183 2236

3. Service Type
 Adult Signature
 Adult Signature Restricted Delivery
 Certified Mail®
 Certified Mail Restricted Delivery
 Collect on Delivery
 Collect on Delivery Restricted Delivery
 Priority Mail Express®
 Registered Mail™
 Registered Mail Restricted Delivery
 Signature Confirmation™
 Signature Confirmation Restricted Delivery

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X T.H #2336-19 Agent Addressee

B. Received by (Printed Name)
cl

C. Date of Delivery
9-26-22

D. Is delivery address different from item 1? Yes
If YES, enter delivery address below: No

12/23/2022

PS Form 3811, July 2020 PSN 7530-02-000-9053

www.tcenergy.com

Domestic Return Receipt

4708300109P

WW-9
(5/16)

API Number 47 - 083 - 00109
Operator's Well No. Gladly 7427

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

Operator Name Columbia Gas Transmission OP Code 307032
Watershed (HUC 10) McCray Creek Quadrangle Gladly, WV

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. gmm**
If so, please describe anticipated pit waste: N/A

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection (UIC Permit Number 34-167-23862)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain Mud Master 64054; Reserve Environmental Services (WMGR 123SW008)
Appalachian Water Services (WMGR 123SW001))

Will closed loop system be used? If so, describe: No

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

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

Additives to be used in drilling medium? N/A

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. N/A

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

-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.

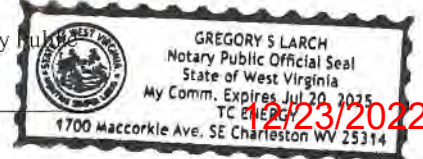
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is 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) Maria Medvedeva
Company Official Title Senior Wells Engineer - Well Engineering and Technology

Subscribed and sworn before me this 20 day of Sept, 2022

[Signature] Notary Public

My commission expires July 20, 2025



4708300109P

Glady 7427

Form WW-9

Operator's Well No. _____

Proposed Revegetation Treatment: Acres Disturbed <1.0 Prevegetation pH per USFS

Lime per USFS Tons/acre or to correct to pH per USFS

Fertilizer type per USFS

Fertilizer amount per USFS lbs/acre

Mulch per USFS Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type

lbs/acre

Seed Type

lbs/acre

US Forest Service to determine seed mix and vegetation treatment requirements.

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:

Maureen J. Kuntz

Comments: _____

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Reclaim SITE ASAP

OCT 05 2022

WV Department of
Environmental Protection

Title:

Inspector

Date:

9/30/2022

Field Reviewed?

() Yes

() No

12/23/2022

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

Operator Name: Columbia Gas Transmission LLC
Watershed (HUC 10): McCray Creek Quad: Glady, WV
Farm Name: _____

1. List the procedures used for the treatment and discharge of fluids. Include a list of all operations that could contaminate the groundwater.

- No fluids planned to be discharged.
- No fertilizer will be stored on site. Small quantities of fuel, oil, and lubrications will be stored on site, but located within secondary containment.
- Accidental release from well fluids and spills from construction equipment are the only sources of contaminants to groundwater.
- All accumulated fluids to be hauled off site to UIC disposal facility.

2. Describe procedures and equipment used to protect groundwater quality from the list of potential contaminant sources above.

All construction and well servicing equipment will be monitored and inspected daily for leaks. Spill kits will be on site.

3. List the closest water body, distance to closest water body, and distance from closest Well Head Protection Area to the discharge area.

McCray Creek Run is at a distance of 0.21 miles N.

The Harman Town of ConDel (WV3304204c) is the closest Well Head Protection Area at a distance of 3.52 miles SE from discharge area.

4. Summarize all activities at your facility that are already regulated for groundwater protection.

N/A

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5. Discuss any existing groundwater quality data for your facility or an adjacent property.

N/A

6. Provide a statement that no waste material will be used for deicing or fill material on the property.

No waste material will be used for deicing or fill material on the property.

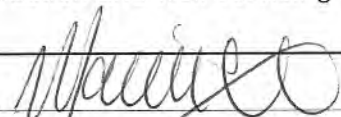
7. Describe the groundwater protection instruction and training to be provided to the employees. Job procedures shall provide direction on how to prevent groundwater contamination.

During routine tailgate meetings, groundwater protection will be a topic of discussion.

8. Provide provisions and frequency for inspections of all GPP elements and equipment.

No fertilizer will be stored on site. Small quantities of fuel, oil, and lubricants will be stored on site, but located within secondary containment. Accidental release from well fluids and spills from construction equipment are the only sources of contaminants to groundwater.

All construction and well servicing equipment will be monitored and inspected daily for leaks or spills.

Signature: 

Date: 09/20/2022

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Environmental Protection **12/23/2022**

**USFS Erosion Control Plan
Glady well 7427**

Scope of Well Work

- Plug and abandonment of observation well.

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Access Roads

- Upgrade roadways to accommodate equipment as needed.
- Vehicle travel to be confined to existing access roads.
- Existing drainage and road surface to be maintained during planned work activities.
- Upon completion of work, access roads to be restored to pre-existing condition as approved by the USFS.

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Well Site

- All equipment, tanks, material, vehicles to be confined to pre-disturbed perimeter of well site.
- Perform minor grading to accommodate equipment as needed.
- Apply crushed limestone on well site as needed to stabilize soils and equipment.
- Use portable toilets during plugging and abandonment activities.
- Remove all pipe to below ground level.
- Remove gathering lines associated with the well (to the transmission line).
- Survey and set (offset) monument marker for well bore location.
- Clean up and properly dispose of all trash generated by project.
- Ensure proper collection, storage, and disposal of all fluids off Forest Service lands.
- Remove surface structures.
- Upon completion of work, minor grading, raking, seeding, fertilizing, and mulching to be performed to restore site to pre-existing condition.
- After reclamation, reshape and clean all ditches and dips, clean culverts on access road, reshape and repair the road surface.
- Leave the locked gate on the roadway as is.

Seed Mix

Timothy	7 lbs/acre
Kentucky Bluegrass	7 lbs/acre
Winter Wheat (6/15 – 11/15) or Spring Wheat (2/15 – 6/15)	12 lbs/acre
Annual Rye (6/15 – 11/15) or Oats (2/15 – 6/15)	14 lbs/acre
Alfalfa (pre-inoculated)	10 lbs/acre
Durana Clover (pre-inoculated)	3 lbs/acre
Mammoth Red Clover (pre-inoculated)	5 lbs/acre
Chicory	2 lbs/acre

Total seeding rate @ 60 lbs/acre

12/23/2022

47083001090

Fertilizer 10-20-10 @ 500 lbs/acre
Agriculture lime or pellets @ 3 ton/acre
Mulch – weed free straw @ 1500 lbs/acre

Misc

- Earth moving equipment to be pressure washed prior to entering Monongolia National Forest (MNF). Road vehicles to be pressure washed prior to entering MNF if there is a buildup of soil underneath or on the vehicle.

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USFS Erosion Control Plan

Glady well 7427

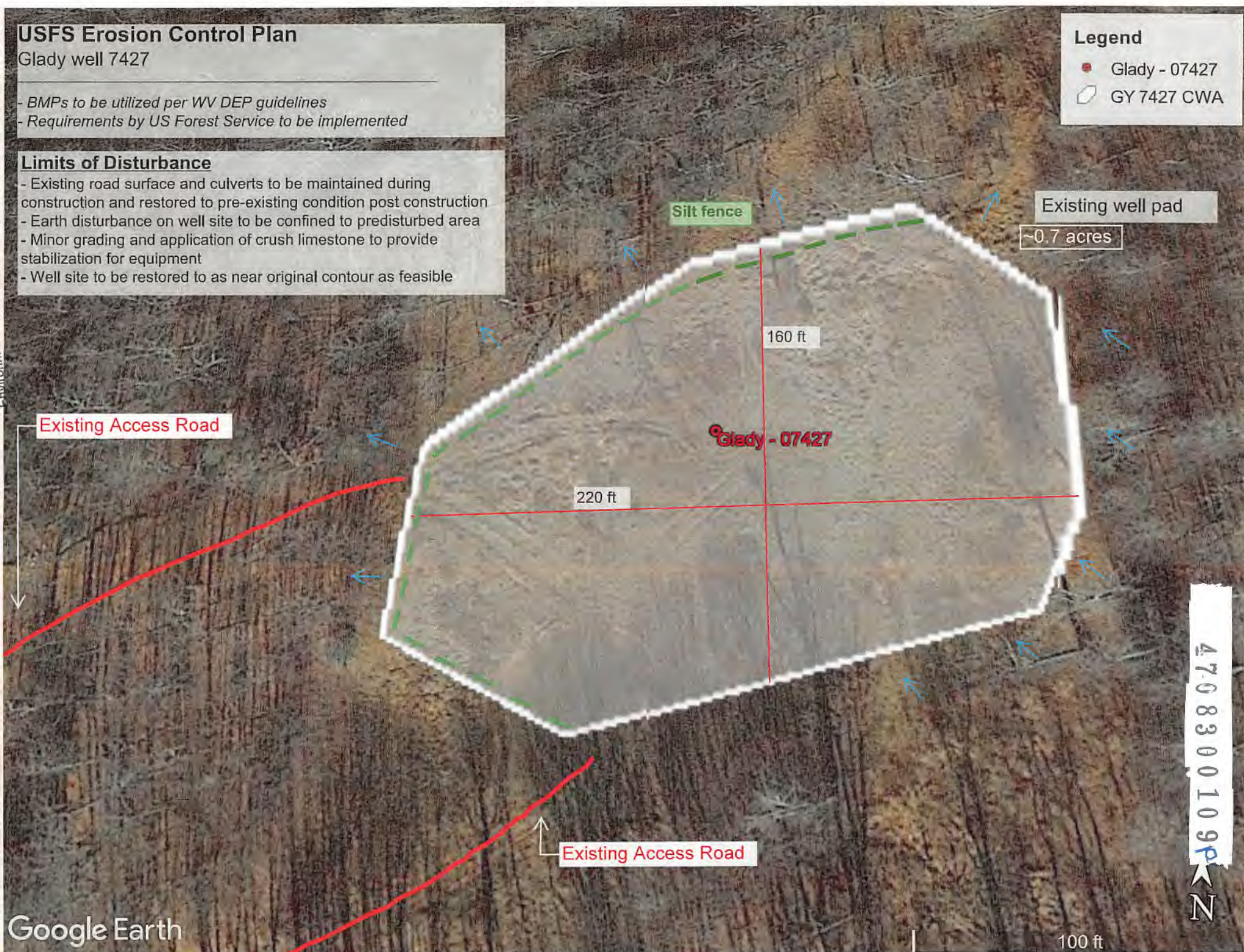
- BMPs to be utilized per WV DEP guidelines
- Requirements by US Forest Service to be implemented

Limits of Disturbance

- Existing road surface and culverts to be maintained during construction and restored to pre-existing condition post construction
- Earth disturbance on well site to be confined to predisturbed area
- Minor grading and application of crush limestone to provide stabilization for equipment
- Well site to be restored to as near original contour as feasible

Legend

- Glady - 07427
- GY 7427 CWA



Existing well pad

~0.7 acres

Silt fence

160 ft

220 ft

Glady - 07427

Existing Access Road

Existing Access Road

4708300109
N

100 ft

Google Earth

WV DEP Reclamation Plan - Site Detail

Glady well 7427 (API 47-083-00109)

- BMPs and erosion control devices to be utilized per WV DEP guidelines and Columbia's WV Environmental Construction Standards
- Existing drainage, culverts, and road ditches to be maintained
- Minor grading and surface material to be applied as needed

Legend

- Glady - 07427
- GY 7427 CWA

Limit of Proposed Disturbance
on existing well site

~0.7 acres

Glady - 07427

Existing Access Road

46010088047

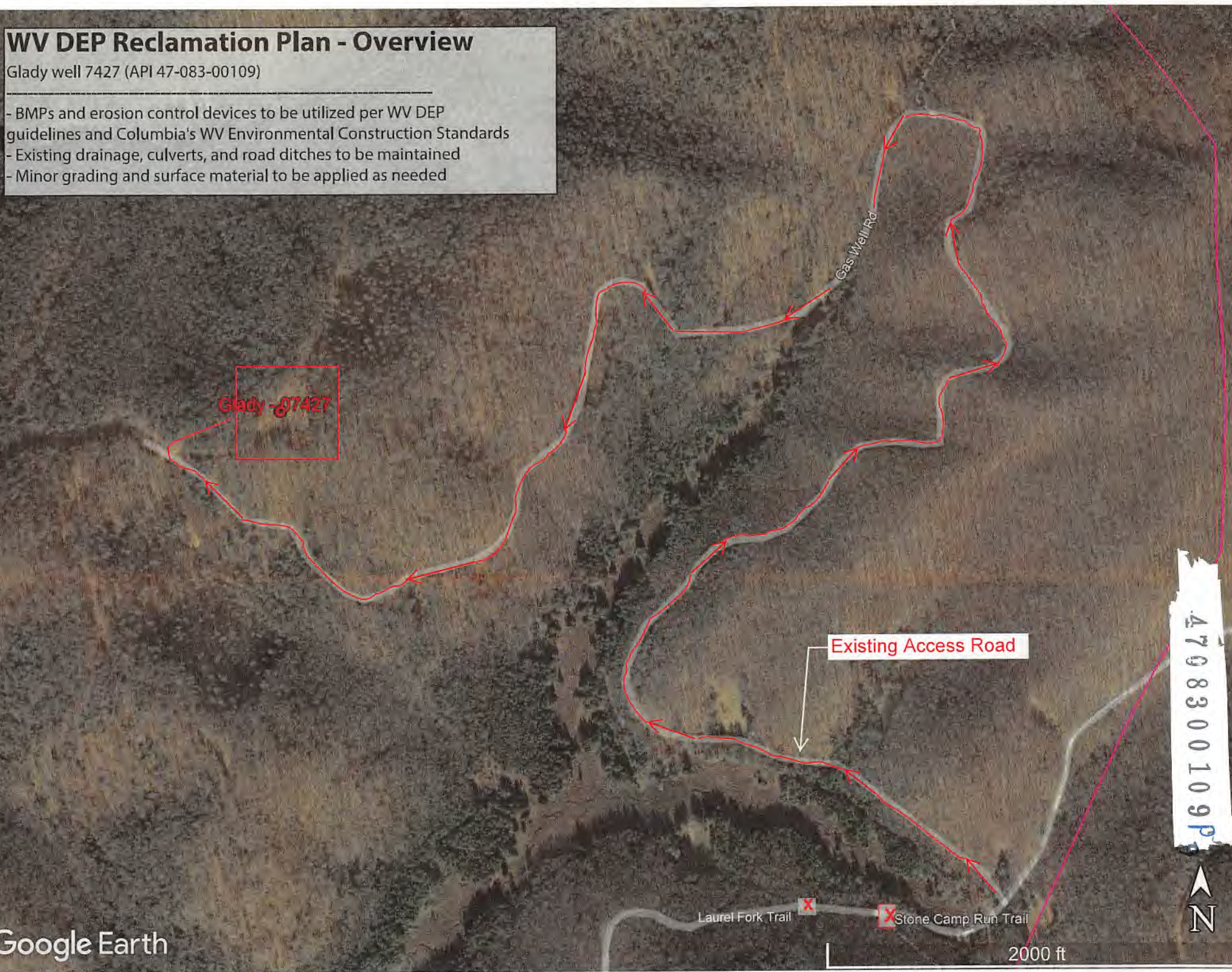


200 ft

WV DEP Reclamation Plan - Overview

Glady well 7427 (API 47-083-00109)

- BMPs and erosion control devices to be utilized per WV DEP guidelines and Columbia's WV Environmental Construction Standards
- Existing drainage, culverts, and road ditches to be maintained
- Minor grading and surface material to be applied as needed



Glady - 7427

Existing Access Road

4708300109P

Laurel Fork Trail

Stone Camp Run Trail

2000 ft



(ELKINS)



4708300109P

GLADY QUADRANGLE
WEST VIRGINIA
TOPOGRAPHIC SERIES

(HARMAN)

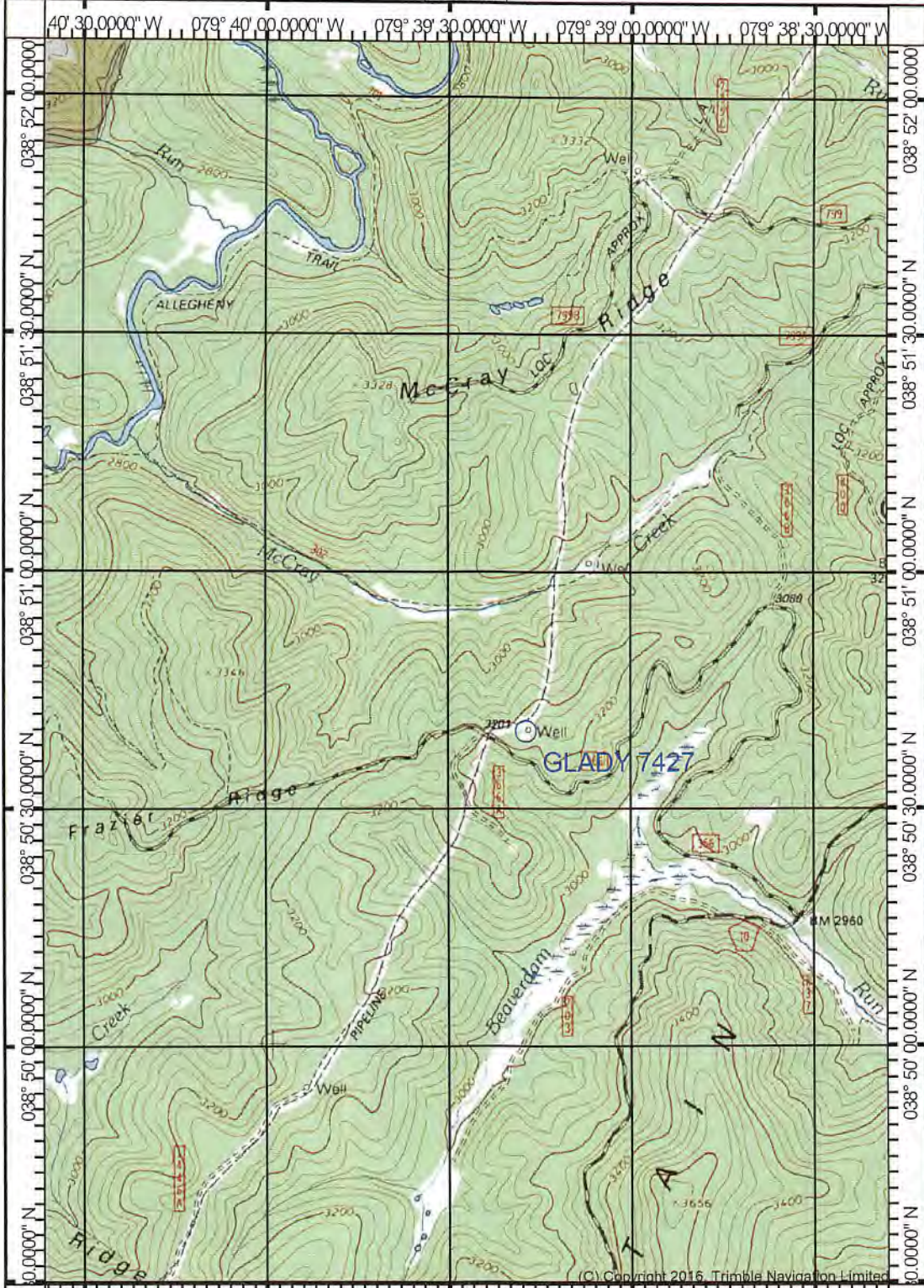
079° 40' 36.6057" W
038° 52' 06.9111" N

(BOWDEN)

079° 38' 17.3024" W
038° 52' 06.9111" N

(BEVERLY EAST)

(WHITMER)



(C) Copyright 2016, Trimble Navigation Limited

038° 49' 29.1327" N
079° 40' 36.6057" W

(SINKS OF GANDY)
SCALE 1:24000

Printed: Tue May 24, 2022

038° 49' 29.1327" N
079° 38' 17.3024" W

(WILDELL)

(SPRUCE KNOB)

Produced by Trimble Terrain Navigator Pro
Topography based on USGS 1:24,000
Maps

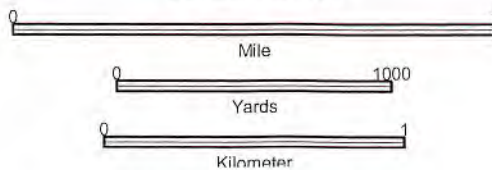
North American 1983 Datum (NAD83)

To place on the predicted North American
1927 move the projection lines 12M N and
19M E

Declination



GN 0.84° E
MN 9.14° W

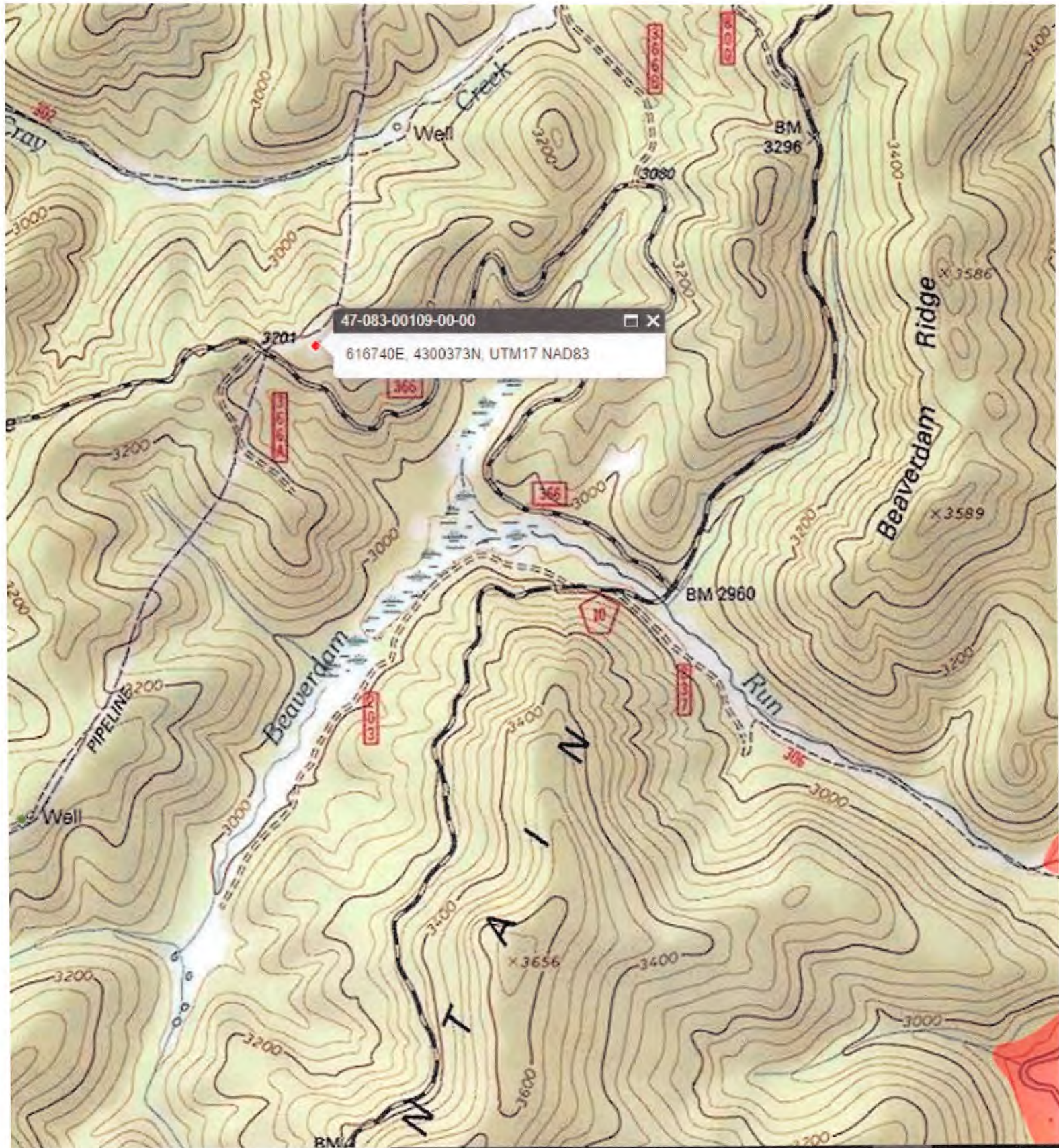


CONTOUR INTERVAL 40 FT

38079-G5-TM-024
GLADY, WV
JAN 1, 1998

12/23/2022

4708300109P



12/23/2022



Stansberry, Wade A <wade.a.stansberry@wv.gov>

Plugging Vertical Well Work Permit API: 47-083-00109) Corrected

1 message

Stansberry, Wade A <wade.a.stansberry@wv.gov>

Tue, Dec 20, 2022 at 3:09 PM

To: Maria Medvedeva <maria_medvedeva@tcenergy.com>, Phyllis Yokum <pyokum@assessor.state.wv.us>, "Knitowski, Gayne J" <gayne.j.knitowski@wv.gov>

Here is the correct document.



I have attached a copy of the newly issued well [permit](#) number. This will serve as your copy.

47-083-00109 - 7427

If you have any questions, then [please](#) contact us here at the Office of Oil and Gas.

Thank you,

Wade A. Stansberry**Environmental Resource Specialist 3****West Virginia Department of Environmental Protection****Office of Oil & Gas****601 57th St. SE****Charleston, WV 25304****(304) 926-0499 ext. 41115****(304) 926-0452 fax****Wade.A.Stansberry@wv.gov**

2 attachments **47-083-00109 - Copy.pdf**
3389K **IR-8 Blank.pdf**
237K**12/23/2022**