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west virginia department of environmental protection

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

Harold D. Ward, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Wednesday, August 25, 2021  
WELL WORK PLUGGING PERMIT  
Vertical Plugging

CENTURY MINING, LLC  
7004 BUCKHANNON RD.  
VOLGA, WV 26238

Re: Permit approval for 10628  
47-001-00184-00-00

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: 10628  
Farm Name: BOYERS, GIDEON  
U.S. WELL NUMBER: 47-001-00184-00-00  
Vertical Plugging  
Date Issued: 8/25/2021

## 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.

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### CONDITIONS

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1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
3. Well work activities shall not constitute a hazard to the safety of persons.

1) Date July, 14, 2021  
2) Operator's Well No. 10628  
3) API Well No. 47-001 - 00184

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 X or Underground storage \_\_\_) Deep \_\_\_/ Shallow \_\_\_

5) Location: Elevation 1290.25 Watershed Left Branch of Gnatty Creek  
District Union County Barbour Quadrangle Century

6) Well Operator Previously Plugged 7) Designated Agent Gary Miles  
Address \_\_\_\_\_ Address 7004 Buckhannon Road  
Volga, WV 26238

8) Oil and Gas Inspector to be notified Name Samuel D. Ward  
Address P.O. Box 2327  
Buckhannon, WV 26201  
9) Plugging Contractor Name CJ's Well Service, Inc.  
Address P.O. Box 133  
Rowe, VA 24646

10) Work Order: The work order for the manner of plugging this well is as follows:  
PREVIOUSLY PLUGGED 10/18/2001

- Move to site FOLLOW MSHA 101C EXEMPTION
- The well record shows that this well was plugged using cement and gel.
- Bore to a depth of 1,203 feet (Approximately 400' below the lowest coal seam).
- Cement hole from 1,203' to surface with expandable cement.
- Rig down and set monument as required by WV DEP.

All cement plugs will be Class A cement with no more than 3% CaCl<sub>2</sub>. UNLESS

RECEIVED  
Office of Oil and Gas

JUL 19 2021

EXPANDING CEMENT IS NEEDED PER MSHA 101C EXEMPTION

JWA

WV Department of  
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 [Signature] Date 7/15/2021

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Mine Safety and Health Administration (MSHA)

47-001-00184 P

ENGLISH SPANISH

MSHA HOME [PETITION - DOCKET NO. M-2020-010-C](#)

# Petition - Docket No. M-2020-010-C

April 30, 2021

In the matter of: Petition for Modification

Century Mining LLC Longview Mine

I.D. No. 46-09447

Docket No. M-2020-010-C

MSHA 101C  
EXEMPTION

## PROPOSED DECISION AND ORDER

On June 26, 2020, a petition was filed seeking a modification of the application of 30 C.F.R. § 75.1700 to Century Mining LLC's Longview mine located in Barbour County, West Virginia. The Petitioner filed the petition to permit an alternative method of compliance with the standard with respect to vertical oil and gas wells and surface directional drilled (SDD) wells<sup>1</sup> into the underground coal seams. The Petitioner alleges that the proposed alternative method will at all times guarantee no less than the same measure of protection afforded miners under 30 C.F.R. § 75.1700 as that provided by the standard, which states:

§ 75.1700 Oil and gas wells.

Each operator of a coal mine shall take reasonable measures to locate oil and gas wells penetrating coalbeds or any underground area of a coal mine. When located, such operator shall establish and maintain barriers around such oil and gas wells in accordance with State laws and regulations, except that such barriers shall not be less than 300 feet in diameter, unless the Secretary or his authorized representative permits a lesser barrier consistent with the applicable State laws and regulations where such lesser barrier will be adequate to protect against hazards from such wells to the miners in such mine, or unless the Secretary or his authorized representative requires a greater barrier where the depth of the mine, other geologic conditions, or other factors warrant such a greater barrier.

The petition addresses items for which District Manager approval is required, procedures for cleaning out and preparing oil and gas wells prior to plugging or re-plugging, procedures for plugging or re-plugging oil or gas wells to the surface, procedures for plugging or re-plugging oil or gas wells for use as degasification boreholes, alternative procedures for preparing and plugging or re-plugging oil or gas 1 The extraction of methane from coal seams and surrounding strata is a rapidly growing component of the domestic natural gas supply. Recent innovations in drilling techniques have resulted in development of several types of wells and production methods to extract coalbed methane (CBM) resources. The wells are drilled from the surface using directional drilling technology to develop horizontal branches within the coal seam being mined. Drill holes may be deviated in both the horizontal and vertical planes using these techniques. Multiple horizontal

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Although MSHA has granted modifications of this standard at different mines over the years, changing circumstances in oil and gas drilling technology and practices compels MSHA to reconsider the safest approach to mining around or through such wells. In recent years, changes in hydraulic fracturing (fracking) technology, marketplace and resource conditions have led to an increase in the number and depth of oil and gas wells penetrating the Pittsburgh and other coal seams. Since deeper wells are usually associated with higher well pressures, modifications of § 75.1700 must include appropriate measures to better protect miners. In addition to the risks associated with higher well pressures, MSHA is concerned that operators may be preparing and plugging wells to inadequate depths for convenience or to lower costs, which may result in reduced safety for miners.

This PDO addresses these concerns as they affect the Longview mine. There are several differences between the petitioner's proposal and the amended terms and conditions set forth by MSHA. The essential changes include:

1. Making a diligent effort to clean out the well bore to the original total depth. MSHA believes that cleaning wells to the original total depth provides miners with a higher degree of safety by ensuring all gas producing zones have been effectively sealed.
2. Unknown total depth: If the total depth of the well is unknown the operator must contact the District Manager before proceeding. MSHA believes, by including this step in the process, that miner safety will be better served because the petitioner and the District Manager can work together to evaluate the conditions of the well to be plugged as well as the safest way to accomplish the plugging.
3. Inadvertently intersecting an uncharted gas well: MSHA believes such an occurrence presents a hazard to the mine and the environment, requiring immediate cessation of mining, de-energizing power, notifying MSHA, and taking corrective action as dictated by the specific occurrence.
4. Requirement that the Longview mine ventilation plan and ventilation map provides SDD well information, and the plan provides specific information regarding SDD well plugging or replugging procedures.

Wells vary in depth. The petitioner's proposed alternate method does not specify the depths of wells to be plugged, only that the operator will plug wells to 200 feet below the lowest mineable coal seam. The terms and conditions required by MSHA will prepare these wells for safe intersection by making a diligent effort to clean the wells to the original total depth, removing all casing and plugging to the total depth by pumping expanding cement slurry and pressurizing to at least 200 psi. If the total depth cannot be reached and casing cannot be removed, these alternative methods included in this proposed decision and order have proven safe and effective when properly implemented.

Therefore, the terms and conditions as amended by MSHA will at all times guarantee no less than the same measure of protection afforded the miners under 30 CFR 75.1700 for wells at least 2,000 to 4,000 feet or greater in depth, as well as SDD wells and branches.

On the basis of the petition, comments received, and the findings of MSHA's investigation, Century Mining LLC is granted a modification of the application of 30 C.F.R. § 75.1700 to its Longview mine.

#### ORDER

Under the authority delegated by the Secretary of Labor to the Administrator for Mine Safety and Health Enforcement, and under § 101(c) of the Federal Mine Safety and Health Act of 1977, 30 U.S.C. § 811(c), and 30

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District Manager determines that the proposed barrier reduction is reasonable, he will provide his approval, and the mine operator may then mine within the safety barrier of the well.

d. In the event an uncharted well is inadvertently mined into, mining shall cease immediately on the section, electrical power shall be deenergized in the affected area, and MSHA shall be notified immediately via the emergency phone number posted on MSHA's website for reporting of this hazardous condition. In addition to its potential for liberating methane, the well may also be an open connection from the mine to the surface that presents a hazard to the mine and the environment. The District will respond with a timely investigation, issue a K Order if needed, and allow resumption of mining once a suitable action plan is in place.

e. The terms and conditions of this Order apply to all types of underground coal mining.

## 2. MANDATORY PROCEDURES FOR CLEANING OUT, PREPARING, PLUGGING, AND RE-PLUGGING OIL OR GAS WELLS

### a. MANDATORY PROCEDURES FOR CLEANING OUT AND PREPARING VERTICAL OIL AND GAS WELLS PRIOR TO PLUGGING OR RE- PLUGGING

The mine operator shall test for gas emissions inside the hole before cleaning out, preparing, plugging, and re-plugging oil and gas wells. The District Manager shall be contacted if gas is being produced.

(1) A diligent effort shall be made to clean the well to the original total depth. The mine operator shall contact the District Manager prior to stopping the operation to pull casing or clean out the total depth of the well.

If this depth cannot be reached, and the total depth of the well is less than 4,000 feet, the operator shall completely clean out the well from the surface to at least 200 feet below the base of the lowest mineable coal seam, unless the District Manager requires cleaning to a greater depth based on his judgment as to what is required due to the geological strata, or due to the pressure within the well. The operator shall provide the District Manager with all information it possesses concerning the geological nature of the strata and the pressure of the well. If the total depth of the well is 4,000 feet, or greater, the operator shall completely clean out the well from the surface to at least 400 feet below the base of the lowest mineable coal seam. Wells of this greater depth are under greater pressure, so the 400 feet requirement provides greater protection for miners. The operator shall remove all material from the entire diameter of the well, wall to wall. If the total depth of the well is unknown and there is no historical information, the mine operator must contact the District Manager before proceeding.

(2) The operator shall prepare down-hole logs for each well. Logs shall consist of a caliper survey, a gamma log, a bond log and a deviation survey for determining the top, bottom, and thickness of all coal seams down to the lowest minable coal seam, potential hydrocarbon producing strata and the location of any existing bridge plug. In addition, a journal shall be maintained describing the depth of each material encountered; the nature of each material encountered; bit size and type used to drill each portion of the hole; length and type of each material used to plug the well; length of casing(s) removed, perforated or ripped or left in place; any sections where casing was cut or milled; and other pertinent information concerning cleaning and sealing the

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(5) If the upper-most hydrocarbon-producing stratum is within 300 feet of the base of the lowest minable coal seam, the operator shall properly place mechanical bridge plugs as described in subparagraph (a)(4) to isolate the hydrocarbon-producing stratum from the expanding cement plug.

Nevertheless, the operator shall place a minimum of 200 feet (400 feet if the total well depth is 4,000 feet or greater) of expanding cement below the lowest mineable coal seam, unless the District Manager requires a greater distance based on his judgment that it is required due to the geological strata, or due to the pressure within the well.

#### b. MANDATORY PROCEDURES FOR PLUGGING OR RE-PLUGGING OIL OR GAS WELLS TO THE SURFACE

After completely cleaning out the well as specified in paragraph 2(a) above, the following procedures shall be used to plug or re-plug wells:

(1) The operator shall pump expanding cement slurry down the well to form a plug which runs from at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) below the base of the lowest mineable coal seam (or lower if required by the District Manager based on his judgment that a lower depth is required due to the geological strata, or due to the pressure within the well) to the surface. The expanding cement will be placed in the well under a pressure of at least 200 pounds per square inch.

Portland cement or a lightweight cement mixture may be used to fill the area from 100 feet above the top of the uppermost mineable coal seam (or higher if required by the District Manager based on his judgment that a higher distance is required due to the geological strata, or due to the pressure within the well) to the surface.

(2) The operator shall embed steel turnings or other small magnetic particles in the top of the cement near the surface to serve as a permanent magnetic monument of the well. In the alternative, a 4-inch or larger diameter casing, set in cement, shall extend at least 36 inches above the ground level with the API well number engraved or welded on the casing. When the hole cannot be marked with a physical monument (e.g. prime farmland), high-resolution GPS coordinates (one-half meter resolution) are required.

#### c. MANDATORY PROCEDURES FOR PLUGGING OR RE-PLUGGING OIL AND GAS WELLS FOR USE AS DEGASIFICATION WELLS

After completely cleaning out the well as specified in paragraph 2(a) above, the following procedures shall be utilized when plugging or re-plugging wells that are to be used as degasification wells:

(1) The operator shall set a cement plug in the well by pumping an expanding cement slurry down the tubing to provide at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) of expanding cement below the lowest mineable coal seam, unless the District Manager requires a greater depth based on his judgment that a greater depth is required due to the geological strata, or due to the pressure within the well. The expanding cement will be placed in the well under a pressure of at least 200 pounds per square inch. The top of the expanding cement shall extend at least 50 feet above the top of the coal seam being mined, unless the District Manager requires a greater distance based on his judgment that a greater distance is required due to the geological strata, or due to the pressure within the well.

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well wall with expanding (minimum 0.5% expansion upon setting) cement, and shall ensure that these areas contain no voids. If the operator, using a casing bond log, can demonstrate to the satisfaction of the

District Manager that the annulus of the well is adequately sealed with cement, then the operator will not be required to perforate or rip the casing for that particular well, or fill these areas with cement. When multiple casing and tubing strings are present in the coal horizon(s), any casing which remains shall be ripped or perforated and filled with expanding cement as indicated above. An acceptable casing bond log for each casing and tubing string is needed if used in lieu of ripping or perforating multiple strings.

(4) Where the operator determines, and the District Manager agrees, that there is insufficient casing in the well to allow the method outlined in subparagraph (d)(3) to be used, then the operator shall use a horizontal hydraulic fracturing technique to intercept the original well. From at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) below the base of the lowest mineable coal seam to a point at least 50 feet above the seam being mined, the operator shall fracture in at least six places at intervals to be agreed upon by the operator and the District Manager after considering the geological strata and the pressure within the well. The operator shall then pump expanding cement into the fractured well in sufficient quantities and in a manner which fills all intercepted voids.

(5) The operator shall prepare down-hole logs for each well. Logs shall consist of a caliper survey, a gamma log, a bond log and a deviation survey for determining the top, bottom, and thickness of all coal seams down to the lowest minable coal seam, potential hydrocarbon producing strata and the location of any existing bridge plug. The operator may obtain the logs from the adjacent hole rather than the well if the condition of the well makes it impractical to insert the equipment necessary to obtain the log.

(6) A journal shall be maintained describing the depth of each material encountered; the nature of each material encountered; bit size and type used to drill each portion of the hole; length and type of each material used to plug the well; length of casing(s) removed, perforated or ripped or left in place; any sections where casing was cut or milled; and other pertinent information concerning sealing the well. Invoices, work-orders, and other records relating to all work on the well shall be maintained as part of this journal and provided to MSHA upon request.

(7) After the operator has plugged the well as described in subparagraphs (d)(3) and/or (d)(4), the operator shall plug the adjacent hole, from the bottom to the surface, with Portland cement or a lightweight cement mixture. The operator shall embed steel turnings or other small magnetic particles in the top of the cement near the surface to serve as a permanent magnetic monument of the well. In the alternative, a 4-inch or larger casing, set in cement, shall extend at least 36 inches above the ground level.

A combination of the methods outlined in subparagraphs (d)(3) and (d)(4) may have to be used in a single well, depending upon the conditions of the hole and the presence of casings. The operator and the District Manager shall discuss the nature of each hole.

The District Manager may require that more than one method be utilized. The mine operator may submit an

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The ventilation plan shall include the techniques that the mine operator plans to use to prepare the SDD wells for safe intersection, the specifications and steps necessary to implement these techniques, and the required operational precautions that are required when mining within the minimum working barrier. In addition, the ventilation plan will contain any additional information or provisions related to the SDD wells required by the District Manager.

4. Ventilation Map – The ventilation map specified in 30 C.F.R. § 75.372 shall contain the following information:

- i. The surface location of all coalbed methane wells in the active mining area and any projected mining area as specified in 30 C.F.R. § 75.372(b)(14);
- ii. Identifying information of coalbed methane wells (i.e. API hole number or equivalent);
- iii. The date that gas production began from the well;
- iv. The coal seam intersection of all coalbed methane wells;
- v. The horizontal extents in the coal seam of all coalbed methane wells and branches;
- vi. The outline of the probable error of location of all coalbed methane wells; and
- vii. The date of mine intersection and the distance between estimated and actual locations for all intersections of the coalbed methane well and branches.

#### b. MANDATORY PROCEDURES FOR PLUGGING OR REPLUGGING SDD WELLS

The mine operator shall include one or more of the following methods to prepare SDD wells for safe intersection in the mine ventilation plan. The methods approved in the ventilation plan must be completed on each SDD well before mining encroaches on the minimum working barrier around the well or branch of the well in the coal seam being mined.

If methane leakage through subsidence cracks is a problem when retreat mining, the minimum working barrier must be maintained around wells and branches in overlying coal seams or the wells and branches must be prepared for safe intersection as specified in the mine ventilation plan.

1. Cement Plug – Cement may be used to fill the entire SDD hole system. Squeeze cementing techniques are necessary for SDD plugging due to the lack of tubing in the hole. Cement should fill void spaces and eliminate methane leakage along the hole. Once the cement has cured, the SDD system may be intersected multiple times without further hole preparation. Gas cutting occurs if the placement pressure of the cement is less than the methane pressure in the coal seam. Under these conditions, gas will bubble out of the coal seam and into the unset cement creating a pressurized void or series of interconnected pressurized voids. Water cutting occurs when formation water and standing water in the hole invades or displaces the unset cement. Standing water has to be bailed out of the hole or driven into the formation with compressed gas to minimize water cutting. The cement pressure must be maintained higher than the formation pressure until the cement sets to minimize both gas and water cutting. The cementing program in the ventilation plan must address both gas and water cutting.

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specified in the ventilation plan. The MSDS for all gel components and any personal protective equipment and techniques to protect workers from the potentially harmful effects of the gel and gel components should be included in the ventilation plan. A record of the calculated hole volume, gel quantities, gel formulation, pump pressures, and flow rates and times should be retained for each hole that is treated with gel. Other gel chemistries other than organic polymers may be included in the ventilation plan with appropriate methods, parameters, and safety precautions.

3. Bentonite Gel – High-pressure injection of bentonite gel into the SDD system will infiltrate the cleat and butt joints of the coal seam near the well bore and effectively seal these conduits against the flow of methane. Bentonite gel is a thixotropic fluid that sets when it stops moving. Bentonite gel has a significantly lower setting viscosity than polymer gel. While the polymer gel fills and seals the borehole, the lower strength bentonite gel must penetrate the fractures and jointing in the coal seam in order to be effective in reducing formation permeability around the hole. The use of bentonite gel is restricted to depleted CBM applications that have low abandonment pressures and limited recharge potential. In general, these applications will be mature CBM fields with long production histories.

A slug of water should be injected prior to the bentonite gel in order to minimize moisture-loss bridging near the well bore. The volume of gel pumped should exceed the estimated hole volume to ensure that the gel infiltrates the joints in the coal seam for several feet surrounding the hole. Due to the large gel volume and potential problems with premature thixotropic setting, adequately sized pumping units with back-up capacity are required.

Additives to the gel may be required to modify viscosity, reduce filtrates, reduce surface tension, and promote sealing of the cracks and joints around the hole. To reduce the potential for an inundation of bentonite gel, the final level of gel should be approximately the elevation of the coal seam and the remainder of the hole should remain open to the atmosphere until mining in the vicinity of the SDD system is completed. If a water

column is used to pressurize the gel, it must be bailed down to the coal seam elevation prior to intersection. The complete bentonite gel program, including formation infiltration and permeability reduction data, hole pretreatment, gel specifications, additives, gel quantities flow rates, injection pressures and infiltration times, must be specified in the ventilation plan. The ventilation plan should list the equipment used to prepare and pump the gel. The MSDS for all gel components and any personal protective equipment and techniques to protect workers from the potentially harmful effects of the gel and additives should be included in the ventilation plan. A record of hole preparation, gel quantities, gel formulation, pump pressures, and flow rates and times should be retained for each hole that is treated with bentonite gel.

4. Active Pressure Management and Water Infusion - Reducing the pressure in the hole to less than atmospheric pressure by operating a vacuum blower connected to the wellhead may facilitate safe intersection of the hole by a coal mine. The negative pressure in the hole will limit the quantity of methane released into the higher pressure mine atmosphere. If the mine intersection is near the end of a horizontal

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A record of the negative pressures applied to the system, methane liberation, use of packers and any water infusion pressures and application time should be retained for each intersection.

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Remedial work – If problems are encountered in preparing the holes for safe intersection, then remedial measures must be taken to protect the miners. For example: if only one-half of the calculated hole volume of cement could be placed into a SDD well due to hole blockage, holes should be drilled near each branch that will be intersected and squeeze cement using pressures sufficient to fracture into the potentially empty SDD holes. The District Manager will approve remedial work in the ventilation plan on a case-by-case basis.

#### 4. MANDATORY PROCEDURES AFTER APPROVAL HAS BEEN GRANTED BY THE DISTRICT MANAGER TO MINE WITHIN A 100-FOOT DIAMETER BARRIER AROUND WELL OR WITHIN THE MINIMUM WORKING BARRIER AROUND THE SDD WELL OR BRANCH OF THE SDD WELL

- a. A representative of the operator, a representative of the miners, the appropriate State agency, or the MSHA District Manager may request that a conference be conducted prior to intersecting any plugged or re-plugged well. Upon receipt of any such request, the District Manager shall schedule such a conference. The party requesting the conference shall notify all other parties listed above within a reasonable time prior to the conference to provide opportunity for participation. The purpose of the conference shall be to review, evaluate, and accommodate any abnormal or unusual circumstance related to the condition of the well or surrounding strata when such conditions are encountered.
- b. The operator shall intersect a well on a shift approved by the District Manager. The operator shall notify the District Manager and the miners' representative in sufficient time prior to intersecting a well in order to provide an opportunity to have representatives present.
- c. When using continuous mining methods, the operator shall install drivage sights at the last open crosscut near the place to be mined to ensure intersection of the well. The drivage sites shall not be more than 50 feet from the well. When using longwall mining methods, distance markers shall be installed on 5-foot centers for a distance of 50 feet in advance of the well or branch in the headgate entry and in the tailgate entry.
- d. The operator shall ensure that fire-fighting equipment including fire extinguishers, rock dust, and sufficient fire hose to reach the working face area of the well or branch intersection (when either the conventional or continuous mining method is used) is available and operable during all well or branch intersections. The fire hose shall be located in the last open crosscut of the entry or room. The operator shall maintain the water line to the belt conveyor tailpiece along with a sufficient amount of fire hose to reach the farthest point of penetration on the section. When the longwall mining method is used, a hose to the longwall water supply is sufficient.
- e. The operator shall ensure that sufficient supplies of roof support and ventilation materials shall be available and located at the last open crosscut. In addition, emergency plugs and suitable sealing materials shall be available in the immediate area of the well or branch intersection.
- f. On the shift prior to intersecting the well or branch, the operator shall service all equipment and check it for permissibility. Water sprays, water pressures, and water flow rates used for dust and spark suppression shall be examined and any deficiencies corrected.
- g. The operator shall calibrate the methane monitor(s) on the longwall, continuous mining machine, or

withdrawal of personnel by issuing either a verbal or written order to that effect to a representative of the operator, which order shall include the basis for the order. Operations in the affected area of the mine may not resume until a representative of MSHA permits resumption. The mine operator and miners shall comply with verbal or written MSHA orders immediately. All verbal orders shall be committed to writing within a reasonable time as conditions permit.

s. A copy of this Order shall be maintained at the mine and be available to the miners.

t. If the well or branch is not plugged to the total depth of all minable coal seams identified in the core hole logs, any coal seams beneath the lowest plug will remain subject to the barrier requirements of 30 C.F.R. § 75.1700, should those coal seams be developed in the future.

u. All necessary safety precautions and safe practices according to Industry Standards, required by MSHA regulations and State regulatory agencies having jurisdiction over the plugging site will be followed to provide the utmost protection to the miners involved in the process.

v. All miners involved in the plugging or re-plugging operations will be trained on the contents of this petition prior to starting the process and a copy of this petition will be posted at the well or branch site until the plugging or re-plugging has been completed.

w. Mechanical bridge plugs should incorporate the best available technologies that are either required or recognized by the State regulatory agency and/or oil and gas industry.

x. Within 30 days after this Order becomes final, the operator shall submit proposed revisions for its approved 30 C.F.R. Part 48 training plan to the District Manager. These proposed revisions shall include initial and refresher training on compliance with the terms and conditions stated in the Order. The operator shall provide all miners involved in well or branch intersection with training on the requirements of this Order prior to mining within 150 feet of the next well or branch intended to be mined through.

y. The responsible person required under 30 C.F.R. § 75.1501 Emergency Evacuations, is responsible for well or branch intersection emergencies. The well or branch intersection procedures should be reviewed by the responsible person prior to any planned intersection.

z. Within 30 days after this Order becomes final, the operator shall submit proposed revisions for its approved mine emergency evacuation and firefighting program of instruction required under 30 C.F.R. § 75.1502. The operator will revise the program of instruction to include the hazards and evacuation procedures to be used for well or branch intersections. All underground miners will be trained in this revised plan within 30 days of submittal.

##### 5. MANDATORY PROCEDURES SPECIFIC TO SDD INTERSECTIONS

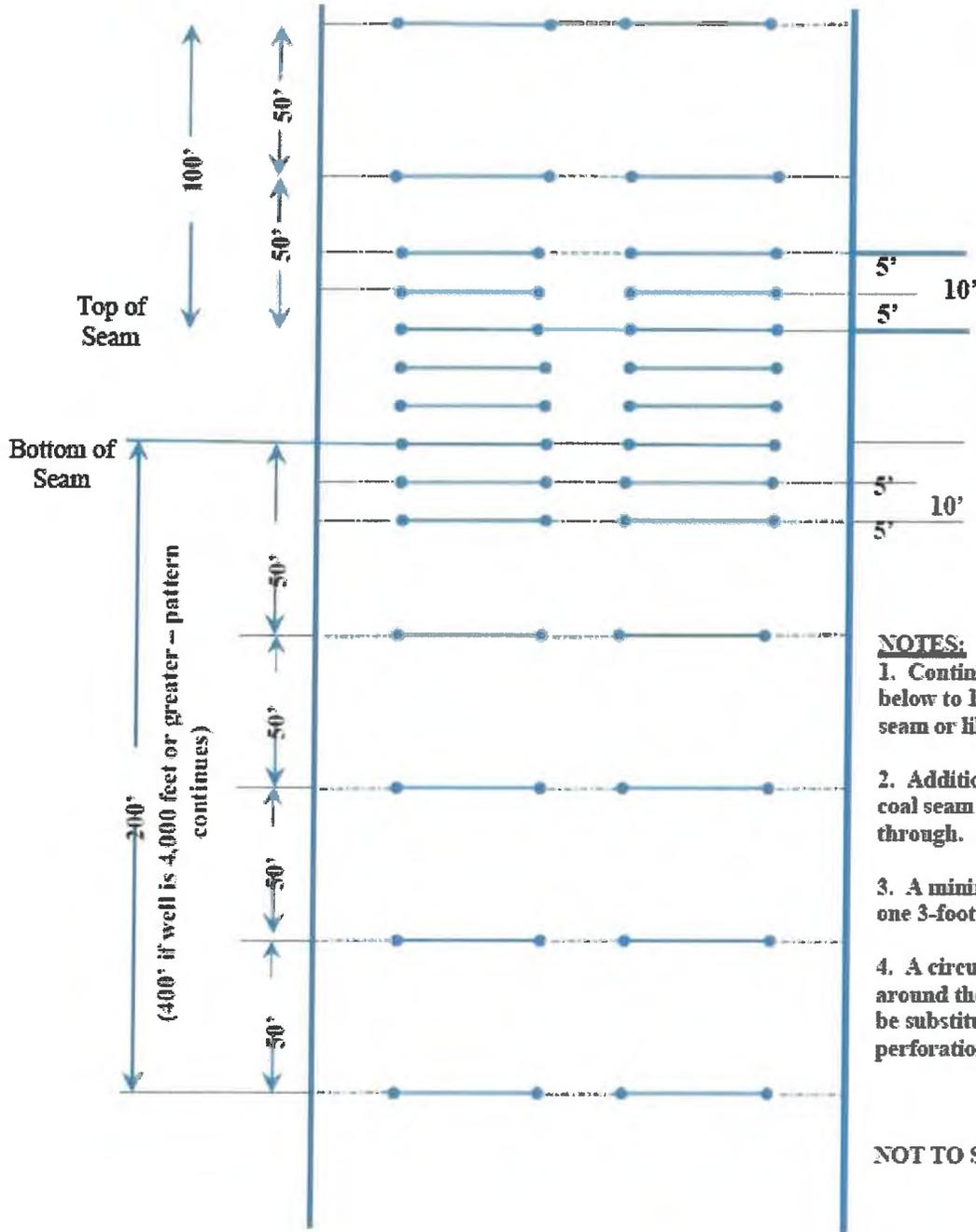
a. Following the initial intersection of a branch of an SDD well, subsequent intersections of the same branch of the SDD well typically have lower risk. Appropriate procedures to protect the miners prior to these subsequent intersections or a given branch shall be specified in the ventilation plan.

b. All intersections with SDD wells and branches that are in intake air courses shall be examined as part of the pre-shift examinations required under 30 C.F.R. § 75.360.

c. All other intersection with SDD wells and branches shall be examined as part of the weekly examinations required under 30 C.F.R. § 75.364.

Any party to this action desiring a hearing on this matter must file in accordance with 30 C.F.R. § 44.14, within 30 days. The request for hearing must be filed with the Administrator for Mine Safety and Health.

### Appendix A



**NOTES:**

- 1. Continuous rip from 10 feet below to 10 feet above coal seam or like sketch.
- 2. Additional rips made across coal seam to facilitate mine through.
- 3. A minimum of 4 shots or one 3-foot rip at each location.
- 4. A circumferential cut around the entire casing may be substituted for the perforation or ripping.

NOT TO SCALE

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

AFFIDAVIT OF PLUGGING AND FILLING WELL

AFFIDAVIT SHOULD BE IN TRIPLICATE, one copy mailed to the Department, one copy to be retained by the Well Operator and the third copy (and extra copies if required) should be mailed to each coal operator at their respective addresses.

Farm name: Boyers, Gideon Operator Well No: Boyers #1 10628

LOCATION: Elevation: 1298' Quadrangle: Century 7.5"  
District: Union County: Barbour  
Latitude: 1,910 Feet South of 39 Deg. 07 Min. 30 Sec.  
Longitude: 11,020' Feet West of 80 Deg. 07 Min. 30 Sec.

Well Type: OIL \_\_\_\_\_ GAS X

Company: Dominion Exploration & Production, Inc. Coal Operator Gebruder, Inc.  
P O Box 1248 or Owner 338 Washington Ave.  
Jane Lew, WV 26378 Clarksburg, WV 26301

Coal Operator \_\_\_\_\_  
or Owner \_\_\_\_\_

Agent: Rodney J. Biggs

Permit Issued Date: 07/05/2001



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WV Department of  
Environmental Protection

AFFIDAVIT

STATE OF WEST VIRGINIA,  
County of Barbour ss:

David L. Johnson being first duly sworn according to law depose and say that they are experienced in the work of plugging and filling oil and gas wells and were employed by the above named well operator, and participated in the work of plugging and filling the above well, and Tim Bennett Oil and Gas Inspector representing the Director, say that said work was commenced on the 18th day of October, 2001, and that the well was plugged and filled in the following manner:

| TYPE   | FROM | TO      | PIPE REMOVED | LEFT         |
|--------|------|---------|--------------|--------------|
| Cement | 4340 | 3906    |              |              |
| Gel    | 3906 | 1234    |              |              |
| Cement | 1234 | 1100    | 4 1/2" 1421' | 4 1/2' 2972' |
| Gel    | 1100 | 846     |              |              |
| Cement | 846  | 746     |              |              |
| Gel    | 746  | 127     |              |              |
| Cement | 127  | Surface |              | 16" 10'      |

Description of monument: 6" Tbg. W/ 1/4" x 12" x 12" plate w/ Well No., Co. Name, API No., Date and that the work of plugging and filling said well was completed on the 22 day of October, 2001.

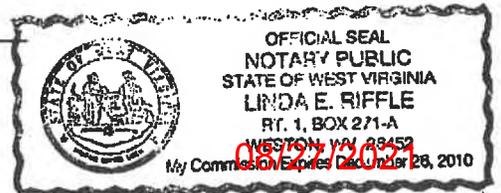
And further deponents saith not.

David L. Johnson

Sworn and subscribe before me this 23rd day of October, 2001

My commission expires: December 26, 2010  
Linda E. Riffle  
Notary Public

Oil and Gas Inspector: Craig Duckworth





STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

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Rotary   
Spudder   
Cable Tools   
Storage

WV Department of Environmental Protection

Oil or Gas Well Gas  
(KIND)

Quadrangle \_\_\_\_\_

Permit No. Bar-184

WELL RECORD

Company Allegheny Land & Mineral Co.  
Address Clarksburg, W. Va.  
Farm Gideon Doyers Acres 170-3/4

Location (waters) \_\_\_\_\_  
Well No. A-259 Elev. 1292  
District Union County Barbour

The surface of tract is owned in fee by Gideon Doyers  
Address Phillipi, W. Va.  
Mineral rights are owned by White  
Address \_\_\_\_\_

Drilling commenced September 17, 1964  
Drilling completed December 22, 1964

Date Shot \_\_\_\_\_ From \_\_\_\_\_ To \_\_\_\_\_  
With \_\_\_\_\_

Open Flow 12/10ths Water in 1 Inch  
/10ths Merc. in \_\_\_\_\_ Inch

Volume 36,000 Cu. Ft.  
Rock Pressure 720 lbs. 48 hrs.  
Oil Show only bbls., 1st 24 hrs.

WELL ACIDIZED \_\_\_\_\_

WELL FRACTURED January 4, 1965 - By Dowell, using kerosene, sand and acid

RESULT AFTER TREATMENT 36,000 gal & 23 gal per 24 hr - Too much oil to get test of

ROCK PRESSURE AFTER TREATMENT 1340 13 hr.  
Fresh Water 1 boiler per hour Feet \_\_\_\_\_ Salt Water None full Feet 1896 to 1903

| Casing and Tubing | Used in Drilling | Left in Well | Packers               |
|-------------------|------------------|--------------|-----------------------|
| Size              |                  |              | Kind of Packer        |
| 16                | 10'              | 10'          |                       |
| 13                |                  |              |                       |
| 10                | 8 1/2'           |              | Size of               |
| 8 3/4             | 1905'            |              |                       |
| 6 3/4             |                  |              | Depth set             |
| 5 3/4             | 4393'            | 4393'        |                       |
| 3                 |                  |              | Perf. top             |
| 2                 |                  |              | Perf. bottom          |
| Liners Used       |                  |              | Perf. top <u>4340</u> |
|                   |                  |              | Perf. bottom          |

CASING CEMENTED 4 1/2" SIZE 391 No. Ft. 18-23-64  
50 bags cement, 6 bags aquajal

COAL WAS ENCOUNTERED AT: \_\_\_\_\_ FEET \_\_\_\_\_ INCHES  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES \_\_\_\_\_ FEET \_\_\_\_\_ INCHES  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES \_\_\_\_\_ FEET \_\_\_\_\_ INCHES

| Formation     | Color | Hard or Soft | Top | Bottom | Oil, Gas or Water | Depth | Remarks           |
|---------------|-------|--------------|-----|--------|-------------------|-------|-------------------|
| Top Soil      |       |              | 0   | 6      |                   |       |                   |
| Gray mud      |       |              | 6   | 18     |                   |       |                   |
| Brown mud     |       |              | 18  | 42     |                   |       |                   |
| Red Rock      |       |              | 42  | 46     |                   |       |                   |
| Gray mud      |       |              | 46  | 54     |                   |       |                   |
| Sand          |       |              | 54  | 59     |                   |       |                   |
| Gray mud      |       |              | 59  | 64     |                   |       |                   |
| Red Rock      |       |              | 64  | 80     |                   |       |                   |
| Sand          |       |              | 70  | 90     |                   |       |                   |
| Gray mud      |       |              | 90  | 118    |                   |       |                   |
| Gray line     |       |              | 118 | 155    |                   |       |                   |
| Red Rock      |       |              | 155 | 198    |                   |       |                   |
| Slate & shale |       |              | 198 | 215    |                   |       |                   |
| Red Rock      |       |              | 215 | 220    |                   |       |                   |
| Slate & shale |       |              | 220 | 240    |                   |       |                   |
| Gritty line   |       |              | 240 | 261    |                   |       |                   |
|               |       |              |     |        | Fresh water       | 130   | 1 boiler per hour |

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08/27/2021

| Formation         | Color | Hard or Soft | Top  | Bottom | Oil, Gas or Water | Depth Found | Remarks    |
|-------------------|-------|--------------|------|--------|-------------------|-------------|------------|
| Slate             |       |              | 635  | 650    |                   |             |            |
| Gritty lime       |       |              | 650  | 660    |                   |             |            |
| Sand              |       |              | 660  | 670    |                   |             |            |
| Slate             |       |              | 670  | 671    |                   |             |            |
| Lime              |       |              | 671  | 678    |                   |             |            |
| Slate             |       |              | 678  | 720    |                   |             |            |
| Lime              |       |              | 720  | 727    |                   |             |            |
| Slate             |       |              | 727  | 731    |                   |             |            |
| Sand              |       |              | 731  | 740    |                   |             |            |
| Slate             |       |              | 740  | 750    |                   |             |            |
| Sand              |       |              | 750  | 757    |                   |             |            |
| Red Lime          |       |              | 757  | 770    |                   |             |            |
| Slate             |       |              | 770  | 802    |                   |             |            |
| Lime              |       |              | 802  | 817    |                   |             |            |
| Slate             |       |              | 817  | 821    |                   |             |            |
| Sand              |       |              | 821  | 845    |                   |             |            |
| Slate             |       |              | 845  | 870    |                   |             |            |
| Sand              |       |              | 870  | 1062   |                   |             |            |
| Slate & shells    |       |              | 1062 | 1135   |                   |             |            |
| Sandy lime        |       |              | 1135 | 1190   |                   |             |            |
| Slate             |       |              | 1190 | 1205   |                   |             |            |
| Lime              |       |              | 1205 | 1216   |                   |             |            |
| Slate & shells    |       |              | 1216 | 1279   |                   |             |            |
| Red Rock          |       |              | 1279 | 1345   |                   |             |            |
| Slate             |       |              | 1345 | 1390   |                   |             |            |
| Marl              |       |              | 1390 | 1430   |                   |             |            |
| Limy slate        |       |              | 1430 | 1450   |                   |             |            |
| Sandy lime        |       |              | 1450 | 1480   |                   |             |            |
| Slate             |       |              | 1480 | 1502   |                   |             |            |
| Red Rock          |       |              | 1502 | 1528   |                   |             |            |
| Slate             |       |              | 1528 | 1545   |                   |             |            |
| Little lime       |       |              | 1545 | 1555   |                   |             |            |
| Pencil cave       |       |              | 1555 | 1575   |                   |             |            |
| Big Lime          |       |              | 1575 | 1672   |                   |             |            |
| Sand              |       |              | 1672 | 1708   | Oil               | 1680-1684   | Show       |
| Red Rock          |       |              | 1708 | 1717   |                   |             |            |
| Sand              |       |              | 1717 | 1755   |                   |             |            |
| Gritty lime       |       |              | 1755 | 1830   |                   |             |            |
| Slate & shells    |       |              | 1830 | 1896   |                   |             |            |
| Sand              |       |              | 1896 | 1965   | Salt water        | 1896-1903   | Hole full  |
| Slate             |       |              | 1965 | 1975   |                   |             |            |
| Sand              |       |              | 1975 | 2028   |                   |             |            |
| Slate             |       |              | 2028 | 2030   |                   |             |            |
| Gritty lime       |       |              | 2030 | 2137   |                   |             |            |
| Red Rock & Lime   |       |              | 2137 | 2418   |                   |             |            |
| Fifth sand        |       |              | 2418 | 2458   |                   |             |            |
| Red rock & shells |       |              | 2458 | 2470   |                   |             |            |
| Slate shells      |       |              | 2470 | 2490   |                   |             |            |
| Sand              |       |              | 2490 | 2510   |                   |             |            |
| Shale shells      |       |              | 2510 | 3215   |                   |             |            |
| Limy sand         |       |              | 3215 | 3230   | Oil               |             |            |
| Slate & shells    |       |              | 3230 | 3956   |                   |             |            |
| Riley sand        |       |              | 3956 | 3992   | Oil               |             |            |
| Lime shells       |       |              | 3992 | 4022   |                   |             |            |
| Gritty lime       |       |              | 4022 | 4312   |                   |             |            |
| lensen sand       |       |              | 4312 | 4348   | Gas               | 4334-38     | 20/10 W 1" |
| Gritty lime       |       |              | 4348 | 4393   | Gas               | 4348        | 10/10 W 1" |
| Total depth       |       |              |      | 4393   | Gas               | 4357        | 12/10 W 1" |

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WW-4A  
Revised 6-07

1) Date: July 14, 2021  
2) Operator's Well Number  
10628  
3) API Well No.: 47 - 001 - 00184

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 NORTH CENTRAL RESOURCES, LLC, Address 7004 Buckhannon Road, Volga, WV 26238, (b) Name, Address, (c) Name, Address  
5) (a) Coal Operator: Name CENTURY MINING, LLC., Address 7004 Buckhannon Road, Volga, WV 26238, (b) Coal Owner(s) with Declaration: Name NORTH CENTRAL RESOURCES, LLC, Address 7004 Buckhannon Road, Volga, WV 26238, (c) Coal Lessee with Declaration: Name, Address  
6) Inspector: Samuel D. Ward, Address P.O. 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 CENTURY MINING, LLC.  
By: GARY MILES - Gary W. Miles  
Its: CHIEF ENGINEER  
Address 7004 Buckhannon Road, Volga, WV 26238  
Telephone 304-809-1167

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Subscribed and sworn before me this 15th day of July, 2021

My Commission Expires 6/14/26

Notary



Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).

08/27/2021

**SURFACE OWNER WAIVER**

47-001-00184 P

Operator's Well  
Number

10628

**INSTRUCTIONS 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 57<sup>th</sup> St. SE  
Charleston, WV 25304  
(304) 926-0450

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**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,

|           |      |  |           |  |
|-----------|------|--|-----------|--|
|           | Date |  | Name      | North Central Resources, LLC   |
| Signature |      |  | By        | Kevin Bealko   |
|           |      |  | Its       | President  |
|           |      |  | Signature |  |
|           |      |  | Date      | 7/15/21<br>08/27/2021  |

**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 X / 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: 7/15/21

*[Signature]*  
By: Kevin Bealko  
Its President

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08/27/2021

WW-9  
(5/16)

47-001-00184P

API Number 47 - 001 - 00184  
Operator's Well No. 10628

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

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Operator Name Century Mining, LLC OP Code \_\_\_\_\_

Watershed (HUC 10) Left Fork of Gnaty Creek Quadrangle Century

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes  No

Will a pit be used? Yes  No

If so, please describe anticipated pit waste: \_\_\_\_\_

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 Tanks and existing ponds.)

SDW  
7/15/2021

Will closed loop system be used? If so, describe: Yes. Gel circulated from tank thru well bore and returned to tank.

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Gel or cement

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

Additives to be used in drilling medium? Bentonite, Bicarbonate of Soda

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Shaker cutting buried on site.

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

-Landfill or offsite name/permit number? N/A

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 Gary Miles  
Company Official (Typed Name) Gary Miles  
Company Official Title Chief Engineer

Subscribed and sworn before me this 15<sup>th</sup> day of July, 2021  
Jessica Oliver  
My commission expires 6/14/26



Proposed Revegetation Treatment: Acres Disturbed 1 Prevegetation pH \_\_\_\_\_

Lime 3 Tons/acre or to correct to pH 6.0

Fertilizer type 10-20-20 or equivalent

Fertilizer amount 500 lbs/acre

Mulch 2 Tons/acre

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Seed Mixtures

**Temporary**

**Permanent**

|                     |            |
|---------------------|------------|
| Seed Type           | lbs/acre   |
| <b>See Attached</b> | <b>100</b> |

|                     |            |
|---------------------|------------|
| Seed Type           | lbs/acre   |
| <b>See Attached</b> | <b>100</b> |

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: SAD W... #

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Title: COG Inspector Date: 7/15/2021

Field Reviewed? ( ) Yes ( X ) No

MR-4 SMA  
North Central Resources, LLC  
Attachment O-9

O-9. PROVIDE A PLANTING PLAN WHICH INCLUDES THE FOLLOWING:

- A. A PREDICTION OF THE MINESOIL CHARACTER BASED ON OVERBURDEN ANALYSIS, SOIL ANALYSIS, AND OTHER AVAILABLE INFORMATION;

A site-specific test of the soils to be used for reclamation will be performed. These tests will be used to determine the amount of lime and fertilizer to be added prior to seeding.

- B. PROPOSED TREATMENT TO NEUTRALIZE ACIDITY;

Soil shall be treated with ground limestone or an equivalent amendment to maintain a pH of 6.0. Liming requirements will be determined by approved testing of soil conducted during or just prior to regrading.

- C. METHOD OF MECHANICAL SEED BED PREPARATION;

A minimum of 6 inches of topsoil material will be spread over the regrade area to provide a suitable base for vegetation. Where and when possible, as promoted by the FRA, the surface soil layer will be four feet deep and only lightly graded. Ability to achieve this FRA surface soil layer depth will be determined by the steepness of the slopes and available material. Heavily compacted areas such as road beds shall be ripped or disked prior to revegetation in order to create a loose growth medium.

- D. APPLICATION RATES AND ANALYSIS OF FERTILIZATION;

Fertilizer shall be at the rate of 600 pounds per acre of 10-20-10 or as required by the results of approved soil testing prior to hydroseeding. Higher levels of application will be applied if specified by post mining soils test analyses. As suggested by the FRA, lower nitrogen fertilizers will be utilized, as this should discourage over growth of ground cover while allowing for optimal tree growth.

- E. APPLICATION RATES AND TYPES OF MULCH;

Mulch will be applied at a rate of 1,000 lbs/acre of wood fiber or wood cellulose. If shredded bark is used, it will be applied at a rate of 50 cy/acre. Straw or hay will be used at 1½ - 2 tons/acre.

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F. APPLICATION RATES AND SPECIES OF PERENNIAL VEGETATION INCLUDING THE HERBACEOUS AND WOODY PLANTS;

| <u>Seed Mixture</u> | <u>Permanent Vegetation</u> |                                    |
|---------------------|-----------------------------|------------------------------------|
|                     | <u>Rate<sup>a</sup></u>     | <u>Seeding time(s)<sup>b</sup></u> |
| Winter Wheat        | 15 lbs/acre                 | Sept – Nov                         |
| Foxtail Millet      | 5 lbs/acre                  | March 1 – June 15                  |
| Redtop              | 2 lbs/acre                  | March 1 – June 15                  |
| Perennial Ryegrass  | 2 lbs/acre                  | March 1 – June 15                  |
| Orchardgrass        | 5 lbs/acre                  | March 1 – June 15                  |
| Weeping Lovegrass   | 2 lbs/acre                  | March 1 – June 15                  |
| Kobe Lespedeza      | 5 lbs/acre                  | March 1 – June 15                  |
| Birdsfoot trefoil   | 10 lbs/acre                 | March 1 – June 15                  |
| White Clover        | 3 lbs/acre                  | March 1 – June 15                  |

<sup>a</sup>Seeding rate suggested is for Pure Live Seed (PLS) in pounds/acre.

<sup>b</sup>Fall and winter seeding mixtures should vary as shown.

<sup>c</sup>Herbaceous legumes must be treated with the appropriate bacterium before seeding.

G. AREAS TO BE PLANTED OR SEEDED TO TREES AND SHRUBS;

All areas shall be revegetated to hayland/pasture.

H. A MAINTENANCE SCHEDULE AND PROCEDURES; AND

During the active life of the mining operation and after final planting has occurred, the areas which were seeded, will be inspected prior to the spring and fall planting seasons. Any areas, which have not met the revegetation success standards, as required by the West Virginia Department of Environmental Protection, shall be reseeded. Reseeding application rates and species shall be the same as those specified herein. A temporary vegetative cover shall be established as contemporaneously as possible with backfilling and grading until a permanent vegetative cover can be established. At a minimum, a temporary or permanent vegetative cover shall be established by the end of the first growing season and a permanent vegetative cover shall be established after the areas have been regraded for final reclamation.

I. A PLAN FOR TEMPORARY VEGETATION COVER TO INCLUDE THE FOLLOWING:

- SPECIES
- SEEDING RATE; AND
- TIMING.

A temporary vegetative cover shall be established as soon as possible in coordination with backfilling and regrading until such a time that permanent vegetative cover shall be established

MR-4 SMA  
 North Central Resources, LLC  
 Attachment O-9 (continued)

and will serve as a form of erosion control. At a minimum, a temporary vegetative cover shall be established by the end of the first growing season and a permanent cover shall be established after associated structures have been removed and the areas have been regraded for final reclamation. The following mixtures, rates and seeding times are outlined below:

| <u>Seed Mixture</u> | <u>Temporary Vegetation</u> |                                    |
|---------------------|-----------------------------|------------------------------------|
|                     | <u>Rate<sup>a</sup></u>     | <u>Seeding time(s)<sup>b</sup></u> |
| Winter Wheat        | 15 lbs/acre                 | Sept – Nov                         |
| Foxtail Millet      | 5 lbs/acre                  | March 1 – June 15                  |
| Redtop              | 2 lbs/acre                  | March 1 – June 15                  |
| Perennial Ryegrass  | 2 lbs/acre                  | March 1 – June 15                  |
| Orchardgrass        | 5 lbs/acre                  | March 1 – June 15                  |
| Weeping Lovegrass   | 2 lbs/acre                  | March 1 – June 15                  |
| Kobe Lespedeza      | 5 lbs/acre                  | March 1 – June 15                  |
| Birdsfoot trefoil   | 10 lbs/acre                 | March 1 – June 15                  |
| White Clover        | 3 lbs/acre                  | March 1 – June 15                  |

<sup>a</sup>Seeding rate suggested is for Pure Live Seed (PLS) in pounds/acre.

<sup>b</sup>Fall and winter seeding mixtures should vary as shown.

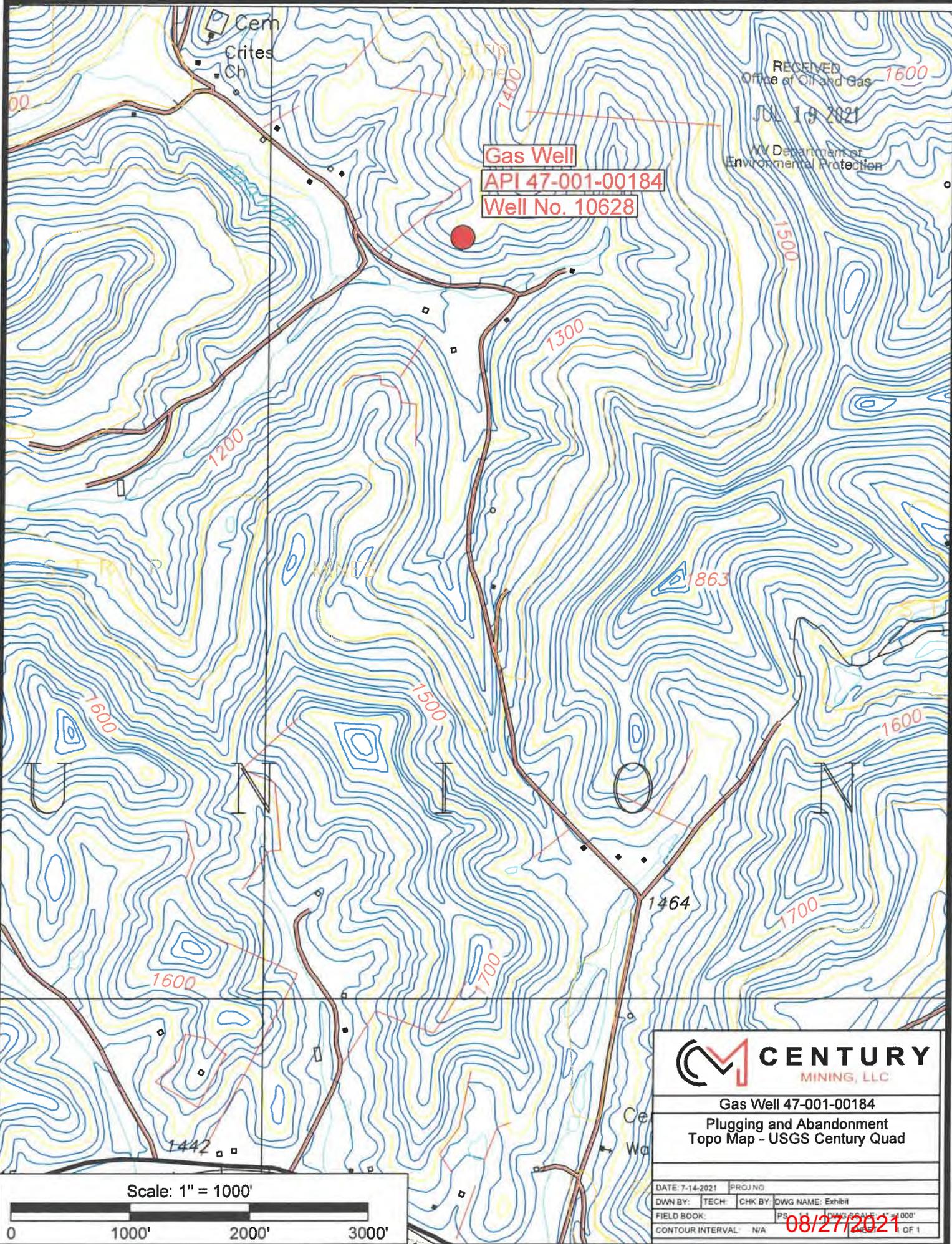
<sup>c</sup>Herbaceous legumes must be treated with the appropriate bacterium before seeding.

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Gas Well  
API 47-001-00184  
Well No. 10628

|                              |                             |
|------------------------------|-----------------------------|
|                              |                             |
| CENTURY MINING, LLC          |                             |
| Gas Well 47-001-00184        |                             |
| Plugging and Abandonment     |                             |
| Topo Map - USGS Century Quad |                             |
| DATE: 7-14-2021              | PROJ NO:                    |
| DWN BY: TECH                 | CHK BY: DWG NAME: Exhibit   |
| FIELD BOOK:                  | PS: 14 DWG SCALE: AT 1:500' |
| CONTOUR INTERVAL: N/A        | 08/27/2021 1 OF 1           |

Scale: 1" = 1000'



47-001-00184P

WW-7  
8-30-06

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West Virginia Department of Environmental Protection  
Office of Oil and Gas

WELL LOCATION FORM: GPS

API: 47-001-00184 WELL NO.: 10628

FARM NAME: Gideon Boyers

RESPONSIBLE PARTY NAME: Gary W. Miles

COUNTY: Barbour DISTRICT: Union

QUADRANGLE: Century

SURFACE OWNER: North Central Resources, LLC

ROYALTY OWNER: North Central Resources, LLC

UTM GPS NORTHING: 4330406.27

UTM GPS EASTING: 572291.47 GPS ELEVATION: 393.27 Meters  
1,290.25 Feet

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

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

Survey grade GPS  : Post Processed Differential \_\_\_\_\_  
Real-Time Differential

Mapping Grade GPS \_\_\_\_\_ : Post Processed Differential \_\_\_\_\_  
Real-Time Differential \_\_\_\_\_

4. Letter size copy of the topography map showing the well location.

I the undersigned, hereby certify this data is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Office of Oil and Gas.

Gary W. Miles  
Signature

Chief Engineer  
Title

7/14/21  
Date

08/27/2021



July 14, 2021

WV Department of Environmental Protection  
Office of Oil & Gas  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304-2345

Re: Permit to Re-Plug and Abandon Well  
API 47-001-00184

Dear Sir:

Please find attached for your review a completed WW-48b Application for a Permit to Re-Plug and Abandon the Well API 47-001-00184. This well is located on Peel Tree Road near Century 2, WV in Barbour County as shown on the attached location map.

If you should have any additional question or need any additional information, please feel free to contact me at your convenience at (304)809-1167.

Respectfully,

A handwritten signature in blue ink that reads 'Gary W. Miles'.

Gary W. Miles  
Chief Engineer  
Century Mining, LLC

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Stansberry, Wade A <[wade.a.stansberry@wv.gov](mailto:wade.a.stansberry@wv.gov)>

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## Plugging Vertical Well Work Permit (API: 47-001-00184)

1 message

---

**Stansberry, Wade A** <[wade.a.stansberry@wv.gov](mailto:wade.a.stansberry@wv.gov)>

Wed, Aug 25, 2021 at 8:13 AM

To: [kjbealko5554@yahoo.com](mailto:kjbealko5554@yahoo.com), "Ward, Samuel D" <[samuel.d.ward@wv.gov](mailto:samuel.d.ward@wv.gov)>, Derick Spencer <[spencer@assessor.state.wv.us](mailto:spencer@assessor.state.wv.us)>

I have attached a copy of the newly issued well [permit](#) number, "10628", API: (47-001-00184). This will serve as your copy.

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](mailto:Wade.A.Stansberry@wv.gov)**

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### 2 attachments

 **IR-8 Blank.pdf**  
157K

 **47-001-00184 - Copy.pdf**  
1873K

08/27/2021