



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

Monday, March 13, 2023
WELL WORK PLUGGING PERMIT
Vertical Plugging

WOLF RUN MINING LLC
100 TYGART DR

GRAFTON, WV 26354

Re: Permit approval for L-61-C
47-001-00129-00-00

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: L-61-C
Farm Name: CORDER, LACO B.
U.S. WELL NUMBER: 47-001-00129-00-00
Vertical Plugging
Date Issued: 3/13/2023

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.

4700100129P

WW-4B
Rev. 2/01

1) Date February 15, 2023
2) Operator's
Well No. 1
3) API Well No. 47-001 - 00129P

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 ___ / Liquid injection ___ / Waste disposal ___ /
(If "Gas, Production ___ or Underground storage ___) Deep ___ / Shallow X
- 5) Location: Elevation 1175' Watershed Simpson Creek
District Pleasant County Barbour Quadrangle Philippi (545)
- 6) Well Operator Wolf Run Mining LLC 7) Designated Agent Charles E. Duckworth
Address 100 Tygart Drive Address 100 Tygart Drive
Grafton, WV 26354 Grafton, WV 26354
- 8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Sam Ward Name Coastal Drilling East, LLC
Address P.O. Box 2327 Address 130 Meadows Ridge Road
Buckhannon, WV 26201 Mt. Morris, PA 15349

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

See Exhibit Nos. 1 and 2 and MSHA 101-C Exemption

Wolf Run Mining LLC (47-001-00288)
Sentinel Mine (MSHA ID# 46-04168)
MSHA 101-C Docket No. M-2009-050-C

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Appropriate coal seam top = LK Seam = 548' ; Approximate coal seam bottom = LK Seam = 553'

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

Work order approved by inspector Samuel D. Ward II Digitally signed by Samuel D. Ward II
Date: 2023.02.22 16:16:59 -05'00' Date 2/22/23

03/17/2023

EXHIBIT NO. 1

From the experience and technology developed since 1970 in plugging oil and gas wells for mining through, Wolf Run Mining LLC will utilize the following method to plug all future wells.

SOLID PLUG METHOD

- ~~a) If active well: clean out to total depth and plug back according to state regulations to a minimum of 200 feet below lowest minable coal seam.~~
- ★ b) If abandoned well: clean out to first plug 200 feet below lowest minable coal seam.
- c) Circulate through tubing or drill steel an expanding cement plug from a minimum of 200 feet below minable coal seam to a point 100 feet above minable coal.

Circulate through tubing or drill steel from 100 feet above coal seam to surface.

A monument will be installed with API No. and stating "solid plug".

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Date: 2023.02.22
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03/17/2023

EXHIBIT II

Coastal Drilling East LLC • 130 Meadow Ridge Road, Mt. Morris, PA 15349

Phone 304-296-1120 Fax 304-413-0061

"A Shaft Drillers International Company"

Mr. Chuck Duckworth
 Gas Well & Property Manager
 Arch Resources, Inc. – Leer and Leer South Mine Complexes
 100 Tygart Drive
 Grafton, WV 26354

Mr. Duckworth,

Below is the proposed plugging plan we discussed that can be used on previously plugged gas wells like the wells we have been MSHA plugging for the last few years. Specific tasks will evolve due to conditions found in field and in the actual wellbore.

Plugging Plan

- Move to site, rig up, mix mud, drill rathole
- Clean out wellbore through the first cement plug, to a point at least 100' below sea level. We may need to cleanout deeper, tagging the top of the next most competent cement plug.
- Run suite of logs to determine casing size, bottom of casing, depth of coal seams, deviation of wellbore and cement bond to casing.
- Cement bottom hole from new TD back to 400' below lowest mineable seam (Clarion and/or Lower Kittanning).
- Perforate, cut, rip or mill any remaining casing at depths determined by MSHA's 101C Petition.
- Clean back to bottom and log wellbore to verify window placement and casing cuts as required.
- Cement hole from top of tagged plug to surface using cement required by MSHA's 101C Petition.
- Rig down and set monument as required by WV OOG.

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Samuel D. Ward
 II

Digitally signed by Samuel D.
 Ward II
 Date: 2023.02.22 16:17:13
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U.S. Department of Labor
DEC 16 2011

In the matter of:
Wolf Run Mining Company
Sentinel Mine
I.D. No. 46-04168

Mine Safety and Health Administration
1100 Wilson Boulevard
Arlington, Virginia 22209-3939

Petition for Modification



MSHA 101C
EXEMPTION

Docket No. M-2009-050-C

Proposed Decision and Order

On October 29, 2009, a petition was filed seeking a modification of the application of 30 C.F.R. § 75.1700 to Petitioner's Sentinel 2 Mine located in Barbour County, West Virginia. The petitioner alleges that the alternative method outlined in the petition will at all times guarantee no less than the same measure of protection afforded by the standard.

Section 30 C.F.R. § 75.1700 provides:

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 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. Drill holes are deviated in both the horizontal and vertical planes using these techniques. These techniques differ from vertical gas wells and require different techniques in order to plug the wells. Procedures to address the potential hazards presented by CBM wells must be implemented to protect the coal miners who will be exposed to these wells. When coal mines intersect inadequately plugged CBM wells, methane inundations, ignitions and explosions are possible.

The alternative method proposed by Petitioner would include well plugging procedures, water infusion and ventilation methods, and procedures for mining through each CBM well and/or its branches.

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Finding of Fact and Conclusion of Law

The Sentinel 2 Mine is an underground coal mine that operates in the Lower Kittanning Seam. The mine includes one slope and two shafts, employs nearly 245 people, and operates three shifts per day, six days per week. The mine currently has three working sections utilizing continuous mining machines. On average, the Sentinel Mine produces 8,000 tons of run-of-mine coal daily. The coal bed ranges from 60 to 108 inches in height and the mine is ventilated by one blowing fan. The second quarter 2011 total liberation results for the mine were 4,139,677 cubic feet of methane in 24 hours.

Sentinel Mine extracts CBM from the coal seam prior to mining in order to reduce methane emissions and, thus, the incidence of face ignitions. 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 branches may be developed from a single well and multiple seams may be developed from a single well. The drilling industry has trademarked several different proprietary names for these drilling processes. For purposes of this Order, these proprietary drilling processes will be referred to as generic "surface directional drilled" (SDD) wells.

On February 16, 2010, MSHA conducted an investigation of Sentinel's petition and filed a report of its findings and recommendations with the Administrator for Coal Mine Safety and Health. Based on information gathered during the investigation, MSHA evaluated Petitioner's proposed alternative method and, as amended by the terms and conditions of MSHA, concluded that it would provide the same measure of protection afforded by 30 C.F.R. § 75.1700. The alternative method has been successfully used to prepare CBM wells for safe intersection by using one or more of the following methods: (1) Cement Plug, (2) Polymer Gel, (3) Bentonite Gel, (4) Active Pressure Management and Water Infusion, and (5) Remedial Work. The alternate method will prevent the CBM well methane from entering the underground mine.

Petitioner's proposed alternative method includes provisions from previously approved petition requests that permit a smaller barrier and/or permit mining through properly plugged oil and gas wells. These alternative methods have proven safe and effective when properly implemented. In addition, Sentinel's petition request also includes additional provisions that are specific to SDD wells.

Accordingly, after a review of the entire record, including the petition and MSHA's investigative report, Wolf Run Mining Company is granted a modification of the application of 30 C.F.R. § 75.1700 to its Sentinel 2 Mine, and this Proposed Decision and Order (PDO) is issued.

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ORDER

Wherefore, pursuant to the authority delegated by the Secretary of Labor to the Administrator for Coal Mine Safety and Health, and pursuant to Section 101(c) of the Federal Mine Safety and Health Act of 1977, 30 U.S.C. § 811(c), and 30 C.F.R. Part 44, a modification of the application of 30 C.F.R. § 75.1700 at the Sentinel 2 Mine is hereby:

GRANTED, to allow mining within or through the 300 foot barrier around SDD oil and gas wells, conditioned upon compliance with the following terms and conditions:

1. DISTRICT MANAGER APPROVAL REQUIRED

A minimum **working barrier of 300 feet in diameter** shall be maintained around all SDD wells until approval to proceed with mining has been obtained from the District Manager. **This barrier extends around all vertical and horizontal branches drilled in the coal seam. This barrier also extends around all vertical and horizontal branches within overlying coal seams subject to caving or subsidence** from the coal seam being mined when methane leakage through the subsidence zone is possible. The District Manager may choose to approve each branch intersection, each well, or a group of wells as applicable to the conditions. The District Manager may require a certified review of the proposed methods to prepare the SDD wells for intersection by a professional engineer in order to assess the applicability of the proposed system(s) to the mine-specific conditions.

2. MANDATORY PROCEDURES FOR PREPARING, PLUGGING, AND REPLUGGING SDD WELLS

a. MANDATORY COMPUTATIONS AND ADMINISTRATIVE PROCEDURES PRIOR TO PLUGGING OR REPLUGGING

1. Probable Error of Location - Directional drilling systems rely on sophisticated angular measurement systems and computer models to calculate the estimated location of the well bore. This estimated hole location is subject to cumulative measurement errors so that the distance between actual and estimated location of the well bore increases with the depth of the hole. Modern directional drilling systems are typically accurate within one or two degrees depending on the specific equipment and techniques. The probable error of location is defined by a cone described by the average accuracy of angular measurement around the length of the hole. For example: a hole that is drilled 500 vertical feet and deviated into a coal seam at a depth of 700 feet would have a probable error of location at a point that is 4,000 feet from the hole collar (about 2,986 ft. horizontally from the well collar) of 69.8 ft. ($4,000 \text{ ft.} \times \sin(1.0$

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degree)) if the average accuracy of angular measurement was one degree and 139.6 ft if the average accuracy of angular measurement was two degrees. In addition to the probable error of location, the true hole location is also affected by underground survey errors, surface survey errors, and random survey errors.

2. Minimum Working Barrier Around Well - For purposes of this Order, the **minimum working barrier** around any coalbed methane well or branches of a coalbed methane well in the coal seam is **50 feet plus the probable error of location**. For example: for a hole that is drilled 500 vertical feet and deviated into a coal seam at a depth of 700 feet using drilling equipment that has an average accuracy of angular measurement of one degree, the probable error of location at a point that is 4,000 feet from the hole collar is 69.8 ft. Therefore, the minimum working barrier around this point of the well bore is 120 ft. (69.8 ft. plus 50 ft., rounded up to the nearest foot). The 50 additional feet is a reasonable separation between the probable location of the well and mining operations. When mining is within the minimum working barrier distance from a coalbed methane well or branch, the mine operator must comply with the provisions of this Order. Coalbed methane wells must be prepared in advance for safe intersection and specific procedures must be followed on the mining section in order to protect the miners when mining within this minimum working barrier around the well. **The District Manager may require a greater minimum working barrier around coalbed methane wells where geologic conditions, historical location errors, or other factors warrant a greater barrier.**

3. Ventilation Plan Requirements - The ventilation plan shall contain a description of all SDD coalbed methane wells drilled in the area to be mined. This description should include the well numbers, the date drilled, the diameter, the casing information, the coal seams developed, maximum depth of the wells, abandonment pressures, and any other information required by the District Manager. All or part of this information may be listed on the 30 C.F.R. § 75.372 map. 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 of more of the following methods to prepare SDD wells for safe intersection in the mine ventilation plan. The methods approved in the ventilation plant 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.

Due to the large volume to be cemented and potential problems with cement setting prior to filling the entire SDD system, adequately sized pumping units with back-up capacity must be used. Various additives such as retarders, lightweight extenders, viscosity modifiers, thixotropic modifiers, and fly ash may be used in the cement mix. The volume of cement pumped should exceed the estimated hole volume to ensure the complete filling of all voids. The complete cementing program, including hole dewatering, cement, additives, pressures, pumping times and equipment must be specified in the ventilation plan. The material safety data sheets (MSDS) for all cements, additives and components and any personal protective equipment and techniques to protect workers from the potentially harmful effects of the cement and cement components should be included in the ventilation plan. Records of cement mixes, cement quantities, pump pressures, and flow rates and times should be retained for each hole plugged.

SDD holes may be plugged with cement years in advance of mining. However, the District Manager shall require suitable documentation of the cement plugging in order to approve mining within the minimum working barrier around coalbed methane wells.

2. Polymer Gel - Polymer gels start out as low viscosity, water-based mixtures of organic polymers that are crosslinked using time-delayed activators to form a water-insoluble, high-viscosity gel after being pumped into the SDD system. Although polymer gel systems never solidify, the activated gel should develop sufficient strength to resist gas flow. A gel that is suitable for treating SDD wells for mine intersection will reliably fill the SDD system and prevent gas-filled voids. Any gel chemistry used for plugging SDD wells should be resistant to bacterial and chemical degradation and remain stable for the duration of mining through a SDD system.

Water may dilute the gel mixture to the point where it will not set to the required strength. Water in the holes should be removed before injecting the gel mixture. Water removal can be accomplished by conventional bailing and then injecting compressed gas to squeeze the water that accumulates in low spots back into the formation. Gas pressurization should be continued until the hole is dry. Another potential problem with gels is that dissolved salts in the formation waters may interfere with the cross-linking reactions. Any proposed gel mixtures must be tested with actual formation waters.

Equipment to mix and pump gels should have adequate capacity to fill the hole before the gel sets. Back-up units should be available in case something breaks while pumping. The volume of gel pumped should exceed the estimated hole volume to ensure the complete filling of all voids and allow for gel to infiltrate the joints in the coal seam surrounding the hole. Gel injection and setting pressures should be specified in the ventilation plan. To reduce the potential for an inundation of gel, the final level of gel should be close to the level 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. Packers may be used to isolate portions of the SDD system.

The complete polymer gel program, including advance testing of the gel with formation water, dewatering systems, gel specifications, gel quantities, gel placement, pressures, and pumping equipment must be 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 branch of the SDD system, air will flow from the mine into the upstream side of the hole and be exhausted through the blower on the surface. On the downstream side of the intersection, if the open hole length is short, the methane emitted from this side of the hole may be diluted to safe levels with ventilation air. Conversely, safely intersecting this system near the bottom of the vertical hole may not be possible because the methane emissions from the multiple downstream branches may be too great to dilute with ventilation air. The methane emission rate is directly proportional to the length of the open hole. Successful application of vacuum systems may be limited by caving of the hole or water collected in dips in the SDD system. Another important factor in the success of vacuum systems is the methane liberation rate of the coal formation around the well – older, more depleted wells that have lower methane emission rates are more amenable to this technique. The remaining methane content and the formation permeability should be addressed in the ventilation plan.

Packers may be used to reduce methane inflow into the coal mine after intersection. All packers on the downstream side of the hole must be equipped with a center pipe so that the inby methane pressure may be measured or so that water may be injected. Subsequent intersections should

not take place if pressure in a packer-sealed hole is excessive. Alternatively, methane produced by the downstream hole may be piped to an in-mine degas system to safely transport the methane out of the mine or may be piped to the return air course for dilution. In-mine methane piping should be protected as stipulated in "Piping Methane in Underground Coal Mines," MSHA IR 1094, (1978). Protected methane diffusion zones may be established in return air courses if needed. Detailed sketches and safety precautions for methane collection, piping and diffusion systems must be included in the ventilation plan (30 C.F.R. § 75.371(ee)).

Water infusion prior to intersecting the well will temporarily limit methane flow. Water infusion may also help control coal dust levels during mining. High water infusion pressures may be obtained prior to the initial intersection by the hydraulic head resulting from the hole depth or by pumping. Water infusion pressures for subsequent intersections are limited by leakage around in-mine packers and limitations of the mine water distribution system. If water infused prior to the initial intersection, the water level in the hole must be lowered to the coal seam elevation before the intersection.

The complete pressure management strategy including negative pressure application, wellhead equipment, and use of packers, in-mine piping, methane dilution, and water infusion must be specified in the ventilation plan. Procedures for controlling methane in the downstream hole must be specified in the ventilation plan. The remaining methane content and formation permeability should be addressed in the ventilation plan. The potential for the coal seam to cave into the well should be addressed in the ventilation plan. Dewatering methods should be included in the ventilation plan. 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.

5. 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 cemented 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.

3. **MANDATORY PROCEDURES AFTER APPROVAL HAS BEEN GRANTED BY THE DISTRICT MANAGER TO MINE WITHIN THE MINIMUM WORKING BARRIER AROUND THE WELL OR BRANCH OF THE WELL**
- a. The mine operator, the District Manager, the miners' representative, or the State may request a conference prior to any intersection or after any intersection to discuss issues or concerns. Upon receipt of any such request, the District Manager shall schedule 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.
 - b. The mine operator must notify the District Manager, the State and the miners' representative at least 48 hours prior to the intended intersection of any coalbed methane well.
 - c. The initial intersection of a well or branch of a well typically has a higher risk than subsequent intersections. The initial intersection typically indicates if the well preparation is sufficient to prevent the inundation of methane. For the initial intersection of a well or branch, the following procedures are mandatory:
 1. When mining advances within the minimum barrier distance of the well or branches of the well, the entries that will intersect the well or branches must be posted with a readily visible marking. For longwalls, both the head and tailgate entries must be so marked. Marks must be advanced to within 100 feet of the working face as mining progresses. Marks will be removed after well or branches are intersected in each entry or after mining has exited the minimum barrier distance of the well.
 2. Entries that will intersect vertical segments of a well shall be marked with drivage sights in the last open crosscut when mining is within 100 feet of the well. When a vertical segment of a well will be intersected by a longwall, drivage sights shall be installed on 10-foot centers starting 50 feet in advance of the anticipated intersection. Drivage sights shall be installed in both the headgate and tailgate entries of the longwall.
 3. The operator shall ensure that fire-fighting equipment, including fire extinguishers, rock dust, and sufficient fire hose to reach the working fact are of the mine-through (when either the conventional or the continuous mining method is used) is available and operable

during all well mine-throughs. 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. All fire hoses shall be connected and ready for use, but do not have to be charged with water, during the cut-through.

4. The operator shall ensure that sufficient supplies of roof support and ventilation materials are available at the working section. In addition, emergency plugs, packers, and setting tools to seal both sides of the well or branch shall be available in the immediate area of the cut-through.
5. When mining advances within the minimum working barrier distance from the well or branch of the well, the operator shall service all equipment and check for permissibility at least once daily. Daily permissibility examinations must continue until the well or branch is intersected or until mining exits the minimum working barrier around the well or branch.
6. When mining advances within the minimum working barrier distance from the well or branch of the well, the operator shall calibrate the methane monitor(s) on the longwall, continuous mining machine, or cutting machine and loading machine at least once daily. Daily methane monitor calibration must continue until the well or branch is intersected or until mining exits the minimum working barrier around the well or branch.
7. When mining is in progress, the operator shall perform tests for methane with a handheld methane detector at least every 10 minutes from the time that mining with the continuous mining machine or longwall face is within the minimum working barrier around the well or branch. During the cutting process, no individual shall be allowed on the return side until the mine-through has been completed and the area has been examined and declared safe. The shearer must be idle when any miners are in by the tail drum.
8. When using continuous or conventional mining methods, the working place shall be free from accumulations of coal dust and coal spillages, and rock dust shall be placed on the roof, rib, and

- floor within 20 feet of the face when mining through the well or branch. On longwall sections, rock dust shall be applied on the roof, rib, and floor up to both the headgate and tailgate gob.
9. Immediately after the well or branch is intersected, the operator shall de-energize all equipment, and the certified person shall thoroughly examine and determine the working place safe before mining is resumed.
 10. After a well or branch has been intersected and the working place determined safe, mining shall continue inby the well a sufficient distance to permit adequate ventilation around the area of the well or branch.
 11. No open flame shall be permitted in the area until adequate ventilation has been established around the well bore or branch. Any casing, tubing or stuck tools will be removed using the methods approved in the ventilation plan.
 12. No person shall be permitted in the area of the mine-through operation inby the last open crosscut during active mining except those actually engaged in the operation, including company personnel, representatives of the miners, personnel from MSHA, and personnel from the appropriate State agency.
 13. The operator shall warn all personnel in the mine to the planned intersection of the well or branch prior to their going underground if the planned intersection is to occur during their shift. This warning shall be repeated for all shifts until the well or branch has been intersected.
 14. The mine-through operation shall be under the direct supervision of a certified person. Instructions concerning the mine-through operation shall be issued only by the certified person in charge.
 15. All miners shall be in known locations and in constant two-way communications with the responsible person under 30 C.F.R. § 75.1501 when active mining occurs within the minimum working barrier of the well or branch.
 16. The responsible person required under 30 C.F.R. § 75.1501 is responsible for well intersection emergencies. The well intersection

procedures must be reviewed by the responsible person prior to any planned intersection.

17. A copy of the order shall be maintained at the mine and be available to the miners.
18. The provisions of this order do not impair the authority of representatives of MSHA to interrupt or halt the mine-through operation and to issue a withdrawal order when they deem it necessary for the safety of the miners. MSHA may order an interruption or cessation of the mine-through operation and/or a withdrawal of personnel by issuing either a verbal or a 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 of mine-through operations. 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.
- d. For subsequent intersections of branches of a well, appropriate procedures to protect the miners shall be specified in the ventilation plan.

4. MANDATORY PROCEDURES AFTER SDD INTERSECTIONS

- a. 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.
- b. 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.

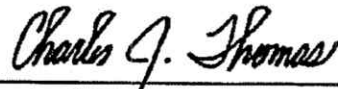
5. OTHER REQUIREMENTS

- a. 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 regarding compliance with the terms and conditions stated in the Order. The operator shall provide all miners involved in the mine-through of a well or branch with training regarding the requirements of this Order prior to mining within the minimum working barrier of the next well or branch intended to be mined through.

- b. 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 by 30 C.F.R § 75.1501. The operator shall revise the program to include the hazards and evacuation procedures to be used for well intersections. All underground miners shall be trained in this revised program within 30 days of the approval of the revised mine emergency evacuation and firefighting program of instruction.

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 Coal Mine Safety and Health, 1100 Wilson Boulevard, Arlington, Virginia 22209-3939.

If a hearing is requested, the request shall contain a concise summary of position on the issues of fact or law desired to be raised by the party requesting the hearing, including specific objections to the proposed decision. A party other than Petitioner who has requested a hearing may also comment upon all issues of fact or law presented in the petition, and any party to this action requesting a hearing may indicate a desired hearing site. If no request for a hearing is filed within 30 days after service thereof, the Proposed Decision and Order will become final and must be posted by the operator on the mine bulletin board at the mine.




Charles J. Thomas
Deputy Administrator for
Coal Mine Safety and Health

Certificate of Service

I hereby certify that a copy of this proposed decision was served personally or mailed, postage prepaid, this 16 day of December, 2011, to:

April Min
ICG, LLC
300 Corporate Center Drive
Scott Depot, WV 25560


Shameka Green
Secretary

cc: Mr. C.A. Phillips, Director, West Virginia Department of Energy, Division of
Mines and Minerals

4700100129P

FORM OC-8

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

AFFIDAVIT OF PLUGGING AND FILLING WELL

AFFIDAVIT SHOULD BE MADE 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 LOCAL OPERATOR AT THEIR RESPECTIVE ADDRESSES.

Pittsburgh Consolidation Coal Co. Union Drilling, Inc.
COAL OPERATOR OR OWNER NAME OF WELL OPERATOR
Fairmont, West Virginia Box 26 Washington, Penna.
Simpson Creek Colliers Co. COMPLETE ADDRESS
P.O. Box 1906, Clarksburg, W. Va. March 22, 1963
Mineral Coal Company WELL AND LOCATION
Philippi, W. Va. Pleasant District
ADDRESS
Laco B. Corder Harbour County
LEASE OR PROPERTY OWNER
Route #2, Flemington, W. Va. Well No. 1
ADDRESS
Laco B. Corder Farm

STATE INSPECTOR SUPERVISING PLUGGING William G. Greenwalt

AFFIDAVIT

STATE OF WEST VIRGINIA,

County of _____ } ss:

Edward Hubbs and Bill Ratliff
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 Union Drilling, Inc., well operator, and participated in the work of plugging and filling the above well, that said work was commenced on the 18th day of March, 1963, and that the well was plugged and filled in the following manner:

BAND OR ZONE RECORD	FILLING MATERIAL	PLUGS USED	CASING	
			SIZE & KIND	CSS PULLED / CSS LEFT IN
Plugging performed by a Service Company				
4546 - 2350	Gel 6% by Volume			
2350	15' Cement Plug			
2350 - 1900	Gel 6% by Volume			
1900	15' Cement Plug			
1900 - 1300	Gel 6% by Volume			
1300	15' Cement Plug			
1300 - 583	Gel 6% by Volume			1131' of 8 5/8"
583 - 528	Cement (30' below to 20' above Coal)			
528 - 156	Gel 6% by Volume			259' of 10-3/4"
156 - 102	Cement (30' below to 20' above Coal)			
102 - 0	Filled to Surface			
COAL BEAMS	DESCRIPTION OF MONUMENT			
(NAME)	12" x 12" Plate Welded On 6" Casing			
(NAME)	Set In Cement Bearing Inscription			
(NAME)	Laco Corder BAR 120 Union Drilling,			
(NAME)	Inc. 1-63			

and that the work of plugging and filling said well was completed on the 21st day of March, 1963.

And further deponents saith not.

Sworn to and subscribed before me this 21st day of March, 1963.

My commission expires 5/3/71



Edward Hubbs
Bill Ratliff
UNION DRILLING, INC.

Notary Public.
Permit No. BAR-129-P

03/17/2023

4700100129P

Form OG-18



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

Quadrangle Phillipi N.E.

WELL RECORD

Permit No. BAR 133-2

Oil or Gas Well Gas

Company Union Drilling, Inc.
 Address Box 231 Washington, Pa.
 Farm Loce R. Gordon Acres 71.25
 Location (waters) _____
 Well No. 61-G No. 1 Elev. 1175
 District Pleasant County Barbour
 The surface of tract is owned in fee by Loce R. Gordon
Route 2 Address Flomington, W. Va.
 Mineral rights are owned by Same
 Address _____
 Drilling commenced 1-27-62
 Drilling completed 3-2-63
 Date Shot From _____ To _____
 With _____
 Open Flow /10ths Water in _____ Inch
 /10ths Merc. in _____ Inch
 Volume 100 Cu. Ft.
 Rock Pressure _____ lbs. _____ hrs.
 Oil _____ bbls. 1st 24 hrs.
 WELL ACIDIZED _____
 WELL FRACTURED No

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16			Kind of Packer
18			
10 3/4	2571		Size of
8 5/8	1131		
6 3/4			Depth set
5 3/16			
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED _____ SIZE _____ No. Ft. _____ Date _____
 COAL WAS ENCOUNTERED AT 122 FEET 43 INCHES
5 1/2 FEET 60 INCHES FEET INCHES
 FEET INCHES FEET INCHES

RESULT AFTER TREATMENT _____
 ROCK PRESSURE AFTER TREATMENT None
 Fresh Water 50' Feet Salt Water 530' - 560' Feet 693'

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Soil			0	5			
White Slate			5	40			
Red Rock			40	60			
Limo			60	80	Water at 50 ft.		
Slate			80	122			
Coal			122	126			
Slate			126	140			
Red Rock			140	160			
Slate			160	235			
Limo			235	255			
Slate			255	410			
Limo			410	457	Water 1 bailer 2 hrs.		
Slate & Shell			457	507			
Limo			507	545			
Coal			545	553			
Limo			553	640	Water 2 bailers 2 hrs.		
Slate			640	655			
Sand			655	854	Water at 594' hole full		
Slate			854	853			
Sand			853	902			
Slate			902	924			
Red			924	930			
Slate			930	1010			
Limo			1010	1025			
Red Rock			1025	1123			
Limo			1123	1137			
Slate			1137	1157			
Limo Red			1157	1175			
Slate & Shells			1175	1330			
			1330	1357			



(over)

RECEIVED
Office of Oil and Gas

FEB 24 2000

WV Department of Environmental Protection

Samuel D. Ward II
Digitally signed by Samuel D. Ward II
Date: 2023.02.22 16:17:33 -0500

03/17/2023

Formation	Color	Hard or Soft	Top /	Bottom	Oil, Gas or Water	Depth Found	Remarks
Lime			1357	1452			
Sand			1452	1553			
Slate & Shell			1553	1657			
Lime			1657	1737			
Sand			1737	1910			
Slate & Shell			1910	1952			
Red Rock			1952	1965			
Sand			1965	1983			
Slate & Shells			1983	2010			
Red Rock			2010	2236			
Sand			2236	2300			
Red Rock			2300	2313			
Sand			2313	2343			
Slate & Shells			2343	2371			
Lime			2371	2970			
Slate & Shells			2770	3212			
Lime			3212	3513	Show of gas at 3235'		
Slate & Shells			3513	3625			
Lime			3625	3695			
Slate & Shells			3695	4234			
Bonson			4234	4244			
Lime			4244	4546			
		TOTAL DEPTH	4546				

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Office of Oil and Gas

FEB 24 2023

WV Department of
Environmental Protection

Date Mar. 5, 1963
 APPROVED Union Drilling, Inc. Owner
 By James W. Sullivan
 (Title) U.P.

Samuel D. Ward II
 Digitally signed by Samuel D. Ward II
 Date: 2023.02.22 16:17:40 -05'00'

03/17/2023



- Table Descriptions
- County Code Translations
- Permit-Numbers Series
- Usage Notes
- Contact Information
- Disclaimer
- WVGES Mail
- Pipeline-Plus

Select County: (001) Barbour (Check All)

Enter Permit #: 00129

Get Data

Select datatypes: Location Production Plugging

Owner/Completion Stratigraphy Sample

Pay/ShowWater Logs Btm Hole Loc

Report Time: Thursday, March 09, 2023 9:13:51 AM

Well: County = 1 Permit = 00129 [Link to all digital records for well](#)

WV Geological & Economic Survey

Location Information: [View Map](#)

API	COUNTY PERMIT TAX DISTRICT	QUAD_75	QUAD_15	LAT_DD	LONG_DD	UTME	UTMN
4700100129	Barbour_129	Pleasant	Phillipi	39.209284	-80.095278	578110.8	4340391.3

There is no Bottom Hole Location data for this well

Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE_LEASE_NUM	MINERAL_OWN	OPERATOR	AT_COMPLETION	PROP_VD	PROP_TRGT_FM	TFM_EST_PR
4700100129	3-/1963		Original Loc	Completed	Laco B Corder	1	61-C		Union Drilling, Inc.				

Completion Information:

API	CMP_DT	SPUD_DT	ELEV DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	KOD	G_BEF	G_AFT	O_BEF	O_AFT	NGL_BEF	NGL_AFT	P_BEF	TL_BEF	P_AFT	T	
4700100129	3-/1963	-/-	1175	Ground Level	Elk Crk(Ovrftd)	Benson	Development	Well	Unsuccessful	Dry w/ Gas Show	unknown	Nat/Open H	4546			0	0	0	0	0	0	0	0	0	0	0

Pay/ShowWater Information:

API	CMP_DT	ACTIVITY	PRODUCT	SECTION	DEPTH_TOP	FM_TOP	DEPTH_BOTTOM	FM_BOTTOM	G_BEF	G_AFT	O_BEF	O_AFT	WATER_QNTY
4700100129	3-/1963	Water	Fresh Water	Vertical	60		60		0	0	0	0	0
4700100129	3-/1963	Water	Fresh Water	Vertical	434		434		0	0	0	0	0
4700100129	3-/1963	Water	Salt Water	Vertical	500		500		0	0	0	0	0
4700100129	3-/1963	Water	Salt Water	Vertical	560		560		0	0	0	0	0
4700100129	3-/1963	Water	Salt Water	Vertical	693		693		0	0	0	0	0

Production Gas Information: (Volumes in Mcf)

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_GAS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4700100129	Union Drilling, Inc.	1982	0	0	0	0	0	0	0	0	0	0	0	0	0
4700100129	Union Drilling, Inc.	1983	0	0	0	0	0	0	0	0	0	0	0	0	0
4700100129	R & B Petroleum, Inc.	2000	2.703	160	391	243	210	186	191	198	295	226	312	130	161
4700100129	EQT Production Company	2018	0	0	0	0	0	0	0	0	0	0	0	0	0
4700100129	EQT Production Company	2020	0	0	0	0	0	0	0	0	0	0	0	0	0

Production Oil Information: (Volumes in Bbl) ** some operators may have reported NGL under Oil

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_OIL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4700100129	Union Drilling, Inc.	1982	0	0	0	0	0	0	0	0	0	0	0	0	0
4700100129	Union Drilling, Inc.	1983	0	0	0	0	0	0	0	0	0	0	0	0	0
4700100129	R & B Petroleum, Inc.	2000	34	0	0	0	0	0	34	0	0	0	0	0	0
4700100129	EQT Production Company	2018	0	0	0	0	0	0	0	0	0	0	0	0	0
4700100129	EQT Production Company	2020	0	0	0	0	0	0	0	0	0	0	0	0	0

Production NGL Information: (Volumes in Bbl) ** some operators may have reported NGL under Oil

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_NGL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4700100129	EQT Production Company	2018	0	0	0	0	0	0	0	0	0	0	0	0	0
4700100129	EQT Production Company	2020	0	0	0	0	0	0	0	0	0	0	0	0	0

Production Water Information: (Volumes in Gallons)

API	PRODUCING_OPERATOR	PRD_YEAR	ANN_WTR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4700100129	EQT Production Company	2018	0	0	0	0	0	0	0	0	0	0	0	0	0
4700100129	EQT Production Company	2020	0	0	0	0	0	0	0	0	0	0	0	0	0

Stratigraphy Information:

API	SUFFIX	FM	FM QUALITY	DEPTH_TOP	DEPTH_BOTTOM	QUALITY	THICKNESS	THICKNESS	QUALITY	ELEV DATUM
4700100129	Original Loc	unidentified coal	Well Record	122	Reasonable	4	Reasonable	5	Reasonable	1175
4700100129	Original Loc	unidentified coal	Well Record	548	Reasonable	332	Reasonable	201	Reasonable	1175
4700100129	Original Loc	'Mutch Chunk'	Well Record	1025	Reasonable	65	Reasonable	106	Reasonable	1175
4700100129	Original Loc	Greenbrier Group	Well Record	1357	Reasonable	64	Reasonable	30	Reasonable	1175
4700100129	Original Loc	Big Lime	Well Record	1452	Reasonable	10	Reasonable	10	Reasonable	1175
4700100129	Original Loc	Big Injun (Gmbr)	Well Record	2236	Reasonable	30	Reasonable	10	Reasonable	1175
4700100129	Original Loc	Fifth	Well Record	2313	Reasonable	10	Reasonable	10	Reasonable	1175
4700100129	Original Loc	Benson	Well Record	4234	Reasonable	10	Reasonable	10	Reasonable	1175

Wireline (E-Log) Information:

* There is no Scanned/Paper Log data for this well

* There is no Digitized Log data for this well

* There is no Scanned or Digital Logs available for download

Plugging Information:

API	PLG_DT	DEPTH_PBT
4700100129	3/21/1963	0

There is no Sample data for this well

4700100129

03/17/2023

WW-4A
Revised 6-07

1) Date: February 15, 2023
2) Operator's Well Number
1

3) API Well No.: 47 - 001 - 00129P

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 Jason P. & Deborah Corder
Address 3234 Galloway Road
Flemington, West Virginia 26347
(b) Name _____
Address _____
(c) Name _____
Address _____
6) Inspector Sam Ward
Address P.O. Box 2327
Buckhannon, WV 26201
Telephone (304) 389-7583

5) (a) Coal Operator
Name CoalQuest Development, LLC
Address 100 Tygart Drive
Grafton, West Virginia 26354
(b) Coal Owner(s) with Declaration
Name _____
Address _____
(c) Coal Lessee with Declaration
Name _____
Address _____

RECEIVED
Office of Oil and Gas
FEB 24 2023
WV Department of
Environmental Protection

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.

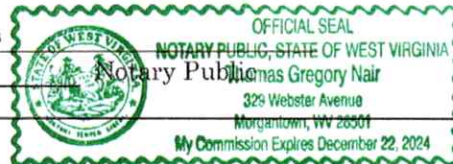
The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

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 Wolf Run Mining LLC
By: Charles E. Duckworth
Its: Designated Agent
Address 100 Tygart Drive
Grafton, West Virginia 26354
Telephone (304) 265-9704

Subscribed and sworn before me this 15 day of February, 2023

My Commission Expires December 22, 2024



Oil and Gas Privacy Notice

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

4700100129 P

7021 1970 0000 0908 4130

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

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

Flemington, WV 26347

OFFICIAL USE

Certified Mail Fee	\$4.15
Extra Services & Fees (check box, add fee as appropriate)	\$2.75
<input checked="" 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 \$2.70

Total Postage and Fees \$7.45

Sent To Jason P. and Deborah Corder
3234 Galloway Road
Flemington, West Virginia 26347
City, State, ZIP+4 47-001-00129



PS Form 3800, 11-2019

RECEIVED
Office of Oil and Gas
FEB 24 2023
WV Department of
Environmental Protection

03/17/2023

WOLF RUN MINING LLC

February 16, 2023

Jason P. and Deborah Corder
3234 Galloway Road
Flemington, West Virginia 26347

Re: Plugging Permit – API # 47-001-00129 – Well No. 1

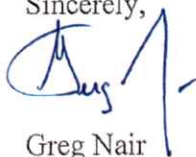
Dear Mr. and Mrs. Corder:

As required by the permit process of the WV Department of Environmental Protection – Office of Oil and Gas enclosed please find a copy of the plugging permit application for the above referenced well that Wolf Run Mining LLC plans to submit to the WV Department of Environmental Protection, Office of Oil and Gas.

If you have no objection to the plugging, permit application, please sign the page, titled Surface Owner Waiver and return in the enclosed self-addressed stamped envelope.

If you should have any questions concerning this application, please feel free to contact Charles Duckworth at (304) 265-9704 or me at (304) 265-9778 or via email at gnair@archrsc.com.

Sincerely,



Greg Nair
Manager Surface Mine Planning

Enclosures

RECEIVED
Office of Oil and Gas

FEB 24 2023

WV Department of
Environmental Protection

CERTIFIED MAIL NO. 7021 1970 0000 0908 4130
RETURN RECEIPT REQUESTED

SURFACE OWNER WAIVER

Operator's Well
Number

1

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 57th St. SE
Charleston, WV 25304
(304) 926-0450

RECEIVED
Office of Oil and Gas
FEB 24 2023
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,

_____	Date _____	Name _____
Signature		By _____
		Its _____
		Date _____

Signature

Date

03/17/2023

WW-4B

API No. 47-001-00129P
Farm Name Laco B. Corder
Well No. 1

**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.

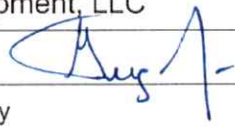
This notice and application is given to you in order that your respective representatives may be present at the plugging and filling of said well. You are further notified that whether you are represented or not the operator will proceed to plug and fill said well in the manner required by Section 24, 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 X / 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: 2/14/2023

CoalQuest Development, LLC
By: Greg Nair 
Its Power of Attorney

RECEIVED
Office of Oil and Gas
FEB 24 2023
Department of
Environmental Protection

03/17/2023

STATE OF MISSOURI)
) ss
COUNTY OF ST. LOUIS)

On this 1st day of January, 2023, before me, the undersigned notary public, personally appeared Rosemary L. Klein, known to me to be the person whose name is subscribed to the within instrument and acknowledged that she executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.



Sarah Tribout
Notary Public

My Commission Expires: 11/8/2024

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Office of Oil and Gas
FEB 24 2023
WV Department of
Environmental Protection

WW-9
(5/16)

API Number 47 - 091 - 00129P
Operator's Well No. 1

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

Operator Name Wolf Run Mining LLC OP Code _____

Watershed (HUC 10) Simpson Creek Quadrangle Philippi (545)

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: N/A

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 - See attached letter)

SDW 2/22/2023

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

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

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

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

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

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

-Landfill or offsite name/permit number? Wolf Run Mining LLC - Permit No. O-113-83

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 _____

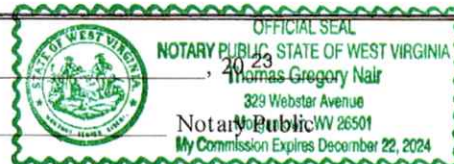
Company Official (Typed Name) Charles E. Duckworth

Company Official Title Designated Agent

Subscribed and sworn before me this 15 day of February

Thomas Gregory Nair

My commission expires 12/22/2024



RECEIVED
Office of Oil and Gas
FEB 24 2023
WV Department of
Environmental Protection

4700100129f

A Subsidiary of:

ARCH
RESOURCES

WOLF RUN MINING LLC

February 15, 2023

WV Department of Environmental Protection
Office of Oil and Gas
601 – 57th Street, S.E.
Charleston, West Virginia 25304

To Whom It May Concern:

As per the WV Department of Environmental Protection, Office of Oil and Gas request, Wolf Run Mining LLC, submits the following procedures utilizing pit waste.

Upon submitting a well work application (without a general permit for Oil and Gas Pit Waste Discharge Application), Wolf Run Mining LLC, will construct no pits, but instead will use mud tanks to contain all drilling muds.

Once the well is completed, that material (minus the cave material) will be trucked to the next well to be plugged or to DEP impoundment facilities O-113-83 or to an approved facility that can handle the material.

Sincerely,

Charles E. Duckworth
Designated Agent

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Office of Oil and Gas
FEB 24 2023
WV Department of
Environmental Protection

Samuel D. Ward II	Digitally signed by Samuel D. Ward II Date: 2023.02.22 16:18:43 -05'00'
----------------------	--

100 Tygart Drive - Grafton, West Virginia 26354
Phone: (304) 265-9778 * Fax: (304) 265-5544

03/17/2023

Proposed Revegetation Treatment: Acres Disturbed 1.50 / 2.0 Prevegetation pH _____

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20 or equivalent

Fertilizer amount 500 lbs/acre

Mulch Hay Bales Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Orchard Grass	12	Orchard Grass	12
Landino Clover	3	Landino Clover	3
Timothy	10	Timothy	10

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.

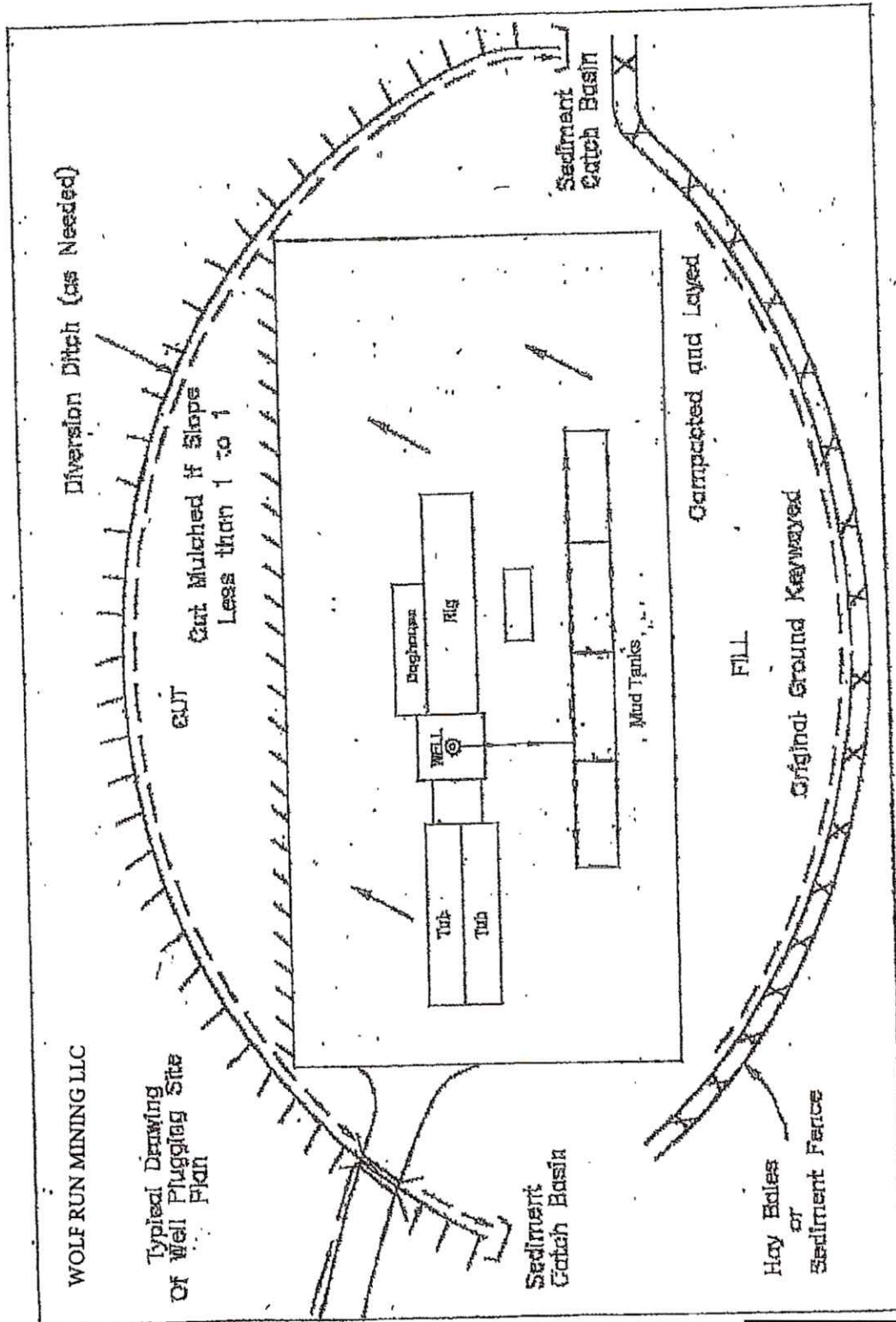
Plan Approved by: Samuel D. Ward II
Digitally signed by Samuel D. Ward II
Date: 2023.02.22 16:18:17 -0500

Comments: _____

RECEIVED
Office of Oil and Gas
FEB 24 2023
WV Department of
Environmental Protection

Title: OOG Inspector Date: 2/22/23

Field Reviewed? () Yes () No



WOLF RUN MINING LLC

Typical Drawing
of Well Plugging Site

Diversion Ditch (as Needed)

CUT
Cut Mulched if Slope
Less than 1 to 1

Sediment
Catch Basin

Drighouse

Rig

WELL

Tub
Tub

Mud Tanks

Compacted and Layered

FILL

Original Ground Keywayed

Sediment
Catch Basin

Hay Bales
or
Sediment Fence

RECEIVED
Office of Oil and Gas
FEB 24 2023

WV Department of
Environmental Protection

Samuel D. Ward II
Digitally signed by
Samuel D. Ward II
Date: 2023.02.22
16:18:51 -0500

03/17/2023

4700100129P

WELL LOCATION SHEET

VERTICAL DATUM: N.G.V.D. 29

COORDINATE DATUM: NAD 27 WV NORTH

ORDER OF ACCURACY: MAPPING GRADE GPS -SUBFOOT (30 CM) ACCURACY

47-001-00129P

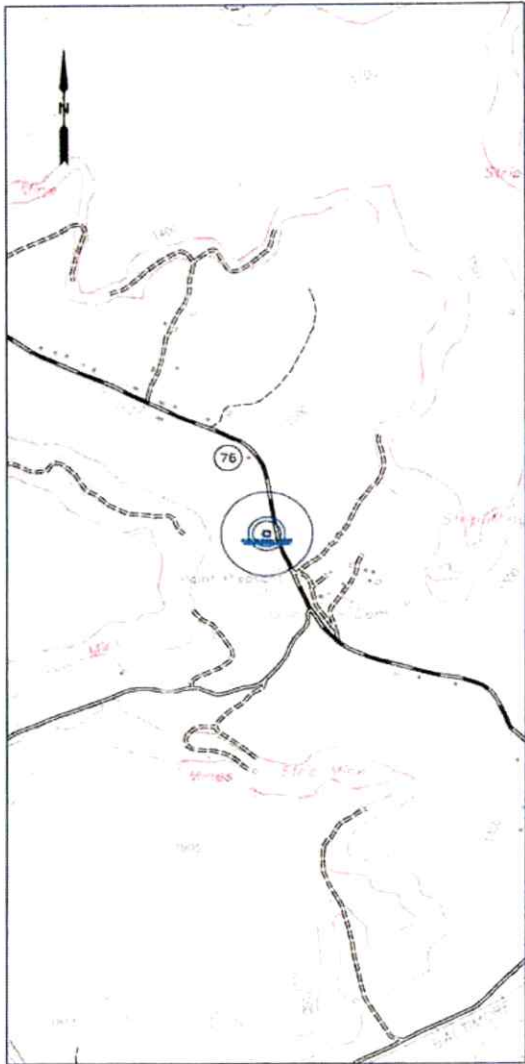
ESTABLISHED BY: ALPHA ENGINEERING SERVICES

LANDOWNER: CORDER, MASON P. AND DEBORAH

STATE: WV

COUNTY: BARBOUR

WELL DATA		WELL NO.	YEAR	STATUS & DATE (IF PLUGGED)
LATITUDE (N)	39° 12' 41.39"	4700100129	2022	PLUGGED (3-21-1963)
LONGITUDE (W)	80° 05' 49.13"			
NORTHING (Y)	259,704.10	DETAILED DESCRIPTION: PLUGGED CASING FOUND		
EASTING (X)	1,830,842.50	CHIEF OF PARTY: ALPHA ENGINEERING		
ELEVATION (Z)	1,161.56	RECOVER DATE ESTABLISHED: SEPTEMBER 18, 2022		
COMMENTS AND ADDITIONAL DATA:		12" x 12" PLATE WELDED ON 6" CASING SET IN CEMENT WITH		
MONUMENT DESCRIPTION "Laco Corder BAR-129 Union Drlg. 3/63"				



Location Map
Scale 1' = 2000 ft



(Handwritten initials)



L. David Prelaz
L. David Prelaz, PE No. 10612
September 30, 2022

This Gas Well was located on the "Recover Date" shown above using a Mapping Grade GPS (MGPS) survey unit with sub 30 cm accuracy. Other data listed above has been updated with information available at the time of this signing.

03/17/2023



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

API: 47-001-00129P WELL NO.: 1

FARM NAME: Laco B. Corder

RESPONSIBLE PARTY NAME: Wolf Run Mining LLC

COUNTY: Barbour DISTRICT: Pleasant

QUADRANGLE: Philippi

SURFACE OWNER: Jason P. and Deborah Corder

ROYALTY OWNER: Jason P. and Deborah Corder

UTM GPS NORTHING: 4340645.5838'

UTM GPS EASTING: 577978.0424' GPS ELEVATION: 1163.24'

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.

Agent

March 13, 2023

Signature

Title

Date

03/17/2023



4700100129P

McLaughlin, Jeffrey W <jeffrey.w.mclaughlin@wv.gov>

47-001-00129 plugging application

1 message

Duckworth, Chuck E. <cduckworth@archrsc.com>
To: "McLaughlin, Jeffrey W" <Jeffrey.W.McLaughlin@wv.gov>
Cc: "Kennedy, James P" <james.p.kennedy@wv.gov>

Mon, Mar 13, 2023 at 2:01 PM

Jeff,

We have researched the issue of our well location pages not matching each other. I have attached a scan of three new sheets for you (my application). The issues we were having are in the conversions from NAD 27 that we typically use, and the previous well operator used - to the NAD 1983 that the WW-7 requires. The well was always the same wellbore and in the same location as found in field. We know that this is the wellbore we need to MSHA plug, and we're confident that it is 47-001-00129. Please see attached:

- 1. Revised topo sheet (with a very, very slight edit since we uncovered better information)**
- 2. A Well Location Sheet (showing a picture of the well marker as found in field by a surveyor contracted by Leer South Mine).**
- 3. Revised WW-7 sheet.**

In the proper format, all these location numbers should show the wellbore in the same spot!

Thanks Jeff, CHUCK

Chuck Duckworth
Gas Well & Property Manager
Arch Land WV – Leer Mining Complex
100 Tygart Drive

Grafton, WV 26354

(304) 552-8783 cell

(304) 265-9704 Leer

Preventing Colds & Flu is in Your Hands.

- * Wash your hands often.
- * Disinfect surfaces at work & home often.
- * Don't touch your eyes, nose, and mouth.

03/17/2023

- * Avoid close contact with people who have a cold or flu.
- * Ask a doctor if a flu shot is right for you.

4700100129P

- I've had my flu shot – have you had yours?
-

***Email Disclaimer: The information contained in this e-mail, and in any accompanying documents, may constitute confidential and/or legally privileged information. The information is intended only for use by the designated recipient. If you are not the intended recipient (or responsible for delivery of the message to the intended recipient), you are hereby notified that any dissemination, distribution, copying, or other use of, or taking of any action in reliance on this e-mail is strictly prohibited. If you have received this e-mail communication in error, please notify the sender immediately and delete the message from your system.

 **47-001-00129P_REVISED location pages for Plugging Application.pdf**
520K

03/17/2023



Kennedy, James P <james.p.kennedy@wv.gov>

Plugging permit issued 4700100129

1 message

Kennedy, James P <james.p.kennedy@wv.gov>

Mon, Mar 13, 2023 at 3:16 PM

To: "Duckworth, Charles" <cduckworth@archrsc.com>, Samuel D Ward <samuel.d.ward@wv.gov>, spencer@assessor.state.wv.us

To whom it may concern plugging permit issued 4701100129.

James Kennedy

OOG WVDEP

2 attachments



IR-8 4700100129.pdf

120K



4700100129.pdf

8331K

03/17/2023