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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

Jim Justice , Governor  
Austin Caperton , Cabinet Secretary  
www.dep.wv.gov

Wednesday, December 20, 2017  
WELL WORK PERMIT  
Vertical / Plugging

MINGO LOGAN COAL LLC  
PO BOX E

SHARPLES, WV 25183

Re: Permit approval for 10043  
47-045-00603-00-00

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.

Please be advised that form WR-35, Well Operators Report of Well Work 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: 10043  
Farm Name: BOONE COUNTY COAL  
U.S. WELL NUMBER: 47-045-00603-00-00  
Vertical / Plugging  
Date Issued: 12/20/2017

Promoting a healthy environment.

12/22/2017

# 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

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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.

WW-4B  
Rev. 2/01

1) Date November 28, 2017  
2) Operator's  
Well No. 10043  
3) API Well No. 47-045 - 00603

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 X / Shallow \_\_\_

5) Location: Elevation 1,308 Watershed Spruce Fork of Little Coal River  
District Logan County Logan Quadrangle Amherstdale

6) Well Operator Mingo Logan Coal LLC 7) Designated Agent Joshua Jackson  
Address P.O. Box E Address P.O. Box E  
Sharples, WV 25183 Sharples, WV 25183

8) Oil and Gas Inspector to be notified 9) Plugging Contractor  
Name Jeffery Smith Name CJ's Well Service, Inc.  
Address 5369 Big Tyler Road Address P.O. Box 133  
Cross Lanes, WV 25313 Rowe, VA

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

✈

MSHA Petition for Modification (Docket No. M-2007-007-C) is also included with this permit package for reference to required standards.

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

Work order approved by inspector \_\_\_\_\_ Date \_\_\_\_\_

OK JMM

12/22/2017



## EXHIBIT NO. 1

From prior experience working with different well plugging contractors and evidence of effective and safe plugging, Mingo Logan Coal LLC plans to utilize the following typical method for plugging all future gas wells. Mingo Logan Coal LLC has demonstrated this method of plugging offers the same level of protection required by State regulation.

### SOLID PLUG METHOD

- ★ 1. **For Active Well:** Clean out well to total depth (TD) and plug in accordance with State regulations and within MSHA 101C Petition requirements to a minimum of 200 feet below lowest minable coal seam.
  
2. **For Abandoned and/or Plugged Well:** Clean out well to 200 feet below the lowest minable coal seam.
  - a. Circulate through tubing or drill steel an expanding cement plug from a minimum 200 feet below minable coal seam to a point 100 feet above minable coal seam.
  - b. Circulate through tubing or drill steel from 100 feet above minable coal seam to surface.
  - c. Construct monument per State regulations and MSHA 101C Petition with API No. and stating "Solid Plug"

Please note if for any circumstance the method outline above is not practical due to well conditions or any other factor(s), specific procedures for plugging that particular well shall be submitted with the plugging permit. Plugging will meet State regulation and MSHA 101C Petition standards.

- CLEAN OUT TO TD OF 2801'.
- TIH w/ WORK STRING & SPOT GEL.
- SET CLASS A CEMENT PLUG FROM TD (2801) TO 2000'.
- MUST TRY TO PULL 8 1/4" CASING. (DOES NOT APPEAR TO BE CEMENTED.)
- IF 8 1/4" WILL NOT PULL FREE WITH A FORCE OF 150% OF CASING STRING WEIGHT, THEN PERFORATE CASING EVERY 100' w/ 4 SHOTS FROM 1900 TO 200' BELOW LOWEST COAL.
- PUMP CLASS A CEMENT FROM 2000' TO 923', BOTTOM OF LOWEST COAL.
- FROM THIS POINT PLUG WELL TO SURFACE, PER MSHA 101C EXEMPTION.
- SET MONUMENT.

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U.S. Department of Labor

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

OCT 23 2007

In the matter of:  
Mingo Logan Coal Company  
Mountaineer II Mine  
I. D. No. 46-09029MSHA 101 C  
EXEMPTION

Petition for Modification

Docket No. M-2007-007-C

**PROPOSED DECISION AND ORDER**

On March 6, 2007, a petition was filed seeking a modification of the application of 30 C.F.R. § 75.1700 to Petitioner's Mountaineer II Mine located at Sharples, Logan 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.

The alternative method proposed by the petitioner is similar to that approved under similar petitions for modification; however, MSHA has added certain conditions.

On July 17, 2007, MSHA conducted an investigation of the petition and filed a report of their findings with the Administrator for Coal Mine Safety and Health. After a careful review of the entire record, including the petition and MSHA's investigative reports and recommendations, this Proposed Decision and Order (PDO) is issued.

Finding of Fact and Conclusion of Law

The alternative method proposed by the Petitioner (as amended by the recommendations of MSHA) will at all times guarantee no less than the same measure of protection afforded the miners under 30 C.F.R. § 75.1700.

The Mountaineer II Mine operates in the Alma/Cedar Grove coal seam. The mining height averages approximately 6.5 feet and continuous mining sections are used to develop panels for longwall retreat mining.

On the basis of the petition and the findings of MSHA's investigation, Mingo Logan Coal Company is granted a modification of the application of 30 C.F.R. § 75.1700 to its Mountaineer II Mine.

**ORDER**

Under the authority delegated by the Secretary of Labor to the Administrator for Coal Mine Safety and Health, and under § 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 Mountaineer II Mine is hereby:

You can now file your MSHA forms online at [www.MSHA.gov](http://www.MSHA.gov). It's easy, it's fast, and it saves you money!

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GRANTED, subject to the following terms and conditions:

**1. DISTRICT MANAGER APPROVAL REQUIRED**

- a. A safety barrier of 300 feet in diameter (150 feet between any mined area and a well) shall be maintained around all oil and gas wells (defined herein to include all active, inactive, abandoned, shut-in, and previously plugged wells and including water injection wells) until approval to proceed with mining has been obtained from the district manager.
- b. Prior to mining within the safety barrier around any well, the mine operator shall provide to the district manager a sworn affidavit or declaration executed by a company official stating that all mandatory procedures for cleaning out, preparing, and plugging each gas or oil well have been completed as described by the terms and conditions of this order. The affidavit or declaration must be accompanied by all logs described in subparagraphs 2(a)(2) and 2(a)(3) below and any other records described in those subparagraphs that the district manager may request. The district manager will review the affidavit or declaration, the logs, and any other records that have been requested, may inspect the well itself, and will then determine if the operator has complied with the procedures for cleaning out, preparing, and plugging each well as described by the terms and conditions of this Order. If the district manager determines that the procedures have been complied with, he will provide his approval and the mine operator may then mine within the safety barrier of the well, subject to the terms of this Order.
- c. The terms and conditions of this Order apply to all types of coal mining.

**2. MANDATORY PROCEDURES FOR CLEANING OUT, PREPARING, PLUGGING, AND REPLUGGING OIL OR GAS WELLS**

**a. MANDATORY PROCEDURES FOR CLEANING OUT AND PREPARING OIL AND GAS WELLS PRIOR TO PLUGGING OR REPLUGGING**

- (1) 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). The operator shall remove all material from the entire diameter of the well, wall to wall.

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- (2) The operator shall prepare down-hole logs for each well. They shall consist of a caliper survey and log(s) suitable for determining the top, bottom, and thickness of all coal seams and potential hydrocarbon producing strata and the location for a bridge plug. The district manager may approve the use of a down-hole camera survey in lieu of down-hole logs. 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 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.
- (3) When cleaning out the well as provided for in subparagraph (a)(1), the operator shall make a diligent effort to remove all of the casing in the well. If it is not possible to remove all of the casing, then the operator must take appropriate steps to ensure that the annulus between the casing and between the casings and the well walls are filled with expanding (minimum 0.5% expansion upon setting) cement and contain no voids. If the casing cannot be removed, it must be cut or milled at all mineable coal seam levels. Any casing that remains shall be perforated or ripped. Perforations or rips are required at least every 50 feet from 200 feet below the base of the lowest mineable coal seam up to 100 feet above the uppermost mineable coal seam. If the operator, using a casing bond log, can demonstrate to the satisfaction of the district manager that all annuli in the well are already adequately sealed with cement, then the operator shall not be required to perforate or rip the casing for that particular well. When multiple casing and tubing strings are present in the coal horizon(s), any casing that 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) If the district manager concludes that the completely cleaned-out well is emitting excessive amounts of gas, the operator must place a mechanical bridge plug in the well. It must be placed in a competent stratum at least 200 feet below the base of the lowest mineable coal seam, but above the top of the uppermost hydrocarbon-producing stratum, 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 (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 it is not possible to set a

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mechanical bridge plug, an appropriately sized packer may be used.

- (5) If the uppermost 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 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 REPLUGGING 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 replug gas or oil wells to the surface:

- (1) The operator shall pump expanding cement slurry down the well to form a plug which runs from at least 200 feet 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 shall 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 4½-inch or larger 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 not be marked with a physical monument (i.e. prime farmland), high-resolution GPS coordinates (one-half meter resolution) are required.

**c. MANDATORY PROCEDURES FOR PLUGGING OR REPLUGGING OIL AND GAS WELLS FOR USE AS DEGASIFICATION BOREHOLES.**

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

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- (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 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 shall 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 30 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.
- (2) The operator shall securely grout into the bedrock of the upper portion of the degasification well a suitable casing in order to protect it. The remainder of this well may be cased or uncased.
- (3) The operator shall fit the top of the degasification casing with a wellhead, equipped as required by the district manager in the approved ventilation plan. Such equipment may include check valves, shut-in valves, sampling ports, flame arrestor equipment, and security fencing.
- (4) Operation of the degasification well shall be addressed in the approved ventilation plan. This may include periodic tests of methane levels and limits on the minimum methane concentrations that may be extracted.
- (5) After the area of the coal mine that is degassed by a well is sealed or the coal mine is abandoned, the operator must seal degas holes using the following procedures:
  - (i) The operator shall insert a tube to the bottom of the drill hole or, if not possible, to no greater than 100 feet above the Pittsburgh coal seam. Any blockage must be removed to ensure that the tube can be inserted to this depth.
  - (ii) The operator shall set a cement plug in the well by pumping Portland cement or a lightweight cement mixture down the tubing until the well is filled to the surface.
  - (iii) 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 4½-inch or larger 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.

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d. **MANDATORY ALTERNATIVE PROCEDURES FOR PREPARING AND PLUGGING OR REPLUGGING OIL OR GAS WELLS.**

The following provisions apply to all wells that the operator determines, and the MSHA district manager agrees, cannot be completely cleaned out due to damage to the well caused by subsidence, caving, or other factors.

- (1) The operator shall drill a hole adjacent and parallel to the well to a depth of at least 200 feet 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.
- (2) The operator shall use a geophysical sensing device to locate any casing that may remain in the well.
- (3) If the well contains casing(s), the operator shall drill into the well from the parallel hole. From 10 feet below the coal seam to 10 feet above the coal seam, the operator shall perforate or rip all casings at intervals of at least 5 feet. Beyond this distance, the operator shall perforate or rip at least every 50 feet from at least 200 feet below the base of the lowest mineable coal seam up to 100 feet above the 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. The operator shall fill the annulus between the casings and between the casings and the 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 shall 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 that 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 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 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.

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The operator shall then pump expanding cement into the fractured well in sufficient quantities and in a manner that fills all intercepted voids.

- (5) The operator shall prepare down-hole logs for each well. They shall consist of a caliper survey and log(s) suitable for determining the top, bottom, and thickness of all coal seams and potential hydrocarbon-producing strata and the location for the 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. The district manager may approve the use of a down-hole camera survey in lieu of down-hole logs if, in his judgment, such logs would not be suitable for obtaining the above-listed data or are impractical to obtain due to the condition of the drill hole. 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, ripped or left in place; 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.
- (6) After the operator has plugged the well as described in subparagraphs (d)(3) and/or (d)(4), the operator shall plug the open portions of both holes 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 4½-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 should discuss the nature of each hole. The district manager may require that more than one method be utilized.

3. **MANDATORY PROCEDURES AFTER APPROVAL HAS BEEN GRANTED BY THE DISTRICT MANAGER TO MINE WITHIN THE SAFETY BARRIER, OR TO MINE THROUGH A PLUGGED OR REPLUGGED 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 mining through any plugged or replugged well. Upon receipt of any such request, the district manager

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will 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(s) related to the condition of the well or surrounding strata when such conditions are encountered.

- b. The operator shall mine through 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 mining-through 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, drivage sights shall be installed on 10-foot centers for a distance of 50 feet in advance of the well. The drivage sights shall be installed in the headgate and tailgate.
- 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 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.
- e. The operator shall ensure that sufficient supplies of roof support and ventilation materials are available and are located at the last open crosscut. In addition, emergency plugs and suitable sealing materials shall be available in the immediate area of the well intersection.
- f. Minimum ventilation air quantities to be maintained in the working face during the period from when mining is within 50 feet of the well location until the post cut-through inspection or mining progresses at least 50 feet past the well location, shall be specified in the approved ventilation plan.
- g. On the shift prior to mining through the well, the operator shall service all equipment and check it for permissibility.
- h. The operator shall calibrate the methane monitor(s) on the longwall, continuous mining machine, or cutting machine and loading machine the shift prior to mining through the well.

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- i. 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 30 feet of the well until the well is intersected and immediately prior to mining through it. During the actual 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. All workplace examinations shall be conducted on the return side of the shearer while the shearer is idle.
- j. 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 to within 20 feet of the face when mining through the well. On longwall sections, rock dusting shall be conducted and placed on the roof, rib, and floor up to both the headgate and tailgate gob.
- k. When the well is intersected, the operator shall de-energize all equipment, thoroughly examine it, and determine the area is safe before mining is resumed.
- l. After a well has been intersected and the working place determined safe, mining shall continue in by the well a sufficient distance to permit adequate ventilation around the area of the well.
- m. If the casing is cut or milled at the coal seam level, the use of torches should not be necessary. However, in rare instances, torches may be used for inadequately or inaccurately cut or milled casings. No open flame shall be permitted in the area until adequate ventilation has been established around the well bore and methane levels of less 1.0% are present in all areas that will be exposed to flames and sparks from the torch. The operator shall apply a thick layer of rock dust to the roof, face, floor, ribs, and any exposed coal within 20 feet of the casing prior to any use of torches.
- n. Non-sparking (brass) tools shall be located on the working section and shall be used to expose and examine cased wells.
- o. No person shall be permitted in the area of the mine-through operation except those actually engaged in the operation, including company personnel, representatives of the miners, personnel from MSHA, and personnel from the appropriate State agency.
- p. The operator shall alert all personnel in the mine to the planned intersection of the well 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 has been mined through.

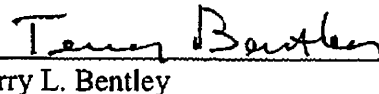
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- q. The mine-through operation shall be under the direct supervision of a certified individual. Instructions concerning the mine-through operation shall be issued only by the certified individual in charge.
- r. The provisions of this Order do not 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.
- s. A copy of this Order shall be maintained at the mine and be available to the miners.
- t. 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 with training regarding the requirements of this Order prior to mining within 150 feet of the next well intended to be mined through.
- u. The responsible person required under 30 C.F.R. § 75.1501 shall be responsible for well intersection emergencies. The well intersection procedures must be reviewed by the responsible person prior to any planned intersection.
- v. Within 30 days after this Order becomes final, the operator shall submit proposed revisions for its approved mine emergency evacuation and firefighting plan required by 30 C.F.R. § 75.1501. The operator shall revise the plans to include the hazards and evacuation procedures to be used for well intersections. All underground miners shall be trained in this revised plan within 30 days of the submittal of the revised evacuation plan.

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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 shall 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 Decision and Order will become final and must be posted by the operator on the mine bulletin board at the mine.



Terry L. Bentley  
Acting Deputy Administrator for  
Coal Mine Safety and Health

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Certificate of Service

I hereby certify that a copy of this proposed decision was served personally or mailed, postage prepaid, this 23<sup>rd</sup> day of October, 2007, to:

Ms. Julia K. Shreve  
Jackson Kelly, PLLC  
PO Box 553  
Charleston, West Virginia 25322

Mr. Harrison Abbot, Miners' Representative  
Mountaineer II Mine  
PO Box E  
Sharples, West Virginia 25183

  
\_\_\_\_\_  
Melissa C. Beaty  
Mine Safety and Health Technician

cc: Mr. Ronald Wooten

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WV Department of  
Environmental Protection

12/22/2017





STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

Quadrangle Logan

Permit No. LOG-603

WELL RECORD

Oil or Gas Well Gas  
(KIND)

Company Hope Natural Gas Company  
Address Clarksburg, W. Va.  
Farm Boone County Coal Corp. Acres 29.000  
Location (waters) \_\_\_\_\_  
Well No. 10043 Elev. 1308  
District Logan County Logan  
The surface of tract is owned in fee by \_\_\_\_\_  
Address \_\_\_\_\_  
Mineral rights are owned by \_\_\_\_\_  
Address \_\_\_\_\_  
Drilling commenced 1-15-57  
Drilling completed 5-6-57  
Date Shot Not shot From \_\_\_\_\_ To \_\_\_\_\_  
With \_\_\_\_\_  
Open Flow \_\_\_\_\_ /10ths Water in \_\_\_\_\_ Inch  
\_\_\_\_\_ /10ths Merc. in \_\_\_\_\_ Inch  
Volume 69 M Cu. Ft.  
Rock Pressure \_\_\_\_\_ lbs. hrs.  
Oil \_\_\_\_\_ bbls., 1st 24 hrs.  
WELL ACIDIZED 4-15-57

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16			Kind of Packer _____
13	<u>17</u>	<u>17</u>	
10	<u>765 IX</u>	<u>765 IX</u>	Size of _____
8 1/2	<u>1942</u>	<u>1942</u>	
6 1/2	<u>2482</u>	<u>2482</u>	Depth set _____
5 3/16			
3			Perf. top _____
2			Perf. bottom _____
Liners Used			Perf. top _____
			Perf. bottom _____

CASING CEMENTED \_\_\_\_\_ SIZE \_\_\_\_\_ No. Ft. \_\_\_\_\_ Date \_\_\_\_\_  
7" Casing set in 25 bags cement

COAL WAS ENCOUNTERED AT \_\_\_\_\_ FEET \_\_\_\_\_ INCHES  
See log below  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES

WELL FRACTURED \_\_\_\_\_

RESULT AFTER TREATMENT 510 M  
ROCK PRESSURE AFTER TREATMENT \_\_\_\_\_  
Fresh Water \_\_\_\_\_ Feet \_\_\_\_\_ Salt Water \_\_\_\_\_ Feet \_\_\_\_\_

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Surface			0	17			
Sand			17	37			
Slate			37	40			
Sand			40	83			
Coal			83	84			
Sand			84	110			
Slate			110	135			
Coal			135	138			
Slate			138	195			
Sand			195	250			
Coal			250	252			
Sand			252	283			
Slate			283	285			
Coal			285	287			
Slate			287	340			
Sand			340	384			
Slate			384	395			
Sand			395	423			
Slate			423	451			
Sand			451	485			
Slate			485	503			
Sand			503	531			
Slate			531	548			
Coal			548	549			
Slate			549	600			
Sand			600	631			
Slate			631	651			
Sand			651	656			
Slate & Shells			656	692			

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DEPT. OF MINES  
JUL 1957

(over)

Formation	Color	Hard or Soft	Top $\bar{5}$	Bottom	Oil, Gas or Water	Depth Found	Remarks
Coal			692	693	Water	1431' & 180'	
Slate & Shells			693	720			
Coal			720	723			
Slate & Shells			723	729			
Sand			729	812			
Lime			812	836			
Slate & Shells			836	877			
Sand			877	916			
Slate & Shells			916	966			
Sand			966	997			
Slate & Shells			997	1044			
Lime			1044	1061			
Slate & Shells			1061	1142			
Sand			1142	1185			
Slate & Shells			1185	1207			
Sand			1207	1418			
Slate & Shells			1418	1572			
Sand			1572	1735			
Slate & Shells			1735	1760	Water	1610' & 1650'	
Sand			1760	1936			
Lime			1936	1950			
Slate & Shells			1950	2000			
Lime Shell			2000	2047			
Red Rock			2047	2097			
Slate & Shells			2097	2277			
MAXON			2277	2298			
Red Rock			2298	2307			
Slate & Shells			2307	2372			
Red Rock			2372	2376			
Slate & Shells			2376	2390	Gas	2740 to 2761	
BIG LIME			2390	2780			
Sand			2780	2801			
Total Depth				2801'			

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Date July 24, 1957, 19\_\_  
APPROVED Hope Natural Gas Company, Owner  
By Jack Philley  
(Title)

12/22/2017

PARTICIPANTS: DATE: SEP 00 1979 BUYER-SELLER CODE  
 WELL OPERATOR: Consolidated Gas Supply Corp. 004228  
 FIRST PURCHASER: General System Purchasers none  
 OTHER: \_\_\_\_\_

W. Va. Department of Mines, Oil & Gas Division  
 WELL DETERMINATION FILE NUMBER  
790227-108-045-603  
 Use Above File Number on all Communications  
 Relating to Determination of this Well

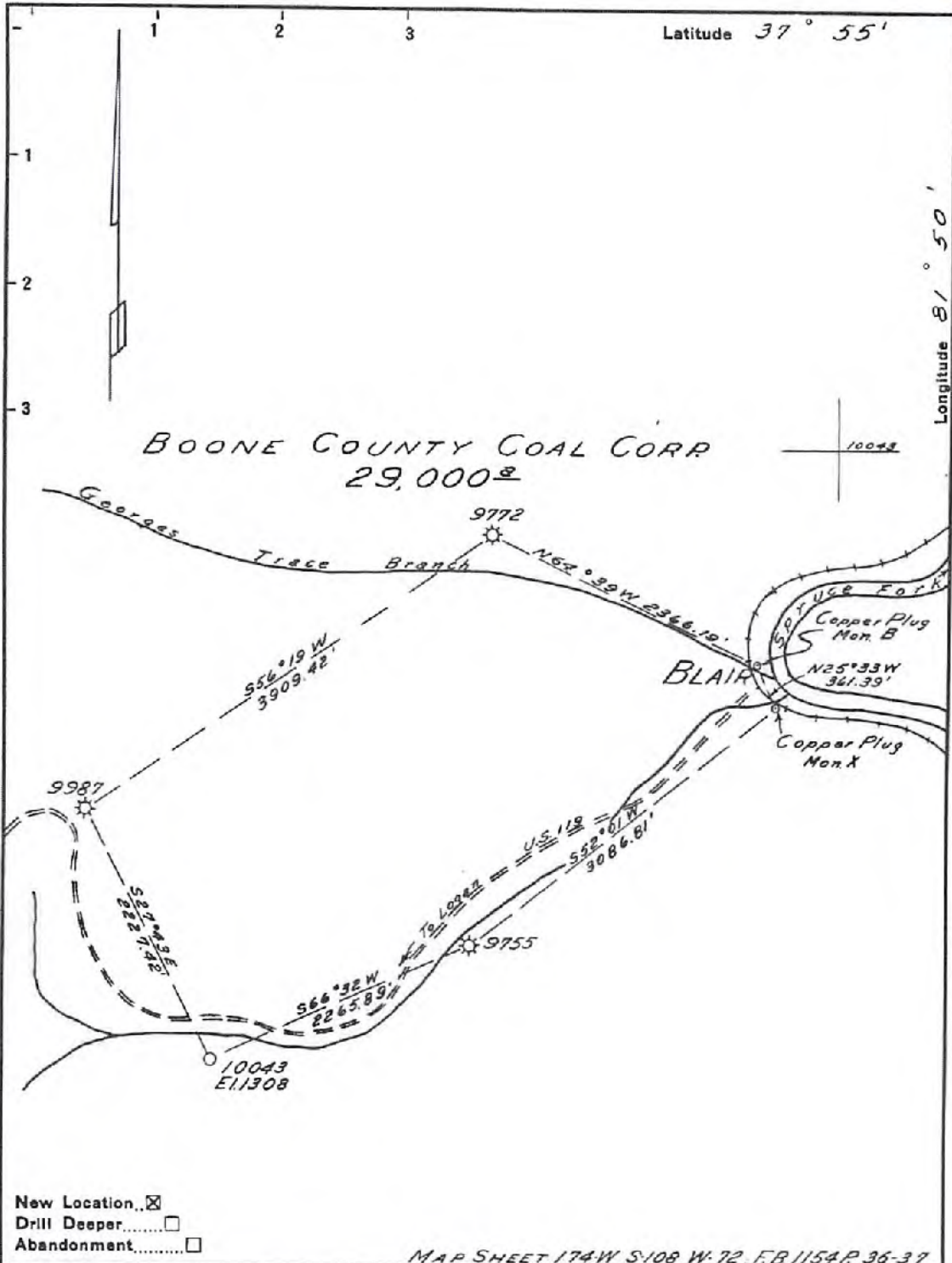
*Qualified as Section 108, program well.*  
*PH*

CHECK EACH ITEM AS COMPLETE OR NOTE WHAT IS MISSING

- ITEM NO.
- 1 FERC-121  Items not completed - Line No. \_\_\_\_\_
  - 2 IV-1 - Agent  J.W. Hendrickson
  - 3 IV-2 - Well Permit
  - 4 IV-6 - Well Plat
  - 5 IV-35- Well Record  Drilling  Deepening \_\_\_\_\_
  - 6 IV-36- Gas-Oil Test: Gas Only  Was Oil Produced? \_\_\_\_\_ Ratio \_\_\_\_\_
  - 7 IV-39- Annual Production 3 years
  - 8 IV-40- 90 day Production 90 Days off Line: \_\_\_\_\_
  - 9 IV-48- Application for Certification. Complete?
  - 10 - 17 IV Form #51 - 52 - 53 - 54 - 55 - 56 - 57 - 58. Complete  Affidavit Signed
  - 18 - 28 Other: Survey \_\_\_\_\_ logs \_\_\_\_\_ Geological Charts \_\_\_\_\_ Structure Map \_\_\_\_\_  
 1:4000 Map \_\_\_\_\_ Well Tabulations \_\_\_\_\_ Gas Analyses \_\_\_\_\_
  - (5) Date Commenced: 1-15-57 Deepened \_\_\_\_\_  
 Date Completed: 4-15-57  
 Date Frac: \_\_\_\_\_
  - (5) Production Depth: 2740-2761
  - (5) Production Formation: Big Limg
  - (5) Final Open Flow: 510 MCFD  
 Initial Potential: \_\_\_\_\_
  - (5) Static R.P. 215 # "Form 39"  
 after frac: \_\_\_\_\_ initially: \_\_\_\_\_
  - (6) Other Gas Test: \_\_\_\_\_
  - (7) Avg. Daily Gas from Annual Production: 14.3 4809/335
  - (8) Avg. Daily Gas from 90-day endir. w/1-120 days: 6.0 548/90
  - (8) Line Pressure: 5 PSIG from Daily Report
  - (5) Oil Production: \_\_\_\_\_ From Completion Report \_\_\_\_\_
  - (10-17) Does lease inventory indicate enhanced recovery being done: N/O
  - (10-17) Is affidavit signed?  Notarized?
  - Does official well record with the Department confirm the submitted information? Y/N
  - Additional Information \_\_\_\_\_ Does computer program confirm? \_\_\_\_\_
  - Was Determination Objected to? \_\_\_\_\_ By Whom? \_\_\_\_\_

.. DT.





MAP SHEET 174W S108 W 72, FB 1154P.36-37

Company HOPE NATURAL GAS CO.  
 Address CLARKSBURG, W. VA.  
 Farm BOONE COUNTY COAL CORP  
 Tract \_\_\_\_\_ Acres 29,000 Lease No. 60352  
 Well (Farm) No. \_\_\_\_\_ Serial No. 10043  
 Elevation (Spirit Level) 1308.  
 Quadrangle LOGAN AMHERSTDALE 7.5'  
 County LOGAN District LOGAN  
 Engineer Guy H. Bradley  
 Engineer's Registration No. 2425  
 File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_  
 Date 12-19-56 Scale 1"=1000'

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

**WELL LOCATION MAP**  
 FILE NO. LOG-603

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.  
 - Denotes one inch spaces on border line of original tracing.

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STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

NOTICE OF PROPOSED LOCATION OF OIL AND GAS WELL

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

Boone County Coal Corporation  
COAL OPERATOR OR COAL OWNER

Hope Natural Gas Company  
NAME OF WELL OPERATOR

Sharples, W. Va.  
ADDRESS

Clarksburg, W. Va.  
COMPLETE ADDRESS

Same  
COAL OPERATOR OR COAL OWNER

December 27, 19 56  
PROPOSED LOCATION

ADDRESS

Logan, District

Same  
OWNER OF MINERAL RIGHTS

Logan, County

ADDRESS

Well No. 10043  
*37' 55'*  
*21' 36'*  
*Civilian - 1308*

Boone County Coal Corporation Farm

GENTLEMEN:

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee title thereto, (or as the case may be) under grant or lease dated 6-15-48, made by Boone County Coal Corporation, to Hope Natural Gas Company, and recorded on the 28th day of June 1948, in the office of the County Clerk for said County in Book 192, page 244.

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

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

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

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

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

Very truly yours,

Hope Natural Gas Company

WELL OPERATOR

145 West Main Street

STREET

Clarksburg, W. Va.

CITY OR TOWN

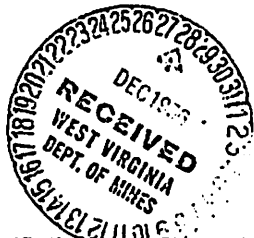
B. R. NUZUM

General Superintendent

By Guley

STATE

Address of Well Operator }



\*Section 3-1-1. If no such objections be filed or be found by the department of mines, within said period of ten days from the receipt of said notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a drilling permit reciting the filing of such plat, that no objections have been made by the coal operators to the location, or found thereto by the department, and that the same is approved and the well operator authorized to proceed to drill at said location.

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WW-4A  
Revised 6-07

1) Date: November 28, 2017  
2) Operator's Well Number  
10043  
3) API Well No.: 47 - 045 - 00603

**STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL**

<b>4) Surface Owner(s) to be served:</b>	<b>5) (a) Coal Operator</b>
(a) Name <u>United Affiliates Corporation</u> <i>W</i>	Name <u>Mingo Logan Coal LLC</u> <i>W</i>
Address <u>1005 Glenway Avenue</u>	Address <u>P.O. Box E</u>
<u>Bristol, VA 24201</u>	<u>Sharples, WV 25183</u>
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>United Affiliates Corporation</u> <i>W</i>
	Address <u>1005 Glenway Avenue</u>
	<u>Bristol, VA 24201</u>
(c) Name _____	Name _____
Address _____	Address _____
<b>6) Inspector</b>	(c) Coal Lessee with Declaration
Address _____	Name <u>Mingo Logan Coal LLC</u> <i>W</i>
	Address <u>P.O. Box E</u>
Telephone _____	<u>Sharples, WV 25183</u>

**TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:**

- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

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

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.

Well Operator Mingo Logan Coal LLC  
 By: Joshua Jackson  
 Its: Designated Agent  
 Address P.O. Box E  
Sharples, WV 25183  
 Telephone (304) 369-7519

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Subscribed and sworn before me this 28th day of November, 2017  
Cynthia Hinde  
 My Commission Expires 9-13-2022

Official Seal  
 Notary Public, State Of West Virginia  
 Cynthia Hinde  
 HC71 Box 79  
 Wharmville WV 25651  
 My commission expires September 13, 2022

**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).



**SURFACE OWNER WAIVER**

Operator's Well Number 10043

**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

**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 of Intent 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

FOR EXECUTION BY A CORPORATION,

_____	Date _____	Name <u>United Affiliates Corporation</u>
Signature		By <u>J. Jasen Eige</u>
		Its <u>VP &amp; General Counsel</u> Date _____

Signature  Date 11/29/2017

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WV Department of Environmental Protection

12/22/2017

WW-4B

API No. 47-045-00603  
 Farm Name Beane County Coal Co.  
 Well No. 10043

**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: 11/29/2017

UNITED AFFILIATES CORPORATION

By: 

Its J. Jasen Eige, VP & General Counsel

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DEC 1 2017  
WV Department of  
Environmental Protection

12/22/2017



**POWER OF ATTORNEY**  
**MINGO LOGAN COAL LLC**  
**TO**  
**BRADLEY D. BALL**

**Dated: January 1, 2017**

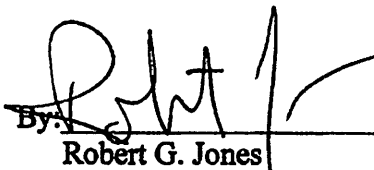
**Expires: December 31, 2017**

KNOW ALL MEN BY THESE PRESENTS: That Mingo Logan Coal LLC, a limited liability company formed under the laws of the State of Delaware (the "Company"), acting by and through Robert G. Jones, its duly authorized Secretary, has and does hereby appoint Bradley D. Ball its true and lawful Attorney-in-Fact with power and authority, for and on behalf, and in the name of the Company, during the period specified above, and subject to the restrictions and limitations set forth in this Power of Attorney to execute and deliver in the ordinary and regular course of the Company's business, applications for any and all permits, bond releases, amendments, supplements or modifications pertaining to surface disturbance of mining permits; water-related permits or other such amendments, supplements or modifications, quarterly discharge monitoring reports or water monitoring reports pertaining to surface coal mining operations; any and all licenses and plan submittals and other like documents pertaining to underground mining issues; air-related permits or other such amendments, supplements or modifications, and monitoring reports arising from emissions affecting air quality pertaining to surface coal mining operations; and waste-related permits or other such amendments, supplements or modifications, and monitoring reports related to generation, transportation or disposal of wastes of any nature or type pertaining to the Company's coal mining operations in West Virginia.

The Attorney herein appointed shall be authorized to act hereunder from the date hereof only so long as such Attorney shall remain an employee of Arch Coal, Inc. or any subsidiary thereof, or until December 31, 2017, or until such earlier time as this instrument has been revoked, annulled, rescinded or set aside by an instrument of revocation filed with the Secretary of the Company, whichever first occurs.

IN WITNESS WHEREOF, the Company has caused this Power of Attorney to be executed on its behalf, and its seal to be hereunto affixed as of the day and year first above written, by the undersigned, Robert G. Jones, duly authorized Secretary of the Company.

MINGO LOGAN COAL LLC

By:   
 Robert G. Jones  
 Secretary

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 Office of Oil and Gas

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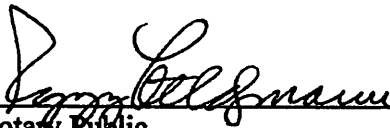
WV Department of  
 Environmental Protection

12/22/2017

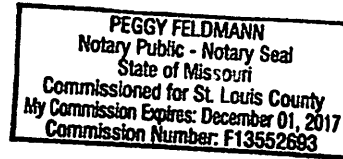
STATE OF MISSOURI     )  
  ) ss  
COUNTY OF ST. LOUIS    )

On this 2d day of January, 2017, before me, the undersigned notary public, personally appeared Robert G. Jones, known to me to be the person whose name is subscribed to the within instrument and acknowledged that he executed the same for the purposes therein contained.

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

  
\_\_\_\_\_  
Notary Public

My Commission Expires: December 1, 2017



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WV Department of  
Environmental Protection

WW-4B

API No. 47-045-00603 P  
Farm Name Boone County Coal Co.  
Well No. 10043

**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.

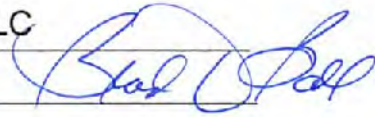
This notice and application is given to you in order that your respective representatives may be present at the plugging and filling of said well. You are further notified that whether you are represented or not the operator will proceed to plug and fill said well in the manner required by Section 24, 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 X / 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: 11/27/17

Mingo Logan Coal LLC  
By: Brad D. Ball   
Its Power of Attorney

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DEC 1 2017  
WV Department of  
Environmental Protection

12/22/2017



WW-9  
(5/16)

API Number 47 - 045 - 00603  
Operator's Well No. 10043

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

Operator Name Mingo Logan Coal LLC OP Code \_\_\_\_\_

Watershed (HUC 10) Spruce Fork of Little Coal River Quadrangle Amherstdale

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 - see attached letter)

Will closed loop system be used? If so, describe: N/A

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

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

Additives to be used in drilling medium? N/A

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

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

-Landfill or offsite name/permit number? \_\_\_\_\_

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on April 1, 2016, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature [Signature]  
Company Official (Typed Name) Joshua Jackson  
Company Official Title Designated Agent

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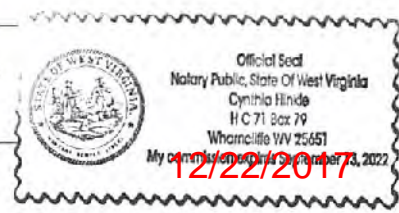
DEC 1 2017

WV Department of  
Environmental Protection

Subscribed and sworn before me this 28th day of November, 2017

[Signature] Notary Public

My commission expires 9-13-2022



Operator's Well No. 10043

Proposed Revegetation Treatment: Acres Disturbed 0.5 Prevegetation pH \_\_\_\_\_

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type \_\_\_\_\_

Fertilizer amount 500 lbs/acre

Mulch hay bales Tons/acre

**Seed Mixtures**

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
orchard grass	50	orchard grass	50
white clover	3	white clover	3
_____	_____	_____	_____

**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: \_\_\_\_\_

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

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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Title: \_\_\_\_\_ Date: \_\_\_\_\_

Field Reviewed? ( ) Yes ( ) No





**MINGO LOGAN COAL LLC  
MOUNTAIN LAUREL COMPLEX  
P.O. Box E, Sharples, WV 25183**

November 29, 2017

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

**To Whom It May Concern:**

**As per the WV Department of Environmental Protection, Office of Oil & Gas request, Mingo Logan Coal 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), Mingo Logan Coal LLC will construct no pits, but instead utilize mud tanks to contain all drilling muds.**

**Once the well is completed, that material (minus the cave material) will be properly disposed of to an approved offsite facility that can handle the material.**

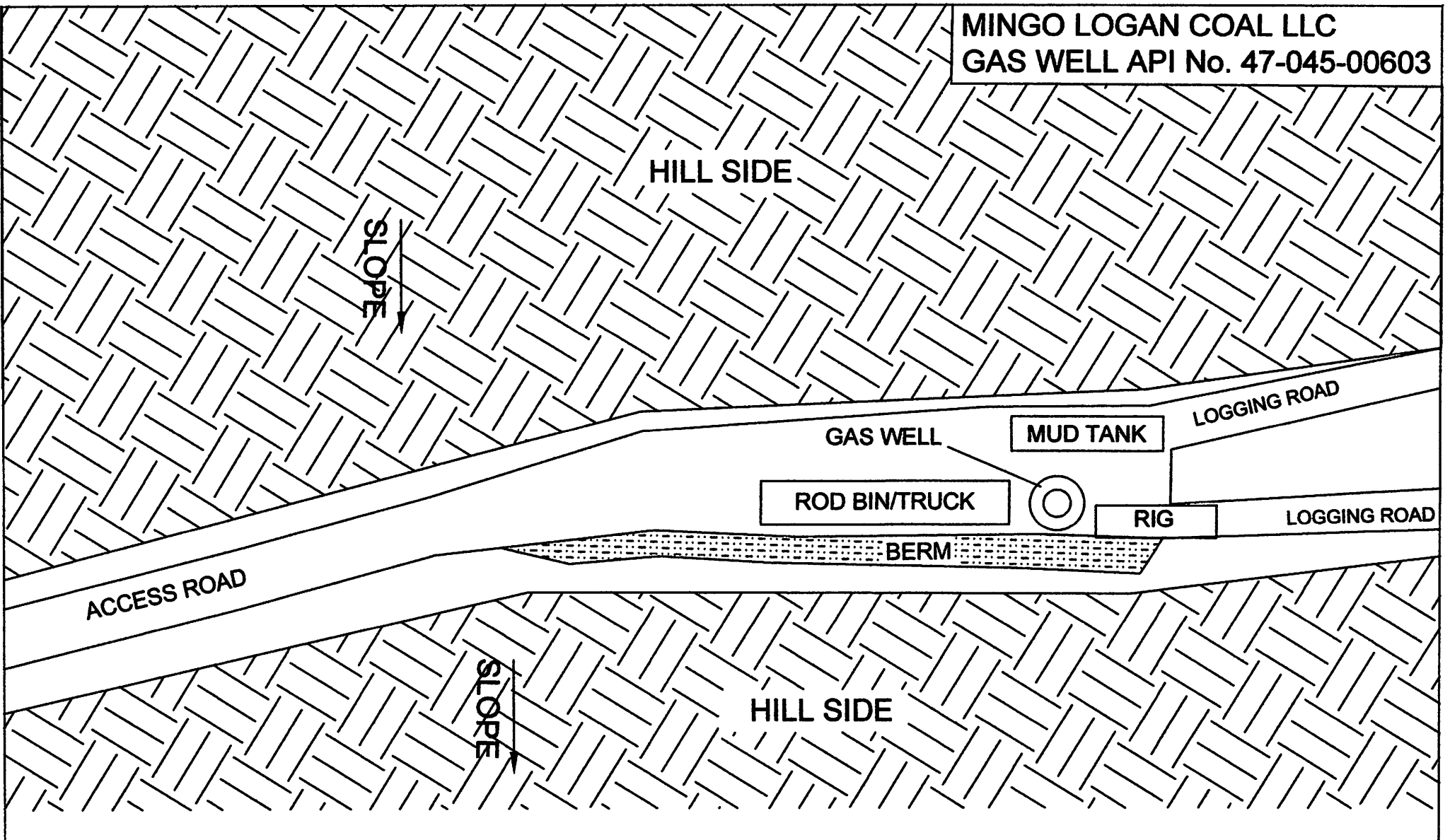
Sincerely,

**Joshua Jackson  
Designated Agent**

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12/22/2017

MINGO LOGAN COAL LLC  
GAS WELL API No. 47-045-00603



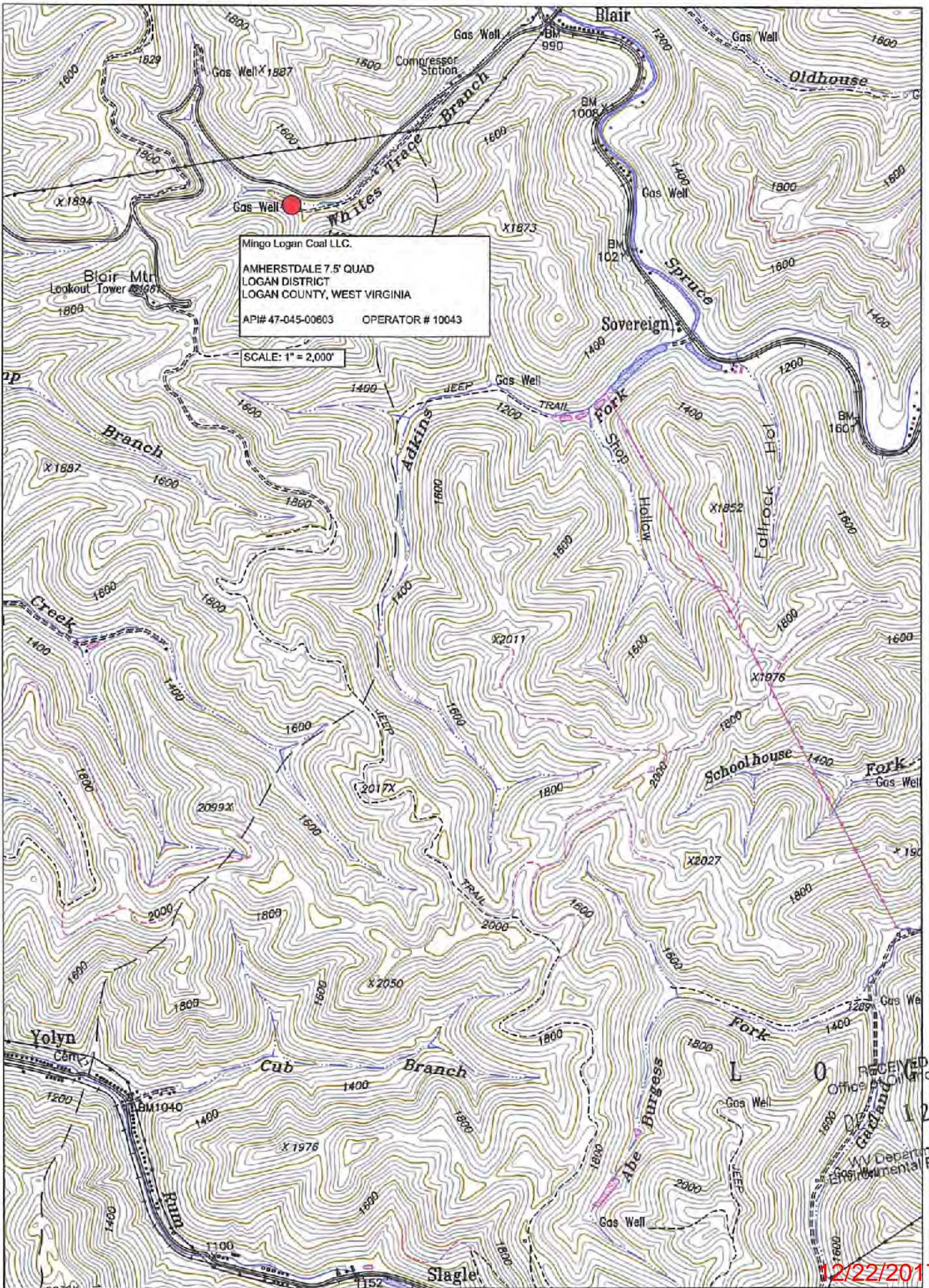
\*ACTUAL SITE LAYOUT MAY VARY FROM  
THAT SHOWN TO ACCOMMODATE ALL  
NECESSARY EQUIPMENT FOR PLUGGING

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Environmental Protection

DRAWING OF ANTICIPATED  
WELL PLUGGING SITE LAYOUT

47-045-00603 P





Mingo Logan Coal LLC.  
 AMHERSTDALE 7.5' QUAD  
 LOGAN DISTRICT  
 LOGAN COUNTY, WEST VIRGINIA  
 API# 47-045-00603 OPERATOR # 10043

SCALE: 1" = 2,000'

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 2017

12/22/2017



WW-7  
8-30-06



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

API: 47-045-00603 WELL NO.: 10043

FARM NAME: Boone County Coal Corporation

RESPONSIBLE PARTY NAME: Mingo Logan Coal LLC

COUNTY: Logan DISTRICT: Logan

QUADRANGLE: Amherstdale

SURFACE OWNER: United Affiliates Corporation

ROYALTY OWNER: United Affiliates Corporation

UTM GPS NORTHING: 4,191,356.2

UTM GPS EASTING: 425,361.0 GPS ELEVATION: 400.812 (1314')

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 x; 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.

*Brian W. Ball*  
Signature

Power of Attorney  
Title

12/25/17  
Date

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12/22/2017



**MINGO LOGAN COAL LLC  
MOUNTAIN LAUREL COMPLEX  
P.O. Box E, Sharples, WV 25183**

November 29, 2017

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

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Environmental Protection

**To Whom It May Concern:**

**Enclosed is a Plugging Permit Application for API Well No. 47-045-00603 located near Blair, Logan County, WV. Plugging is to be conducted in accordance with an approved MSHA 101C petition in order to accommodate underground mining activities. If you have any questions, please call me at 304-369-7508 or Joshua Jackson, Designated Agent, at 304-369-7519.**

Sincerely,

A handwritten signature in blue ink, appearing to read 'Brad D. Ball', is written over a light blue horizontal line.

**Brad D. Ball, PE PS  
Manager of Engineering  
Mingo Logan Coal LLC  
[bball@archcoal.com](mailto:bball@archcoal.com)**

12/22/2017