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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, May 10, 2017  
WELL WORK PERMIT  
Vertical / Plugging

PANTHER CREEK MINING, LLC (A)  
3228 SUMMIT SQUARE PLACE  
SUITE 180  
LEXINGTON, KY 40509

Re: Permit approval for 377  
47-005-01006-00-00

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: 377  
Farm Name: WILLIAMS COAL COMPANY  
U.S. WELL NUMBER: 47-005-01006-00-00  
Vertical / Plugging  
Date Issued: 5/10/2017

Promoting a healthy environment.

05/12/2017

## 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.

Ch#  
029672  
\$185.00

WW-4B  
Rev. 2/01

1) Date Mar. 17, 2017  
2) Operator's  
Well No. 377  
3) API Well No. 47-005-01006

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

- 4) Well Type: Oil \_\_\_\_\_ / Gas X / Liquid injection \_\_\_\_\_ / Waste disposal \_\_\_\_\_ /  
(If "Gas, Production X or Underground storage \_\_\_\_\_) Deep \_\_\_\_\_ / Shallow \_\_\_\_\_
- 5) Location: Elevation 1,406.2' Watershed: Joe's Creek  
District Sherman County Boone Quadrangle Sylvester
- 6) Well Operator Panther Creek Mining, LLC 7) Designated Agent Gary E. Acord  
Address 3228 Summit Square Place, Suite 180 Address P.O. Box 99  
Lexington, KY 40509 Dawes, WV 25054
- 8) Oil and Gas Inspector to be notified 9) Plugging Contractor  
Name Gary Kennedy Name CJ's Well Service  
Address 252 Circle Ave. Address 1013 Cydney Circle  
Rainelle, WV 25962 Oakwood, VA 24631

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

MSHA 101C EXEMPTION  
WITH APPENDIX A

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

Work order approved by inspector Gary Kennedy

RECEIVED  
Office of Oil and Gas  
APR 03 2017  
Date 3/27/17  
Department of  
Environmental Protection

**PLUGGING PROGNOSIS**

Well #377  
 API# 47-005-01006  
 Sherman District, Boone County

**Current Status**

EAGLE ≈ 490' - 510' ELEV. ABOVE SEA LEVEL.

Elevation: 1,406.2'  
 Total Depth: 3,189' (Per Well Drilling Record)  
 Active: Yes (shut in)  
 Plugged: No

**Procedure for Plugging** (SOLID PLUG)

- 1) Notify state inspector, Gary Kennedy, @ 304-382-8402, before starting.
- 2) Cleanout hole to 3,189' (Original T.D.)
- 3) Locate freepoint, cut casing, and pull from hole 4 1/2" CASING APPEARS TO BE CTS.
- 4) Pump Class "A" Cement from 3,189' - 2,714' (T.D. to 100' above Gas Producing Formation - Weir and Berea Sandstone)
- 5) Pump Class "A" Cement ( ) ' from 2,714' - 1,878'
- 6) Pump Class "A" Cement from 1,878' - 1,405.' (100' Below Salt Sands to Elevation)
- 7) Pump Class "A" Cement " " from 1,405' - 1,106' (Approx 200' below Eagle coal seam)
- 8) Perforate casing (if Applicable) to 101C standards to 200' below the Eagle coal seam
- 9) Plug well from 200' below coal seam (Approx Depth 1,106') - surface using 101C Petition Standards
- 10) Set expanding cement plug from 200' below the Eagle coal seam to 100' above the Eagle coal seam.
- 11) Pump Class "A" Cement ( ) from 100' above the Eagle coal seam to the surface.
- 12) Depending on site conditions, plugging procedures may be modified after approval of the inspector.
- 13) All changes to the plugging procedures will be noted in the plugging affidavit.
- 14) Erect permanent monument with API number.
- 15) Reclaim the site and access road.

RECEIVED  
 Office of Oil and Gas  
 APR 03 2017  
 WV Department of  
 Environmental Protection  
 MK

## MSHA/OIC EXEMPTION

FEDERAL MINE SAFETY AND HEALTH ADMINISTRATION  
 1100 Wilson Boulevard, Room 2352  
 Arlington, VA 22209-3939

IN THE MATTER OF SPEED MINING	)	PETITION FOR MODIFICATION
LLC, AMERICAN EAGLE MINE <sup>1</sup>	)	
	)	
Petitioner	)	MSHA Docket No. M-2013-050-C
	)	
	)	

CONSENT ORDER

Pursuant to 30 C.F.R. § 44.27, Panther Creek Mining LLC (“Panther Creek”), by its undersigned counsel, and the Solicitor for the Administrator of Coal Mine Safety, Mine Safety and Health Administration, hereby agree to a Consent Order resolving the above-referenced matter.

- 1) Pursuant to 30 U.S.C. § 101(c) and 30 C.F.R. Part 44, Panther Creek sought modification of 30 C.F.R. § 75.1700, which provides as follows:

Each operator of a coal mine shall take reasonable measures to locate oil and gas wells penetrating coal beds or any underground areas 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.

- 2) In its Petition for Modification, Panther Creek alleged that, pursuant to 30 C.F.R. § 44.4(a)(1), its proposed method was an alternative method of achieving the result of the

<sup>1</sup> The American Eagle Mine at issue in this matter is no longer operated by Speed Mining LLC. Instead, it is now operated by Panther Creek Mining LLC. Accordingly, the petitioner herein shall be referred to as Panther Creek Mining LLC.

standard which would at all times guarantee no less than the same measure of protection afforded by the standard.

- 3) MSHA personnel conducted an investigation of the petition and filed a report of their findings and recommendations with the Administrator of Coal Mine Safety and Health.
- 4) On July 31, 2015, MSHA issued a Proposed Decision and Order granting the Petition for Modification.
- 5) Panther Creek disagreed with a number of conditions of the Petition for Modification and requested a hearing before a Department of Labor Administrative Law Judge pursuant to 30 C.F.R. § 44.14. The parties have entered into settlement discussions and negotiated this Consent Agreement. In accordance with 30 C.F.R. § 44.27(b), this Consent Agreement contains Consent Findings and a Consent Order disposing of the entire proceeding.

#### **Consent Findings**

- 6) In accordance with 30 C.F.R. § 44.27(b)(1), both MSHA and Panther Creek agree that the following Consent Order shall have the same effect as if made after a full hearing.
- 7) In accordance with 30 C.F.R. § 44.27(b)(2), both MSHA and Panther Creek agree that the record on which the following Consent Order is based consists of the petition and agreement and all other pertinent information as set forth in Section 44.27(b)(2).
- 8) In accordance with 30 C.F.R. § 44.27(b)(3), both MSHA and Panther Creek agree to waive any further procedural steps before the Administrative Law Judge and Assistant Secretary.
- 9) In accordance with 30 C.F.R. § 44.27(b)(4), both MSHA and Panther Creek agree to waive any right to challenge or contest the validity of the Consent Findings and Consent Order made in accordance with this Consent Agreement.
- 10) Both MSHA and Panther Creek agree that the terms and conditions of the following Consent Order will at all times guarantee no less than the same measure of protection afforded by the existing standard under the conditions present at this particular mine.

### Consent Order

Under the authority delegated by the Secretary of Labor to the Administrator for Coal mine Safety and Health and under § 811(c) and 30 C.F.R. Part 44, modification of the application of 30 C.F.R. § 75.1700 at the American Eagle Mine is hereby GRANTED as set forth below.

#### **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, previously plugged wells, water injection wells, and carbon dioxide sequestration wells) until approval to proceed with mining has been obtained from the district manager. Wells that were drilled into potential oil or gas producing formations that did not produce commercial quantities of either gas or oil (exploratory wells, wildcat wells or dry holes) are classified as oil or gas wells by MSHA.
- b. Prior to mining within the safety barrier around any well that the mine plans to intersect, 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 which the district manager may request. The district manager will review the affidavit or declaration, the logs and any other records that have been requested, and 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.

If well intersection is not planned, the mine operator may request a permit to reduce the 300 foot diameter of the safety barrier but to not intersect the well. The district manager may require documents and information that help quantify the accuracy of the location of the well in respect to the mine maps and mining projections. This information may include survey closure data, down-hole well deviation logs, historical well intersection location data and any additional data required by the district manager. If the district manager determines that the proposed barrier reduction is reasonable, he will provide his approval, and the mine operator may then mine within the safety barrier of the well.

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

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

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

- (1) If the total depth of the well is less than 4,000 feet, the operator shall completely clean out the well from the surface to at least 200 feet below the base of the lowest mineable coal seam, unless the district manager requires cleaning to a greater depth based on his judgment as to what is required due to the geological strata, or due to the pressure within the well (the operator shall provide the district manager with all information it possesses concerning the geological nature of the strata and the pressure of the well). If the total depth of the well is 4,000 feet, or greater, the operator shall completely clean out the well from the surface to at least 400 feet below the base of the lowest mineable coal seam. The operator shall remove all material from the entire diameter of the well, wall to wall.
- (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. Coal seam depth will be based on an e-log survey completed at the time of the well plugging. This e-log information is used for determining the coal seam depth and the depths of the perforations or rips in the casing from the surface reference point. 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, 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, milled, perforated or ripped at all mineable coal seam levels to facilitate the removal of any remaining casing in the coal seam by the mining equipment. Any casing which remains shall be perforated or ripped to permit the injection of cement into voids within and around the well. The operator shall ensure that work



performed prior to the date of this order to perforate or rip all casing remaining at mineable coal seam levels is consistent with either Appendix A or Appendix B (attached). All work performed after the date of this order to perforate or rip all casing remaining at mineable coal seam levels shall be consistent with Appendix A. Perforations or rips consistent with Appendix A or Appendix B, as applicable by the date of this order, are required at least every 50 feet from 200 feet (400 feet if the total well depth is 4,000 feet or greater) 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 will 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 which remains shall be ripped or perforated and filled with expanding cement as indicated above. An acceptable casing bond log for each casing and tubing string is needed if used in lieu of ripping or perforating multiple strings.

- (4) 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 (400 feet if the total well depth is 4,000 feet or greater) 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 mechanical bridge plug, an appropriately sized packer may be used.
- (5) If the upper-most hydrocarbon-producing stratum is within 300 feet of the base of the lowest mineable coal seam, the operator shall properly place mechanical bridge plugs as described in subparagraph (a)(4) to isolate the hydrocarbon producing stratum from the expanding cement plug. Nevertheless, the operator shall place a minimum of 200 feet (400 feet if the total well depth is 4,000 feet or greater) of expanding cement below the lowest mineable coal seam, unless the district manager requires a greater distance based on his judgment that it is required due to the geological strata, or due to the pressure within the well.

b. MANDATORY PROCEDURES FOR PLUGGING OR 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 wells:

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

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

- (2) The operator shall embed steel turnings or other small magnetic particles in the top of the cement near the surface to serve as a permanent magnetic monument of the well. In the alternative, a 4-inch or larger casing, set in cement, shall extend at least 36 inches above the ground level with the API well number engraved or welded on the casing. When the hole cannot be marked with a physical monument (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 WELLS

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

- (1) The operator shall set a cement plug in the well by pumping an expanding cement slurry down the tubing to provide at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) of expanding cement below the lowest mineable coal seam, unless the district manager requires a greater depth based on his judgment that a greater depth is required due to the geological strata, or due to the pressure within the well. The expanding cement will be placed in the well under a pressure of at least 200 pounds per square inch. The top of the expanding cement shall extend at least 50 feet above the top of the coal seam being mined, unless the district manager requires a greater distance based on his judgment that a greater distance is required due to the geological strata, or due to the pressure within the well.
- (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.
- (4) Such equipment may include check valves, shut-in valves, sampling ports, flame arrestor equipment, and security fencing.
- (5) 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.
- (6) After the area of the coal mine that is degassed by a well is sealed or the coal mine is abandoned, the operator must plug all degas wells using the following procedures:
  - (i) The operator shall insert a tube to the bottom of the well or, if not possible, to within 100 feet above the coal seam being mined. 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 4-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.

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

The following provisions apply to all wells which 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 (400 feet if the total well depth is 4,000 feet or greater) 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 which may remain in the well.

- (3) If the well contains casing(s), the operator shall drill into the well from the parallel hole. All casings shall be perforated or ripped to permit the injection of cement into voids within and around the well. The operator shall ensure that work performed prior to the date of this order to perforate or rip all casing remaining at mineable coal seam levels is consistent with either Appendix A or Appendix B (attached). All work performed after the date of this order to perforate or rip all casing remaining at mineable coal seam levels shall be consistent with Appendix A. Perforations or rips consistent with Appendix A or Appendix B, as applicable by the date of this order, are required at least every 50 feet from at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) below the base of the lowest mineable coal seam 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 will not be required to perforate or rip the casing for that particular well, or fill these areas with cement. When multiple casing and tubing strings are present in the coal horizon(s), any casing which remains shall be ripped or perforated and filled with expanding cement as indicated above. An acceptable casing bond log for each casing and tubing string is needed if used in lieu of ripping or perforating multiple strings.
- (4) Where the operator determines, and the district manager agrees, that there is insufficient casing in the well to allow the method outlined in subparagraph (d)(3) to be used, then the operator shall use a horizontal hydraulic fracturing technique to intercept the original well. From at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) below the base of the lowest mineable coal seam to a point at least 50 feet above the seam being mined, the operator shall fracture in at least six places at intervals to be agreed upon by the operator and the district manager after considering the geological strata and the pressure within the well. The operator shall then pump expanding cement into the fractured well in sufficient quantities and in a manner which fills all intercepted voids.
- (5) The operator shall prepare down-hole logs for each well. 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 logs from the adjacent hole rather than the well if the condition of the well makes its 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 or 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 adjacent hole, from the bottom to the surface, with Portland cement or a lightweight cement mixture. The operator shall embed steel turnings or other small magnetic particles in the top of the cement near the surface to serve as a permanent magnetic monument of the well. In the alternative, a 4-inch or larger casing, set in cement, shall extend at least 36 inches above the ground level.

A combination of the methods outlined in subparagraphs (d)(3) and (d)(4) may have to be used in a single well, depending upon the conditions of the hole and the presences 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. The mine operator may submit an alternative plan to the district manager for approval to use different methods to address wells that cannot be completely cleaned out.

The district manager may require additional documentation and certification by a registered petroleum engineer to support the proposed alternative methods.

### **3. MANDATORY PROCEDURES WHEN MINING WITHIN 100-FOOT DIAMETER BARRIER AROUND WELL**

- a. A representative of the operator, a representative of the miners, the appropriate State agency, or the MSHA district manager may request that a conference be conducted prior to intersecting any plugged or replugged well. Upon receipt of any such request, the district manager shall schedule such a conference. The party requesting the conference shall notify all other parties listed above within a reasonable time prior to the conference to provide opportunity for participation. The purpose of the conference shall be to review, evaluate, and accommodate any abnormal or unusual circumstance(s) related to the condition of the well or surrounding strata when such conditions are encountered.
- b. The operator shall intersect a well on a shift approved by the district manager. The operator shall notify the district manager and the miners' representative in sufficient time prior to intersecting a well in order to provide an opportunity to have the 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 the longwall-mining methods, distance markers shall be installed on 5-foot centers for a distance of 50 feet in advance of the well in the headgate entry and in the tailgate entry.
- d. The operator shall ensure that fire-fighting equipment including fire extinguishers, rock dust, and sufficient fire hose to reach the working face area of the well intersection (when either the conventional or continuous mining method is used) is available and operable during all well intersections. The fire hose shall be located in the last open crosscut of the entry or room. The operator shall maintain the water line to the belt conveyor tailpiece along with a sufficient amount of fire hose to reach the farthest point of penetration on the section. When the longwall mining method is used, a hose to the longwall water supply is sufficient.
- e. The operator shall ensure that sufficient supplies of roof support and ventilation materials shall be available and located at the last open crosscut. In addition, emergency plugs and suitable sealing materials shall be available in the immediate area of the well intersection.
- f. On the shift prior to intersecting the well, the operator shall service all equipment and check it for permissibility. Water sprays, water pressures and water flow rates used for dust and spark suppression shall be examined and any deficiencies corrected.
- g. The operator shall calibrate the methane monitor(s) on the longwall, continuous mining machine, or cutting machine and loading machine on the shift prior to intersecting the well.
- h. 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. During the actual cutting process, no individual shall be allowed on the return side until the well intersection has been completed, and the area has been examined and declared safe. All workplace examinations on the return side of the shearer will be conducted while the shearer is idle.
- i. 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 intersecting 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.
- j. When the well is intersected, the operator shall de-energize all equipment, and thoroughly examine and determine the area is safe before mining is resumed.

- k. After a well has been intersected and the working place determined to be safe, mining shall continue in by the well a sufficient distance to permit adequate ventilation around the area of the well.
- l. 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 than 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 the use of torches.

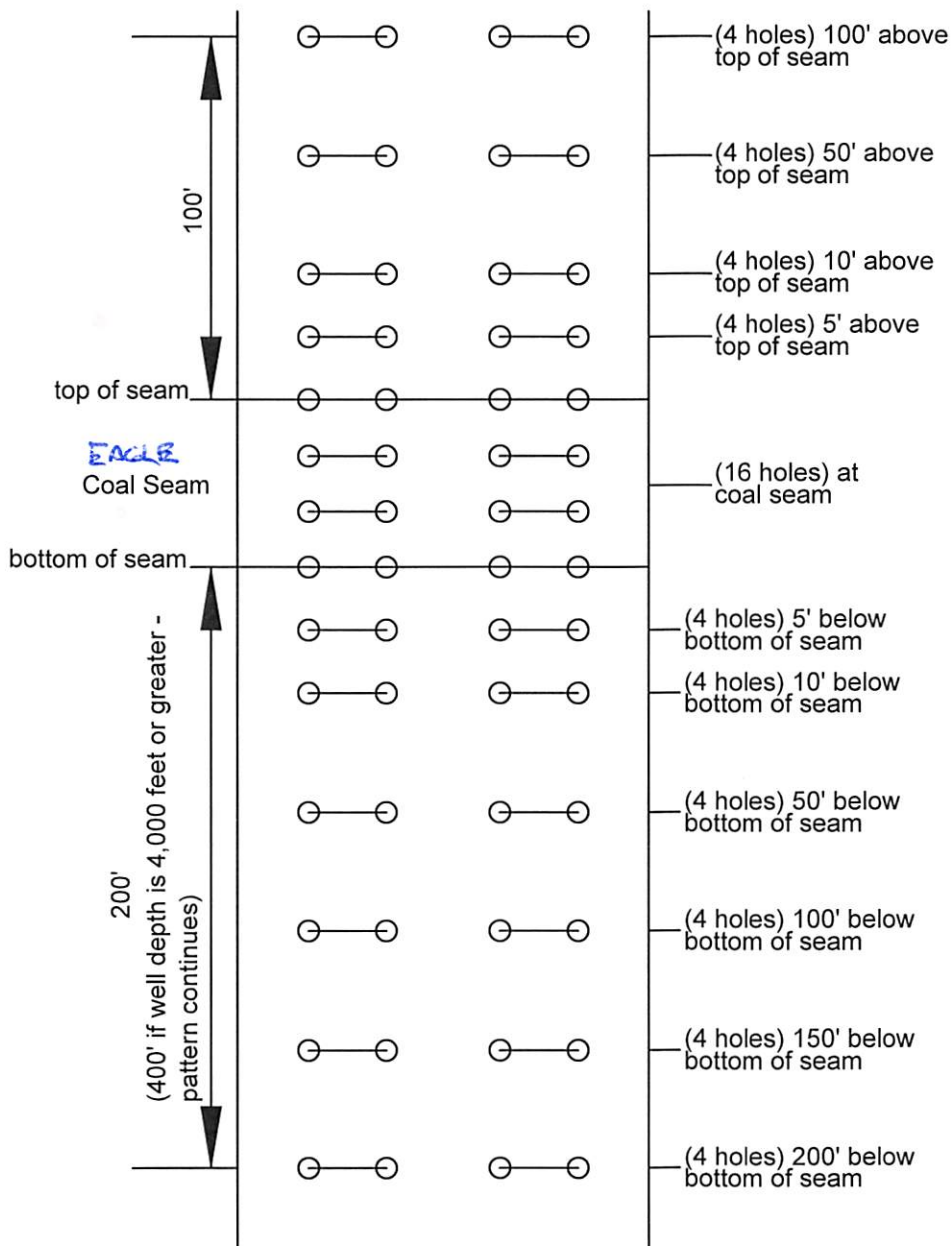
- m. Non-sparking (brass) tools will be located on the working section and will be used to expose and examine cased wells.
- n. No person shall be permitted in the area of the well intersection except those actually engaged in the operation, including company personnel, representatives of the miners, personnel from MSHA, and personnel from the appropriate State agency.
- o. 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.
- p. The well intersection shall be under the direct supervision of a certified individual. Instructions concerning the well intersection shall be issued only by the certified individual in charge.
- q. The provisions of this Order do not impair the authority of representatives of MSHA to interrupt or halt the well intersection, 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 well intersection 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. 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.
- r. A copy of this Order shall be maintained at the mine and be available to the miners.
- s. Within 30 days after this Order becomes final, the operator shall submit proposed revisions for its approved 30 CFR 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 well intersection with training regarding the requirements of this Order prior to mining within 150 feet of the next well intended to be mined through.

- t. The responsible person required under 30 C.F.R. § 75.1501 is responsible for well intersection emergencies. The well intersection procedures should be reviewed by the responsible person prior to any planned intersection.
- u. Within 30 days after this Order becomes final, the operator shall submit proposed revisions for its approved mine emergency evacuation and firefighting program of instruction required under 30 C.F.R. § 75.1502. The operator will revise the program of instruction to include the hazards and evacuation procedures to be used for well intersections. All underground miners will be trained in this revised plan within 30 days of submittal.



# Appendix A



## Notes:

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

Not To Scale

Form OC-10



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

Quadrangle Poytona

WELL RECORD

Permit No. B00-1006

Oil or Gas Well Oil & Gas  
(KIND)

Company Company of California  
Address 311, Olney, Illinois 62450  
Farm 112.000 Acres  
Location (u.s. map)  
Well No. 377 Elev. 2111.8 G.  
District County Boone  
The surface of tract is owned in fee by Shonk Land Co.  
Kenawha Bk & Tr Co Address Charleston, W. Va.  
Mineral rights are owned by sand  
Address

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size OD			Kind of Packgr.
16			
13			
10			Size of
<u>9-5/8</u>	<u>371'</u>	<u>371'</u>	
<u>6 1/2</u>			Depth set
<u>3</u>	<u>3179'</u>	<u>3179'</u>	
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

Drilling commenced 6-21-68  
Drilling completed 6-27-68  
Date Shot From To  
With  
Open Flow 10ths Water In 10ths Merc. In  
Volume 1000 Cu. Ft.  
Rock Pressure 100 lbs. hrs.  
Oil Fractured bbls. 24 hrs.  
WELL ACIDIZED 7-12-68 (Screen) 3137-3151 w/  
10,000 G. GFV, 10,000/ 20/40 Sd, Spearheaded  
w/ 500 Gals. HDA acid.  
WELL FRACTURED 11-68 (Weir) Top perfor 2831, Btr perfor 2962 w/ 18,000 Gals. GFV, 22,000/ 20/40  
sand spearheaded w/ 1000 Gals. HDA acid. Used 90 perf balls.  
RESULT AFTER TREATMENT IP/P-2 BO plus 15 SW, 220 MCF gas/ 24 hrs.  
ROCK PRESSURE AFTER TREATMENT 2800 - 20,000 Gals.  
Fresh Water 0 Feet Salt Water 0 Feet

CASING CEMENTED 1 1/2" SIZE 3179' No. Ft. 1 Date 6-27-68  
& cemented w/ 761 sacks cement.  
COAL WAS ENCOUNTERED AT 118 FEET 60 INCHES  
170 FEET 14 1/2 INCHES 338 FEET 60 INCHES  
568 FEET 60 INCHES 720 FEET 26 1/2 INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Sand rock			0	118			
Coal			118	153			
Sand			153	170			
Coal			170	182			
Sand, Sandy Shale			182	330			
Coal			330	341			
Shale			341	568			
Coal			568	573			
Shale, Sandy Shale			573	720			
Coal			720	742			
Shale, Sand, Slatc			742	1778			
Salt, Sand			1778	1860			
Shale, Sand			1860	2060			
Red Rock, Sand			2060	2294			
Shale			2294	2438			
L. LIME			2438	2666			
Limo, Shaly Limo			2666				
B. LIME			2661				
BIG INJUN			2661				
Red Rock, Shale			2666	2848			
Sand, Shale			2848	3127			
WEIR			2848	2975			
Sand			3127	3151			
BEREA SS, POROSITY			3139	3152			
Shale			3151	3169			
MCCULLOUGH TD. (in Cas)			3179				
DTD			3169				

(over)





OG-11

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

INSPECTOR'S WELL REPORT

Permit No. Boo-1006

Oil or Gas Well \_\_\_\_\_  
(KIND)

Company Yuma Oil Co. of Calif.  
 Address Olney Illinois  
 Farm Williams Coal Co.  
 Well No. 377  
 District Sherman County Boone  
 Drilling commenced \_\_\_\_\_  
 Drilling completed \_\_\_\_\_ Total depth \_\_\_\_\_  
 Date shot \_\_\_\_\_ Depth of shot \_\_\_\_\_  
 Initial open flow \_\_\_\_\_ /10ths Water in \_\_\_\_\_ Inch  
 Open flow after tubing \_\_\_\_\_ /10ths Merc. in \_\_\_\_\_ Inch  
 Volume \_\_\_\_\_ Cu. Ft.  
 Rock pressure \_\_\_\_\_ lbs. \_\_\_\_\_ hrs.  
 Oil \_\_\_\_\_ bbls. 1st 24 hrs.  
 Fresh water 25 feet 790 feet  
 Salt water 1800 feet \_\_\_\_\_ feet

CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Size			
16			Kind of Packer
13			
10			Size of
8 1/2	371'		
6 1/2	3179'		Depth set
4 1/2			
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED \_\_\_\_\_ SIZE \_\_\_\_\_ No. FT. \_\_\_\_\_ Date \_\_\_\_\_  
 NAME OF SERVICE COMPANY \_\_\_\_\_  
 COAL WAS ENCOUNTERED AT 338 FEET 72 INCHES  
568 FEET 60 INCHES 720 FEET 26 1/4 INCHES  
 \_\_\_\_\_ FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES

Drillers' Names Ayers Anderson

Remarks: Lohman Johnson

9 1/2 Cement to surface  
4 1/2 Cement to surface cement used 8 1/2 sacks  
T. D. 3181

7-2-68  
DATE



501006P

FORM NO. 1



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

5/12/68  
CEM

NOTICE OF PROPOSED LOCATION OF OIL AND GAS WELL

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

The Carbon Fuel Company  
COAL OPERATOR OR COAL OWNER

Union Oil Company of California  
NAME OF WELL OPERATOR

Carbon, Kanawha County, West Virginia  
ADDRESS

Box #311, Olney, Illinois, 62450  
COMPLETE ADDRESS

Oleg Brooko Coal Company  
COAL OPERATOR OR COAL OWNER

May 0 19 68

401 Ponna. Ave., Weirton, West Virginia  
ADDRESS

PROPOSED LOCATION

Sherman District

Boone County

OWNER OF MINERAL RIGHTS

Well No. 377

Williams Coal Company Farm

Elevation: 1411.0 Acres: 12.000

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 8-31-14 made by Williams Coal Company to

Columbus Producing Company and recorded on the 29th day of December, 1914 (Boone County) Sept. 16, 1914 (Kanawha County) in the office of the County Clerk for said County in Book 26, page 2 Kanawha County; Book 3 Page 526 Boone County.

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, ~~certified~~ to the above named coal operators or coal owners at their above shown respective addresses on May 12, 1968, on the same day with the mailing ~~certification~~ of this copy to the Department of Mines at Charleston, West Virginia.

Very truly yours, Union Oil Company of California

by: J. J. Mastick WELL OPERATOR Dist. Oper. Supt.

Box 311 STREET

Olney CITY OR TOWN

Illinois, 62450 STATE



Address of Well Operator

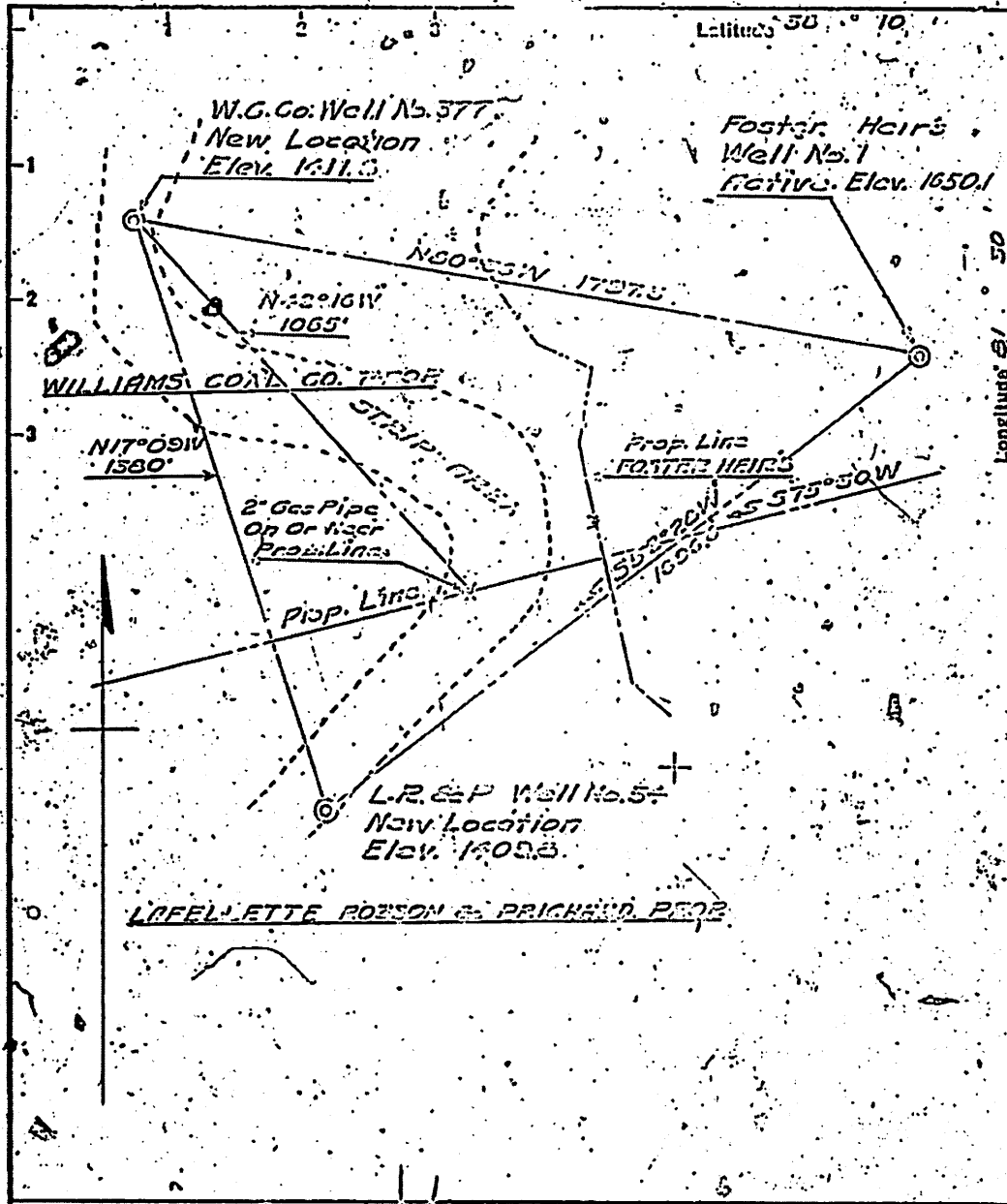
Section 3. If no such objections be filed or be found by the department of mines, within said period of ten days from the receipt of said notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a drilling permit reciting the filing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

BLANKET RATE

800-1006 PERMIT NUMBER

1006

05/12/2017



- Fracture Before 6/5/27
- New Location
- Drill Deeper
- Redrill
- Abandonment

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by Paragraph 5 of the Rules and Regulations of the Oil and Gas Section of the Mining Laws of West Virginia.

The accuracy of this survey is within the limits and as prescribed in paragraph 5 by the Oil and Gas Division of the Department of Mines Regulations.

PROVEN ELEVATION 1411.3

Company UNION OIL CO. OF CAL.

Address GLAY CITY, ILL.

Farm WILLIAMS COAL CO.

Tract Acres 12,000 Lease No. \_\_\_\_\_

Well (Farm) No. 377 Serial No. \_\_\_\_\_

Elevation: (Spirit Level) 1411.3

Quadrangle PEYTONR. V.W.

County DOONE District SHEPHERD

Engineer Harold Miller

Engineer's Registration No. 231

File No. APRIL 1950 Drawing No. 4

Date \_\_\_\_\_ Scale 1" = 300'

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

WELL LOCATION MAP  
FILE NO. 300-1006

- \* 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.



1.) Date: 03/17/2017  
2.) Operator's Well Number  
377  
3.) API Well No.:  
47-005-01006

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 Shonk Land Company  
Address P.O. Box 969  
Charleston, WV 25324  
  
(b) Name \_\_\_\_\_  
Address \_\_\_\_\_  
  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_  
  
6) Inspector Gary Kennedy  
Address 252 Circle Ave  
Rainelle, WV 25962  
Telephone 304-382-8402

5) (a) Coal Operator  
Name Panther Creek Mining, LLC  
Address 3228 Summit Square Place, Suite 180  
Lexington, KY 40509  
  
(b) Coal Owner(s) with Declaration  
Name Shonk Land Company  
Address P.O. Box 969  
Charleston, WV 25324  
  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
  
(c) Coal Lessee with Declaration  
Name Panther Creek Mining, LLC  
Address 3228 Summit Square Place, Suite 180  
Lexington, KY 40509

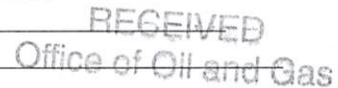
**TO THE PERSONS NAMED ABOVE:** You should have received this Form and the following documents:

- (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.

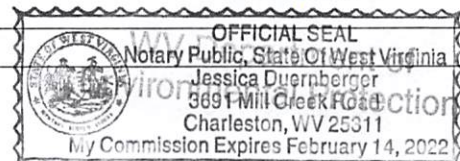
The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

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 Panther Creek Mining, LLC  
By: Gary Acord *[Signature]*  
Its: Agent  
Address P.O. Box 99  
Dawes, WV. 25054  
Telephone 304-205-8847



Subscribed and sworn before me this 22 day of March, 2017  
*[Signature]*  
My Commission Expires 2/14/2022



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 [depprivacyoffier@wv.gov](mailto:depprivacyoffier@wv.gov)



**SURFACE OWNER WAIVER**  
**Operator's Well**  
**Number**

377

**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 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**

*[Handwritten Signature]*  
Signature

Date 2/12/17

**FOR EXECUTION BY A**

*[Handwritten Signature]* Name Shank Land Co LLC Oil and Gas  
By Thomas Lov  
Date 2/12/17

Office of Oil and Gas  
WV Department of Environmental Protection

05/12/2017

501006P

WW-4B

API No. 47-005-01006

Farm Name LaFollette

Well No. 377

**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: 3-22-2017

Panther Creek Mining, LLC

By: Barry E. Alford

Its ENGINEER

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Office of Oil and Gas

APR 03 2017

WV Department of  
Environmental Protection

05/12/2017

WW-4B

API No. 47-005-01006

Farm Name Shonk Land Company

Well No. 377

**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: 2/22/17

By: Shonk Land Company LLC  
Its: Special Asst. to Manager  
Office of Oil and Gas

APR 03 2017  
WV Department of  
Environmental Protection

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

Operator Name Panther Creek Mining, LLC OP Code \_\_\_\_\_

Watershed (HUC 10) Joess Creek Quadrangle Sylvester

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: No expected. Pit built for precautionary measures

Will a synthetic liner be used in the pit? Yes  No  If so, what ml.? 20

- Proposed Disposal Method For Treated Pit Wastes: JK
- Land Application (if selected provide a completed form WW-9-GPP)
  - Underground Injection ( UIC Permit Number \_\_\_\_\_ )
  - Reuse (at API Number \_\_\_\_\_ )
  - Off Site Disposal (Supply form WW-9 for disposal location)
  - Other (Explain \_\_\_\_\_)

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

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

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

Additives to be used in drilling medium? None

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

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

-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 Gary E. Acord

Company Official (Typed Name) Gary E. Acord

Company Official Title Agent/ Engineer

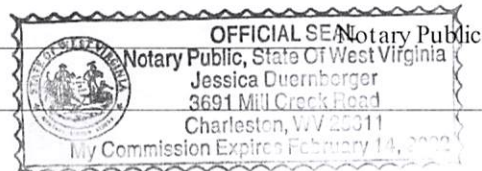
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Office of Oil and Gas  
APR 03 2017

WV Department of  
Environmental Protection

Subscribed and sworn before me this 22 day of March, 2017

Jessica Duernberger

My commission expires 2/14/2022



05/12/2017

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

Lime 2 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20 or equivalent

Fertilizer amount 500 lbs/acre

Mulch 2 tons or 1000 - 1500 lbs hydroseed mulch Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
		Fescue	40
		Clover	5
		Ryegrass	5

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [Signature]

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

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Office of Oil and Gas

APR 03 2017

WV Department of  
Environmental Protection

Title: Inspector Date: 3/27/17

Field Reviewed? (  ) Yes (  ) No

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

Operator Name: Panther Creek Mining, LLC  
Watershed (HUC 10): Joes Creek Quad: Sylvester  
Farm Name: Shonk Land Company

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

Plugging shut in gas well. Not much water is anticipated to be used in the plugging of this well. However a pit will be constructed and lined for precautionary measure. No brine water is expected to be encountered while plugging the well. The pit may be used to hold water used for cement mixing. Any water remaining in the pit once plugging is complete will be allowed to solidify and any remaining water will be sampled by a certified lab before the pit is reclaimed.

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

A lined pit will be constructed as a precautionary measure. Any water remaining in the pit once plugging is complete will be allowed to solidify and any remaining water will be sampled by a certified lab before the pit is reclaimed. Straw bales, oil absorption pads, and silt fences will be available on the mine property in case of spills or contaminations.

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

The closest body of water is a tributary of Joes Creek located approximately 620 ft. away from the well site and anticipated pit location.

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

Mining Operations - storage tanks regulated under two GPP plans.

RECEIVED  
Office of Oil and Gas  
APR 03 2017  
WV Department of  
Environmental Protection

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

None for Joes Creek watershed. Adjacent watersheds are sampled bimonthly for the mining operations. The results of the bimonthly samplings are submitted to the WV DEP.

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

No waste material will be used for deicing or for fill material.

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

Each employee and contractor involved in plugging the well will be trained on the proper environmental procedures of the job. The pit and area around the pit will be visually examined daily for leaks and tears. If a leak or tear is observed, discharge to the pit will cease until proper repairs can be made to the pit or liner. Plugging equipment will be inspected each day before work begins to ensure there are no fluid leaks. Straw bales, oil absorption pads, and silt fencing will be available on the mine property in case of spills. Any contaminated materials will be properly disposed of in specially marked containers. If there is any remaining water in the pit once plugging is complete, it will be analyzed by a lab before the pit is reclaimed.

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

The pit and area around the pit will be visually examined daily for leaks and tears. If a leak or tear is observed, discharge to the pit will cease until proper repairs can be made to the pit or liner. Plugging equipment will be inspected each day before work begins to ensure there are no fluid leaks. Straw bales, oil absorption pads, and silt fencing will be available on the mine property in case of spills. If there is any remaining water in the pit once plugging is complete, it will be analyzed by a lab before the pit is reclaimed.

RECEIVED  
Office of Oil and Gas  
APR 03 2017  
WV Department of  
Environmental Protection

Signature: *Larry E. Clowd*

Date: 3-22-2017

Joes Creek Tributary

Access Road

Well 377  
API. No. 47-005-01006

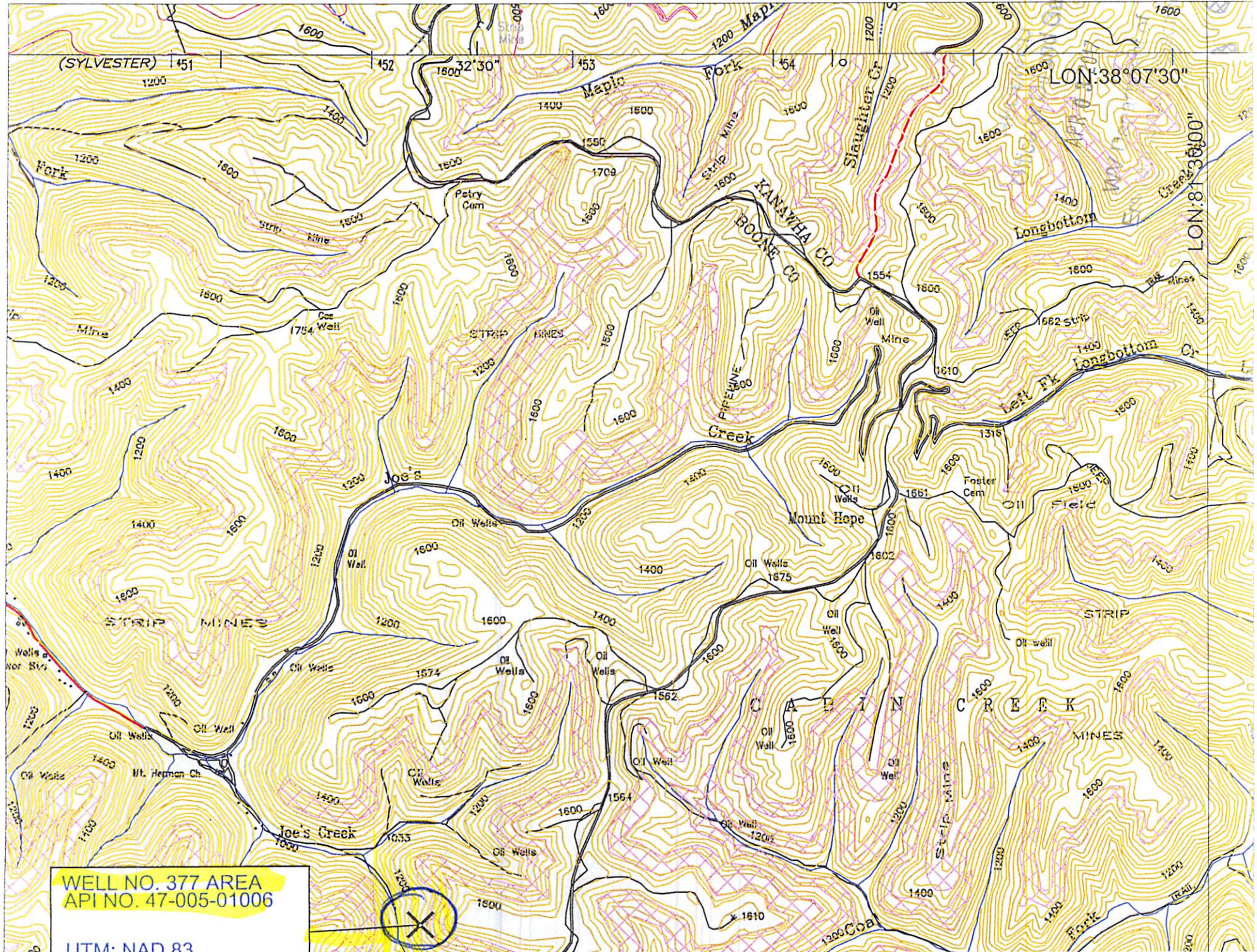
Proposed Lined Pit  
Dim: 25'L x 7.5'W x 5'D

Any remaining pit water will be tested by a certified lab and treated if necessary. Pit water to be sprayed on the hillside after being deemed safe to do so by the lab.

Environmental Permit of  
Panther Creek Mining, LLC  
Well 377 Location  
05/12/2017



501006P



WELL NO. 377 AREA  
 API NO. 47-005-01006

UTM-NAD 83



501006



PANTHER CREEK MINING, LLC  
 AMERICAN EAGLE MINE  
 Well No. 377  
 API No. 47-005-01006  
 Scale: 1" = 2000'

*Handwritten signature*

SYLVESTER QUADRANGLE  
 WEST VIRGINIA - BOONE CO.  
 7.5 MINUTE SERIES (TOPOGRAPHIC)



OP-77 (05-01)

Record No. \_\_\_\_\_

State of West Virginia  
Department of Environmental Protection  
Charleston, WV 25301

This is to acknowledge that the well: API no. 4700501006

District 9 - Boone County, Sherman

Well No 377 Farm name Williams Coal Company

Is hereby transferred from:

The transferor Company: Freedom Oil & Gas, Inc.

Code # 310230 Address P.O. Box 400, Canonsburg, PA 15317

To:

The transferee Company: Panther Creek Mining, LLC

Code # 494515447 Address 3228 Summit Square Place, Suite 180 Lexington, KY 40509

Transfer approval and responsibility for any noncompliance matter not resolved in this document will be addressed in the thirty day circular that will be issued after review of your application for transfer, or as otherwise set forth by agreement with the Chief.

If this well has been out of production for the period in excess of 12 months, the transferee agrees to bring the well into compliance by producing or plugging within 120 days of approval of the application.  Yes  No

The transferee has registered and designated an agent on form OP-1, which is on file with the Office of Oil and Gas. The agent is:

Designated agent (name) Gary E. Acord

Address: 3228 Summit Square Place, Suite 180 Lexington, KY 40509

The transferee has bonded the said well by ( check one ):

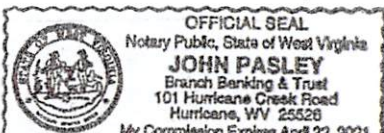
Securities  Cash  Surety bond  Letter of credit  *DL*

Identified by:

Amount:	\$50,000.00	Effective date:	January <sup>31</sup> 2017 <i>CCS</i>
Issuing authority:	Lexon Insurance Company	Id. No:	1137188

Transferor: Freedom Oil & Gas Inc.  
 By: Dan W. Ely  
 Its: President

Taken, subscribed and sworn before me this 31 day of January 2017  
 Notary Public [Signature]  
 My Commission Expires April 22, 2021



Transferee: Panther Creek Mining, LLC  
 By: [Signature]  
 Its: SVP

Taken, subscribed and sworn before me this 15th day of February 2017  
 Notary Public [Signature]  
 My Commission Expires 3/29/2020

SHARON GAIL JOHNSON  
 NOTARY PUBLIC  
 Kentucky, State At Large  
 I.D. # 553856  
 My Commission Expires 3/29/2020

05/12/2017