



west virginia department of environmental protection

Office of Oil and Gas
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Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Friday, October 11, 2019
WELL WORK PLUGGING PERMIT
Vertical Plugging

CONSOLIDATION COAL COMPANY
1 BRIDGE STREET

MONONGAH, WV 265540000

Re: Permit approval for 1 (4528)
47-103-00026-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. Please be advised that form WR-38, Affidavit of Plugging and Filling Well, is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin
Chief

Operator's Well Number: 1 (4528)
Farm Name: FLOYD E. & FRANCIS POST⁺
U.S. WELL NUMBER: 47-103-00026-00-00
Vertical Plugging
Date Issued: 10/11/2019

I

PERMIT CONDITIONS

West Virginia Code § 22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

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

47 10300026P
1) Date JUNE 14, 2019
2) Operator's Well No. 4528
3) API Well No. 47-103-00026

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) Well Type: Oil ____ / Gas X / Liquid injection ____ / Waste disposal ____ /
(If "Gas, Production ____ or Underground storage ____) Deep ____ / Shallow ____

5) Location: Elevation 1246.76' Watershed WEST VIRGINIA FORK OF FISH CREEK
District CHURCH County WETZEL Quadrangle HUNDRED, WV, PA 7.5'

6) Well Operator CONSOLIDATION COAL COMPANY 7) Designated Agent DAVID RODDY
Address 1 BRIDGE STREET Address 1 BRIDGE STREET
MONONGAH, WV 26554 MONONGAH, WV 26554

8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name DEREK HAUGHT Name _____
Address P.O. BOX 85 Address _____
SMITHVILLE, WV 26178

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

SEE EXHIBIT No 1

WELL PREVIOUSLY PLUGGED
IN 1930

↓

MSHA 101 C EXEMPTION

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

Work order approved by inspector Derek M. Haught Date 8/16/2019

EXHIBIT NO.1

From the experience and technology developed since 1970 in plugging oil and gas wells for mining through, Consolidation Coal's Northern West Virginia Operations will utilize the following method to plug all future wells.

SOLID PLUG METHOD

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

Circulate through tubing or drill steel an expanding Class A cement plug from 100 feet above coal seam to surface.

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

PREVIOUSLY PLUGGED IN 1930.

RECEIVED
Office of Oil and Gas

AUG. 16 2019

WV Department of
Environmental Protection

In the matter of:

The Marion County Coal Company **MSHA 101C**
Marion County Mine **EXEMPTION**
I.D. No. 46-01433

Petition for modification

Docket No. M-2016-017-C

DECISION AND ORDER

On May 31, 2016, a petition was filed seeking a modification of the application of 30 C.F.R. § 75.1700 to The Marion County Coal Company's Marion County Mine located in Marion County, West Virginia. The Petitioner filed the petition to permit an alternative method of compliance with the standard with respect to vertical to horizontal oil and gas wells into the underground coal seams. The petitioner request to amend their current Proposed Decision Order (PDO) grant by MSHA on June 4, 1991, under Docket M-1990-156-C formerly known as Consolidation Coal Company, Loveridge No. 22 Mine to the alternate method stipulated in the April 29, 2013 PDO granted to ACI Tygart Valley, Leer Mine.

The Petitioner alleges that the proposed alternative method will at all times guarantee no less than the same measure of protection afforded miners under 30 C.F.R. § 75.1700 as that provided by the standard, which states:

§ 75.1700 Oil and gas wells.

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

The Petition addresses items for which District Manager approval is required, procedures for cleaning out and preparing oil and gas wells prior to plugging or re-plugging, procedures for plugging or re-plugging oil or gas wells to the surface, procedures for plugging or re-plugging oil or gas wells for use as degasification boreholes, alternative procedures for preparing and plugging or re-plugging oil or gas wells, and procedures after approval has been granted to mine through a plugged or re-plugged well.

Between July 20, 2016 and August 3, 2016, MSHA personnel conducted an investigation of the petition and filed a report of their findings with the Administrator for Coal Mine Safety and Health. The modification granted under Docket No. M-1990-156-C will be superseded and replaced by this amended modification granted under Docket No. M-2016-017-C after this Proposed Amended Decision and Order becomes final.

The mine is represented by United Mine Workers of America (UMWA), AFL-CIO, CLC-1638 with miners' representatives and did not file any questions or comments on behalf of the miners.

After review of the parties' submissions and Joint Motion for Settlement, the following Decision and Order is issued.

FINDINGS OF FACT AND CONCLUSIONS OF LAW

The Marion County Mine employs approximately 712 miners and produces approximately 50,000 tons of bituminous coal per day from the Pittsburgh #8 coal seam with an average mine height of 66 inches. At this time, there are no coal seams being mined below (i.e., stratigraphically down section from) the Pittsburgh seam. The mine is accessed through 2 slope and 12 air shafts. The mine operates 3 production shifts per day, 5 days per week, on five working sections, two longwall and three advancing gate sections utilizing continuous mining machines. The mine liberates 11,659,131 cubic feet of methane on a daily basis.

Although MSHA has granted modifications of this standard at different mines over the years, changing circumstances in oil and gas drilling technology and practices compels MSHA to reconsider the safest approach to mining around or through such wells. In recent years, changes in hydraulic fracturing (fracking) technology, marketplace and resource conditions have led to an increase in the number and depth of oil and gas wells penetrating the Pittsburgh #8 and other coal seams. Since deeper wells are usually associated with higher well pressures, modifications of § 75.1700 must include appropriate measures to better protect miners. In addition to the risks associated with higher well pressures, MSHA is concerned that operators may be preparing and plugging wells to inadequate depths for convenience or to lower costs, which may result in reduced safety for miners.

This Decision and Order reflects the settlement between the Petitioner's proposal and the amended terms and conditions first set forth by MSHA, under the terms set forth below. The major points of compromise include the following:

1. *Making a diligent effort to remove the casing to the original total depth.* If all of the casing can be removed, or if the well contains no casing, the operator shall

prepare the well for plugging, and use seals described below, for wells less than 4,000' depth to seal to 200 feet below the coal seam to be mined, or the lowest mineable seam, whichever is lower, or for wells 4,000' deep or greater, seal 400 feet below the coal seam to be mined, or lowest mineable seam, whichever is lower. MSHA retains the right to review and direct the operator's sealing protocol, in the event geologic or well conditions require further measures. As used in this Proposed Amended Decision and Order, in order to make a diligent effort to remove the casing, the operator shall pull a minimum of 150% of casing string weight and/or have made at least three attempts to spear or overshot to grip the casing for the required minimum pull effort. Where casing string length is unknown, a 3,000' casing string will be assumed. The operator shall keep a record of these efforts, including casing length and weights, and make available for MSHA review. The District Manager reserves the right to require additional measures in efforts to remove casing, as appropriate.

2. *Unknown total depth.* If the total depth of the well is unknown the operator must contact the District Manager before proceeding. MSHA believes, by including this step in the process, that miner safety will be better served because the Petitioner and the District Manager can work together to evaluate the conditions of the well to be plugged as well as the safest way to accomplish the plugging. MSHA and the operator will work cooperatively to establish a communications protocol, so that the operator may contact the District Manager while working outside normal working hours.
3. *Cement.* Cement is specified to be used as a plugging material, instead of an unnamed "approved equivalent," as requested by Petitioner.
4. *Wells vary in depth.* The terms and conditions required by MSHA will require operator to prepare these wells for safe intersection by making a diligent effort to remove casing to the total depth if possible, then: cleaning to and setting a plug at least 200' below the coal seam to be mined or lowest mineable seam, whichever is lower; or for wells 4,000' or greater, to at least 400 feet below the coal seam to be mined, or lowest mineable seam, whichever is lower. The operator will then plug from either the attainable bottom or the newly installed plug, as applicable, by pumping expanding cement slurry and pressurizing to at least 200 psi. If the total depth is not reached and casing cannot be removed, these alternative methods included in this proposed decision and order have proven to be safe and effective when properly implemented.
5. *Notification* - Where the operator is required to notify the District Manager pursuant to the terms of this Proposed Decision and Order, the method of notification will be set forth in the cut-through procedures for each well. The

District Manager agrees to provide a number wherein he or his designee is available at all times.

Therefore, the terms and conditions as amended will at all times guarantee no less than the same measure of protection afforded the miners under 30 C.F.R. § 75.1700 for all wells regardless of depth. On the basis of the Petition, comments received, the findings of MSHA's investigation, and the Joint Motion for Settlement by the parties, the Marion County Coal Company is granted a modification of the application of 30 C.F.R. § 75.1700 to its Marion County 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 Marion County Coal Company's Marion County Mine is hereby:

GRANTED, subject to the following terms and conditions:

1. DISTRICT MANAGER APPROVAL REQUIRED

- a. The type of oil or gas well that will be considered under this Petition includes wells that have been depleted of oil or gas production or have not produced oil or gas and may have been plugged, or active conventional vertical wells which are not producing gas or oil, subject to the provisions below. Unconventional wells in the Marcellus, Utica, and all other unconventional shale oil and gas wells are not subject to this modification. Nothing in these provisions is meant to lessen, diminish, or substitute any provision found in applicable state laws or regulations.
- b. 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.
- c. 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, the person at the mine

who is in charge of health and safety at the mine, 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, electronic or otherwise, 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 that does not include intersection of the well. The District Manager may require documents and information that help verify 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.

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

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

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

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

(1) A diligent effort shall be made to remove all the casing in the well and clean the well to 200' below the coal seam to be mined, or the lowest

mineable coal seam, whichever is lower, or for wells 4,000' or greater, clean the well to 400' below the coal seam to be mined, or the lowest mineable coal seam, whichever is lower.

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 coal seam to be mined, 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 coal seam to be mined. Wells of this greater depth are under greater pressure, so the 400 feet requirement provides greater protection for miners. The operator shall make a diligent effort to remove all material from the entire diameter of the well, wall to wall. If the total depth of the well is unknown and there is no historical information, the mine operator must contact the District Manager before proceeding.

Where active wells which are no longer producing are being cleaned and prepared subject to this order, the operator must: 1) attempt to remove all of the casing using a diligent effort, and comply with all other applicable provisions in this order, or 2) if the casing cannot be removed from the total depth, must be filled with cement from the lowest possible depth to 200 feet below the seam to be mined or lowest mineable coal seam, whichever is lower for wells less than 4,000', or 400 feet below the seam to be mined or lowest mineable coal seam, whichever is lower, for wells 4,000' or greater, and the other applicable provisions in this order still apply, or 3) if the casing cannot be removed it shall be perforated from 200 feet below the coal seam to be mined, or lowest mineable seam, whichever is lower, or 400 feet below the seam to be mined or lowest mineable coal seam, whichever is lower, for wells 4,000' or greater, and the annuli shall be cemented or otherwise filled, and the other applicable provisions in this order still apply.

- (2) The operator shall prepare down-hole logs for each well. Logs shall consist of a caliper survey, a bond log if appropriate, a deviation survey, and a gamma survey for determining the top, bottom, and thickness of all coal seams down to the coal seam to be mined, or the lowest mineable coal seam, whichever is lower, potential hydrocarbon producing strata and the location of any existing bridge plug. In addition, a journal shall be maintained describing the depth of each material encountered; the nature

of each material encountered; bit size and type used to drill each portion of the hole; length and type of each material used to plug the well; length of casing(s) removed, perforated or ripped or left in place; any sections where casing was cut or milled; and other pertinent information concerning cleaning and sealing the 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. Thereafter, the well should be plugged to the attainable bottom, at least 200 feet below the coal seam to be mined or lowest mineable seam, whichever is lower, by pumping expanding cement slurry and pressurizing to at least 200 psi. If the casing cannot be removed, it must be cut, milled, perforated or ripped at sufficient intervals 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. All casing remaining at the coal seam to be mined shall be perforated or ripped at least every 5 feet from 10 feet below the coal seam to 10 feet above the coal seam.

Perforations or rips 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. For perforations in the Pittsburgh Seam, see Appendix A. The mine operator must take appropriate steps to ensure that the annulus between the casing and the well walls are filled with expanding (minimum 0.5% expansion upon setting) cement and contain no voids.

Jet/sand cutting is one method for ripping or perforating casing with three or more strings of casing in the Pittsburgh coal seam in preparation for mining. This method uses compressed nitrogen gas and sand to cut the well casings as outlined in Appendix A. On active wells cuts start at 200' above the bottom of the casing at 200' intervals, to 200' below the bottom of the Pittsburgh coal seam where Appendix A outlines cut interval minimums.

If it is not possible to remove all of the casing, the operator shall notify the District Manager before any other work is performed. **If the well cannot be cleaned out or the casing removed, the operator shall prepare the well as described from the surface to at least 200 feet below the base of the lowest mineable coal seam for wells less than 4000 feet in depth and**

400 feet below the lowest mineable coal seam for wells 4000 feet or greater, unless the District Manager requires cleaning out and removal of casing to a greater depth based on his judgement as to what is required due to geological strata, or due to the pressure within the well.

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. The mine operator shall document what has been done to "kill the well" and plug the hydrocarbon producing strata.

- (5) If the upper-most hydrocarbon-producing stratum is within 300 feet of the base of the coal seam to be mined, or lowest mineable seam, whichever is lower, 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 coal seam to be mined, or lowest mineable seam, whichever is lower, unless the District Manager requires a greater distance based on his judgment that it is required due to the geological strata, or due to the pressure within the well.**

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

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

- (1) **The operator shall pump expanding cement slurry down the well to form a plug which runs from at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) below the base of the coal seam to be mined, or lowest mineable seam, whichever is lower, (or lower if required by the District Manager based on his judgment that a lower depth is required due to the geological strata, or due to the pressure within the well) to the surface.** The expanding cement will be placed in the well under a pressure of at least 200 pounds per square inch. Portland cement or a lightweight cement mixture may be used to fill the area from 100 feet above the top of the uppermost mineable coal seam (or higher if required by the District Manager based on his judgment that a higher distance is required due to the geological strata, or due to the pressure within the well) to the surface.
- (2) The operator shall embed steel turnings or other small magnetic particles in the top of the cement near the surface to serve as a permanent magnetic monument of the well. In the alternative, a 4-inch or larger diameter casing, set in cement, shall extend at least 36 inches above the ground level with the API well number engraved or welded on the casing. When the hole cannot be marked with a physical monument (e.g. prime farmland), high-resolution GPS coordinates (one-half meter resolution) are required.

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

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

- (1) **The operator shall set a cement plug in the well by pumping an expanding cement slurry down the tubing to provide at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) of expanding cement below the coal seam to be mined, or lowest mineable seam, whichever is lower, 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. 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 plug all degasification 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.
 - (iv) This provision does not apply to traditional degasification holes which have not intersected the seam to be mined, have not commercially produced gas and have no API number.

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

The following provisions apply to all wells which the operator determines, and with which 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 coal seam to be mined, or lowest mineable seam, whichever is lower, 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. From 10 feet below the coal seam to 10 feet above the coal seam, the operator shall perforate or rip all casings at least every 5 feet. **Beyond this distance, the operator shall perforate or rip 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 coal seam to be mined, or lowest mineable seam, whichever is lower, 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 diagram shown in Appendix A is representative of the locations of the perforations or ripping that must be done.

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 coal seam to be mined, or lowest mineable seam, whichever is lower, to a point at least 50 feet above the seam being mined, the operator shall fracture in at least six places at intervals to be agreed upon by the operator and the District Manager after considering the geological strata and the pressure within the well.** The operator shall then pump expanding cement into the fractured well in sufficient quantities and in a manner which fills all intercepted voids.
- (5) The operator shall prepare down-hole logs for each well. Logs shall consist of a caliper survey, a bond log if applicable, a deviation survey, and a gamma log for determining the top, bottom, and thickness of all coal seams down to the coal seam to be mined, **or lowest mineable seam, whichever is lower,** potential hydrocarbon producing strata and the location of any existing bridge plug. The operator may obtain the logs from the adjacent hole rather than the well if the condition of the well makes it impractical to insert the equipment necessary to obtain the log.
- (6) A journal shall be maintained describing the depth of each material encountered; the nature of each material encountered; bit size and type used to drill each portion of the hole; length and type of each material used to plug the well; length of casing(s) removed, perforated or ripped or left in place; any sections where casing was cut or milled; and other pertinent information concerning sealing the well. Invoices, work-orders, and other records relating to all work on the well shall be maintained as part of this journal and provided to MSHA upon request.
- (7) After the operator has plugged the well as described in subparagraphs (d)(3) and/or (d)(4), the operator shall plug the adjacent hole, from the bottom to the surface, with Portland cement or a lightweight cement mixture.

The operator shall embed steel turnings or other small magnetic particles in the top of the cement near the surface to serve as a permanent magnetic monument of the well. In the alternative, a 4-inch or larger casing, set in cement, shall extend at least 36 inches above the ground level.

A combination of the methods outlined in subparagraphs (d)(3) and (d)(4) may have to be used in a single well, depending upon the conditions of the hole and the presence of casings. The operator and the District Manager shall discuss the nature of each hole. The District Manager may require that more than one method be utilized. The mine operator may submit an 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 A 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 re-plugged well. Upon receipt of any such request, the District Manager shall schedule such a conference. The party requesting the conference shall notify all other parties listed above within a reasonable time prior to the conference to provide opportunity for participation. The purpose of the conference shall be to review, evaluate, and accommodate any abnormal or unusual circumstance related to the condition of the well or surrounding strata when such conditions are encountered.
- b. The operator shall intersect a well on a shift approved by the District Manager. The operator shall notify the District Manager and the miners' representative in sufficient time prior to intersecting a well in order to provide an opportunity to have representatives present.
- c. When using continuous mining methods, the operator shall install drivage sights at the last open crosscut near the place to be mined to ensure intersection of the well. The drivage sites shall not be more than 50 feet from the well. When using longwall-mining methods, distance markers shall be installed on 5-foot centers for a distance of 50 feet in advance of the well 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. The operator's most current Approved Ventilation Plan will be followed at all times unless the District Manager deems a greater air velocity for the intersect is necessary.
- 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 to be safe before permitting mining to resume.
- 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 available and will be used exclusively 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. If the mine operator cannot find the well in the longwall panel or if a development section misses the anticipated intersection, the operator shall cease mining to examine for hazardous conditions at the projected location of the well, notify the District Manager, and take reasonable measures to locate the well, including visual observation/inspection or through survey data. Mining may resume if the well is located and no hazardous conditions exist. If the well cannot be located, the mine operator shall work with District Manager to resolve any issues before mining resumes.
- r. 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 written order to that effect to a representative of the operator, which order shall include the basis for the order. Operations in the affected area of the mine may not resume until a representative of MSHA permits resumption. The mine operator and miners shall comply with verbal or written MSHA orders immediately. All verbal orders shall be committed to writing within a reasonable time as conditions permit.

- s. A copy of this Order shall be maintained at the mine and be available to the miners.
- t. If the well is not plugged to the total depth of all minable coal seams identified in the core hole logs, any coal seams beneath the lowest plug will remain subject to the barrier requirements of 30 C.F.R. § 75.1700, should those coal seams be developed in the future.
- u. All necessary safety precautions and safe practices according to Industry Standards, required by MSHA regulations and State regulatory agencies having jurisdiction over the plugging site will be followed to provide the upmost protection to the miners involved in the process.
- v. All miners involved in the plugging or re-plugging operations will be trained on the contents of this Petition prior to starting the process and a copy of this Petition will be posted at the well site until the plugging or re-plugging has been completed.
- w. Mechanical bridge plugs should incorporate the best available technologies that are either required or recognized by the State regulatory agency and/or oil and gas industry.
- x. Within 30 days after this Order becomes final, the operator shall submit proposed revisions for its approved 30 C.F.R. Part 48 training plan to the District Manager. These proposed revisions shall include initial and refresher training on compliance with the terms and conditions stated in the Order. The operator shall provide all miners involved in well intersection with training on the requirements of this Order prior to mining within 150 feet of the next well intended to be mined through.
- y. The responsible person required under 30 C.F.R. § 75.1501 Emergency Evacuations, is responsible for well intersection emergencies. The well intersection procedures should be reviewed by the responsible person prior to any planned intersection.

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

SUBJECT TO THE ABOVE TERMS AND CONDITIONS, and 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 Marion County Coal Company's Marion County Mine is hereby **GRANTED**.

DISTRIBUTION:

*Winfield Wilson
Office of the Solicitor, U.S. Dept. of Labor
201 12th St S, Suite 401
Arlington, VA 22202*

*Christopher D. Pence
Hardy Pence PLLC
500 Lee Street East, Suite 701
Charleston, WV 25301*

*Stephen Gigliotti
Coal Mine Safety & Health, Safety Division
Mine Safety and Health Administration, U.S. Dept. of Labor
201 12th St S, Suite 401
Arlington, VA 22202*

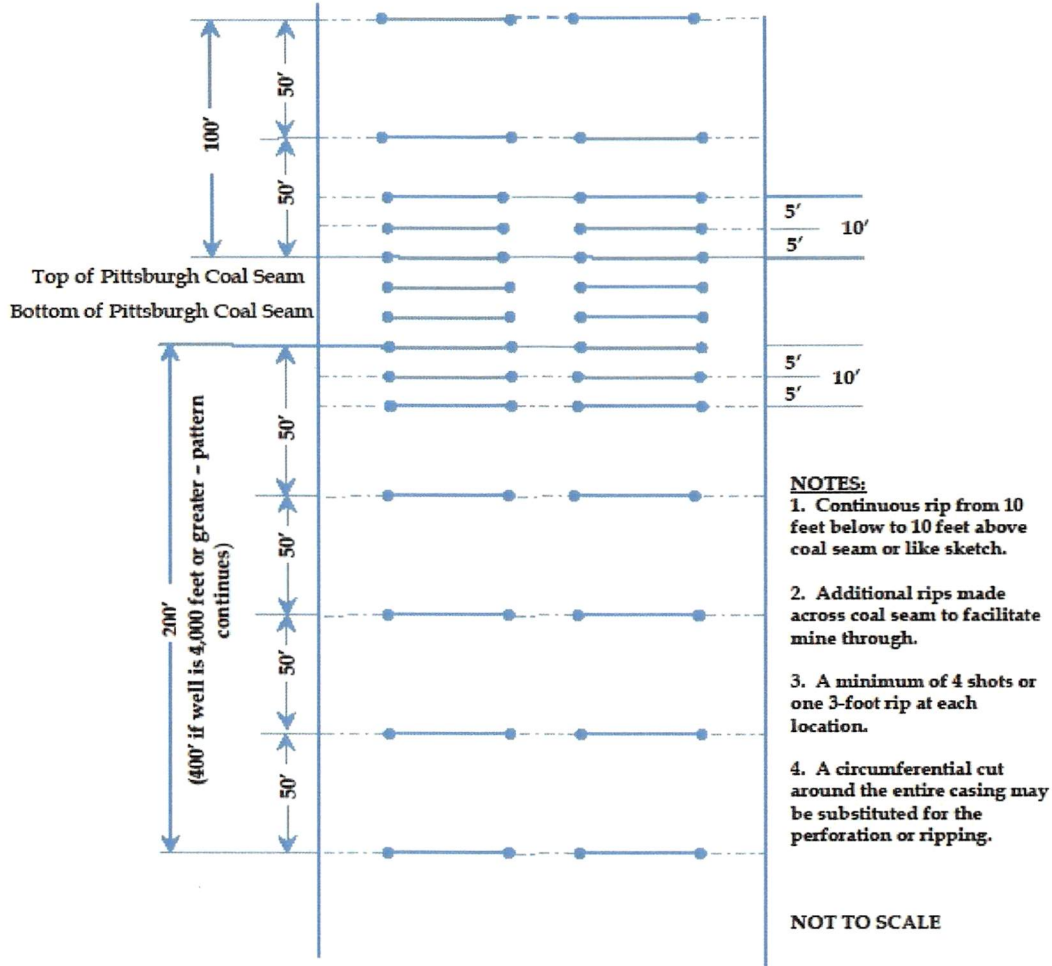
*Sheila McConnell
Office of Standards Regulations and Variances
Mine Safety and Health Administration, U.S. Dept. of Labor
201 12th St S, Suite 401
Arlington, VA 22202*

*David Roddy
Marion County Coal Company
1 Bridge Street
Monongah, WV 26554*

*Greg J. Norman, Director
West Virginia Office of Miners' Health Safety & Training
#7 Players Club Dr. Suite 2
Charleston WV 25311*

*Ricky L. Rinehart
UMWA Representative, Marion County Coal Mine
67 Cellular Drive
Mannington, West Virginia 26582*

Appendix A





Select County: (103) Wetzel

Select datatypes: (Check All)

- Location
- Production
- Plugging
- Owner/Completion
- Stratigraphy
- Sample
- Logs
- Bim Hole Loc
- Pay/Show/Water

Enter Permit #: 26

Get Data Reset

- [Table Descriptions](#)
- [County Code Translations](#)
- [Permit/Numbering Schemes](#)
- [Usage Notes](#)
- [Contact Information](#)
- [Disclaimer](#)
- [WVGES Main](#)
- [Pipeline-Plus New](#)

WV Geological & Economic Survey:

Well: County = 103 Permit = 26

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Report Time: Thursday, June 13, 2019 4:25:40 AM

Location Information: [View Map](#)
 API COUNTY PERMIT TAX_DISTRICT QUAD_75 QUAD_15 LAT_DD LON_DD UTM_E UTM_N
 4710300026 Wetzel 26 Church Hundred Marlington 39.647808 -80.411754 550469.8 4388811.7

There is no Bottom Hole Location data for this well

Owner Information:
 API CMP_DT SUFFEX STATUS SURFACE_OWNER WELL_NUM CO_NUM LEASE_LEASE_NUM MINERAL_OWN OPERATOR AT_COMPLETION
 4710300026 7/4/1930 Original Loc Completed Harry M Aniel 1 1 OP=Cochran & Cochran Oper in Min owner (Id: no code assign(Ophan well pro)) PROP_VD PROP_TRGT_FM TFM_EST_PR

Completion Information:
 API CMP_DT SPUD_DT ELEV DATUM FIELD DEEPEST_FM DEEPEST_FMT INITIAL_CLASS FINAL_CLASS TYPE RIG CMP_MTHD TVD TMD NEW_FTG KOD G_BEF G_AFT O_BEF O_AFT NGL_BEF NGL_AFT P_BEF TL_BEF P_AFT TL_AFT BH_P_BI
 4710300026 7/4/1930 1258 Ground Level Burton Fith Fith Development Well Unsuccessful Dry unknown Nat/Open H 3500 3500 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Pay/Show/Water Information:
 API CMP_DT ACTIVITY PRODUCT SECTION DEPTH_TOP FM_TOP DEPTH_BOT FM_BOT G_BEF G_AFT O_BEF O_AFT WATER_QNTY
 4710300026 7/4/1930 Water Fresh Water Vertical 110

There is no Production Gas data for this well

There is no Production Oil data for this well ** some operators may have reported NGL under Oil

There is no Production NGL data for this well ** some operators may have reported NGL under Oil

There is no Production Water data for this well

Stratigraphy Information:

API	SUFFEX	FM	FM_QUALITY	DEPTH_TOP	DEPTH_QUALITY	THICKNESS	THICKNESS_QUALITY	ELEV DATUM
4710300026	Original Loc	Weyneshg coal	Well Record	715	Reasonable	5	Reasonable	1248 Ground Level
4710300026	Original Loc	Stuckley coal	Well Record	980	Reasonable	6	Reasonable	1248 Ground Level
4710300026	Original Loc	Pittsburg coal	Well Record	1075	Reasonable	6	Reasonable	1248 Ground Level
4710300026	Original Loc	Mahoning S&B/D Dunk	Well Record	1545	Reasonable	185	Reasonable	1248 Ground Level
4710300026	Original Loc	Homeward S&Z/D Cow Run	Well Record	1760	Reasonable	75	Reasonable	1248 Ground Level
4710300026	Original Loc	Little Lime	Well Record	1960	Reasonable	30	Reasonable	1248 Ground Level
4710300026	Original Loc	Big Time	Well Record	2213	Reasonable	55	Reasonable	1248 Ground Level
4710300026	Original Loc	Gambler Group	Well Record	2268	Reasonable	62	Reasonable	1248 Ground Level
4710300026	Original Loc	Big Bluff (undiff)	Well Record	2330	Reasonable	252	Reasonable	1248 Ground Level
4710300026	Original Loc	Goedun Stay	Well Record	3145	Reasonable	25	Reasonable	1248 Ground Level
4710300026	Original Loc	Goedun	Well Record	3185	Reasonable	50	Reasonable	1248 Ground Level
4710300026	Original Loc	Fith	Well Record	3238	Reasonable	20	Reasonable	1248 Ground Level
4710300026	Original Loc	Fith	Well Record	3290	Reasonable	11	Reasonable	1248 Ground Level

There is no Wireline (E-Log) data for this well

Plugging Information:

API PLUG_DT DEPTH_PBT
 4710300026 7/4/1930 0

There is no Sample data for this well



Refresh Map Auto Refresh

LAYERS

- All Layers
- Gas and Oil Data
- Gas and Oil Wells
- OG Misc Layers
- Well Type Groupings
- Combination Wells
- Gas Wells
- Oil Wells
- Base Layers

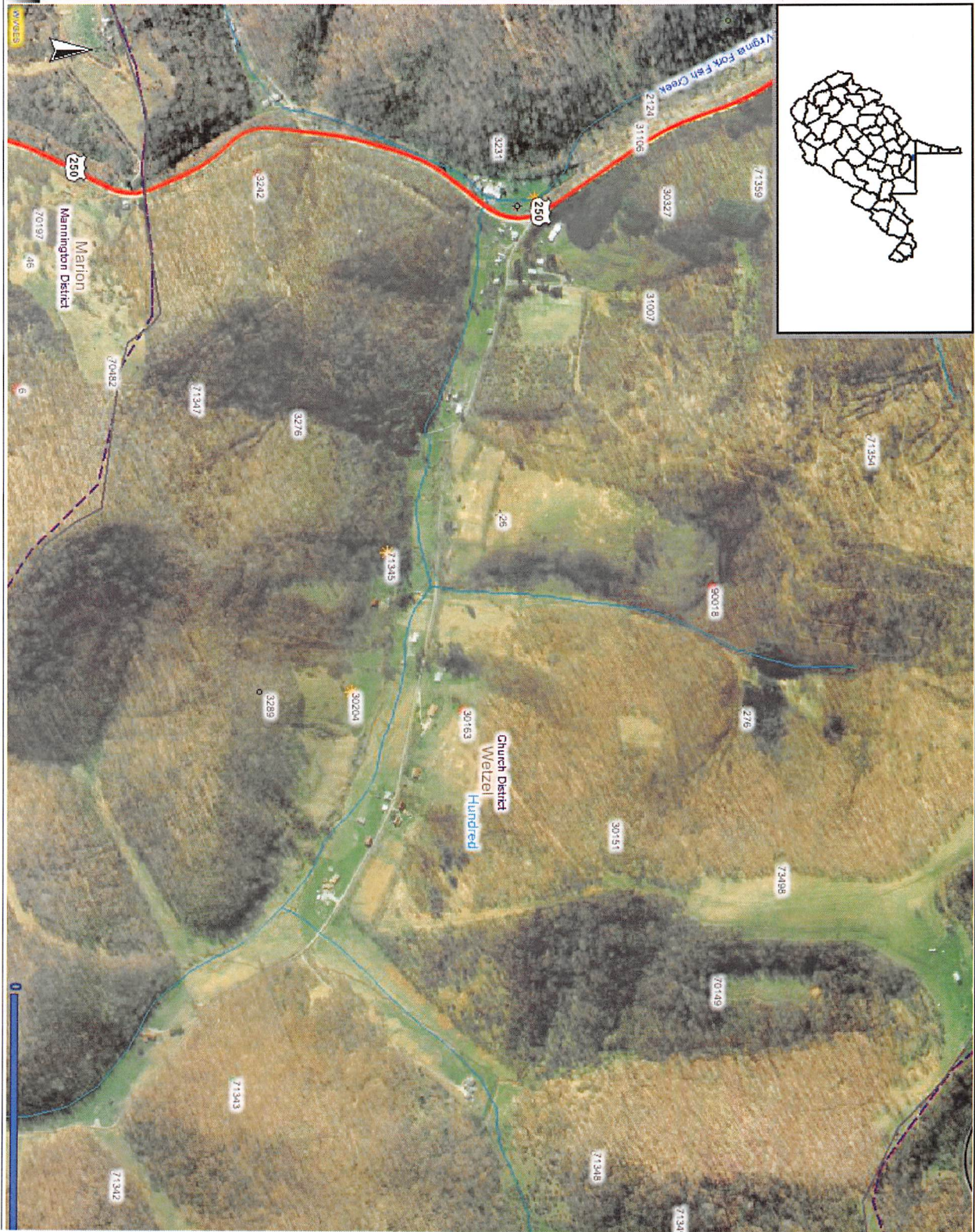
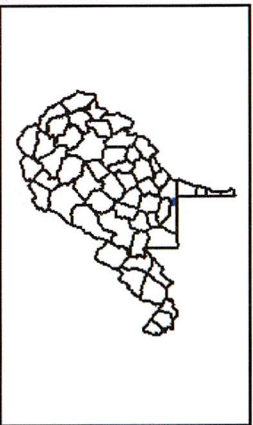
Refresh Map Auto Refresh

Help:

- A closed group: click to open.
- An open group: click to close.
- A map layer.
- A hidden group/layer: click to make visible.
- A visible group/layer: click to hide.
- A visible layer, but not at this scale.
- A partially visible group: click to make visible.
- An inactive layer: click to make active.
- The active layer.
- The layer is hyperlinked to further information.

Gas and Oil Well Legend:

- Gas Well
- Oil Well
- Combination (Oil and Gas) Well
- Dry Well
- Service Well
- Other Well (Including Permits)



B-P

**AFFIDAVIT IN TRIPPLICATE TO TIME AND MANNER OF
PLUGGING AND FILLING WELL**
(Revised by Section 8, Chapter 20, Code 1933)
**WEST VIRGINIA DEPARTMENT OF MINES
OIL AND GAS SECTION**

COAL OPERATOR	Cochran & Cochran
ADDRESS	Parkersburg, West Va.
DATE OF WELL OPERATED	August 5, 1930
WELL AND LOCATION	Church District
ADDRESS	Netzel County
WELL No.	1
NAME OF WELL OPERATOR	Harry M. Antill

APPROVED BY AN AGENT OR INSPECTOR OF THE DEPT. OF MINES AND GEOLOGY, AND BY THE SUPERVISOR OF THE WELL OPERATOR AND THE TOWN AND LOCAL OFFICE OF RECORDS TO BE PLACED TO EACH COAL OPERATOR ABOVE NAMED AT THEIR RESPECTIVE ADDRESSES.

AFFIDAVIT

STATE OF WEST VIRGINIA

County of _____

being first duly sworn according to law depose and say that they are experienced in the work of plugging and filling oil and gas wells and were employed by _____ well operator, and participated in the work of plugging and filling the above well, that said work was commenced on the _____ day of _____ 1930, and that the well was plugged and filled in the following manner:

Manner in which sand was plugged: Well was filled from 3500'ft up to 2570'ft with clay seasoned wood plug at 2570' Clay from 2565' to 2340' Lead Plug at 2335' 5/8 Casing from 2225' to 1640' 8 1/2 Casing from 1450' to 980' Mixture Sand Gravel and Cement from 1100' to 685' Plug at 280' and filled up with clay gravel and cement to 130' Plug at 80' filled with Cement Three feet above the surface with 2 inch tubing from 150 feet up to top of cement to take care of vein of water

Manner in which coal was plugged: 8 1/2 Casing through the Coal and filled with With Cement from 1100 feet to 685 feet

Description of monument: Cement Post Three Feet Above Surface and 1 1/2" Diameter With two inch water Well tubing through The Center With Company Name and Well Number

and that the work of plugging and filling said well was completed on the _____ day of _____ 1930

1930

And further deponents saith not.

R. G. Moorhead
Ray Hixenbaugh

Sworn to and subscribed before me this _____ day of _____ 1930

My Commission expires _____

Notary Public

Aug 16 1932

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B-9

Form 6-a

NOTICE OF INTENTION TO PLUG AND ABANDON WELL
(Repealed by Act of West Virginia, Chapter 22, April 1959)
WEST VIRGINIA DEPARTMENT OF MINES
OIL AND GAS SECTION

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

Cochran & Cochran

NAME OF WELL OPERATOR

Parkersburg, West Va.

CITY AND STATE

Harry M. Antill, Jr. 1930

WELL TO BE ABANDONED

Church District

District

Netzel

County

Well No. 1

Harry M. Antill

Farm

Gentlemen:

The undersigned well operator is about to abandon the above described well and will commence the

work of plugging and abandoning said well on the 7 day of JULY, 1930, (which date shall be not less than five days after the day on which this notice so mailed is received, or in due course should be received by the Department of Mines).

This notice is given 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, represented the undersigned will proceed on that date, or shortly thereafter, to plug and fill said well in the manner required by law.

This notice is being mailed by registered mail to each of you at the above addresses on the above date.

Very truly yours,

Cochran & Cochran

Well Operator

NOTE Upon the abandonment of all wells drilled prior to June 1, 1929, a plat prepared by a competent engineer, showing the district and county in which the tract of land is located, the name and acreage of same, the names of the owners of adjacent tracts; and the location of the about to be abandoned well, determined by survey, and the course and distance of such well from two permanent points or landmarks on said tract, shall be submitted with this notice.

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Net-26 D

WV
2/1

47 10300026P

Church District, Wetzel County, W. Va.
By Cochran & Cochran, Parkersburg, W. Va.
On 19-1/8 acres, located 2 miles south of Burton.
Surface owned by Harry H. Antill, Burton, W. Va.
Drilled under permit 488-26, issued April 30, 1930.
Elevation, 1258' L.
1 1/2" conductor, 15'; 10" casing, 252'; 8", 1450'; 6", 2226'.
No packer. Casing not perforated. No liners used.
Coal was encountered at 715-720, 980-986, and 1075-1081'.
Completion reported to Dept. of Mines Aug. 20, 1930.
Well completed July 4, 1930.
Fresh water at 110'. Dry hole.
Record to RGT from Mrs. Griffith Aug. 30, 1938.

	Top.	Bottom.	Thickness.
Stone, blue, hard	5	30	25
Clay, yellow, soft	(30) 35	95	60
Stone, blue, hard (water, 110')	95	130	35
Slate, black, soft	130	250	120
Rock, white, hard	250	300	50
Red rock, soft	300	330	30
Slate, black, soft	330	600	270
Lime, gray, hard	600	650	50
Slate, black, soft	650	680	30
Sand, gray, hard	680	715	35
Waynesburg Coal, black, soft	715	720	5
Lime, blue, hard	720	800	80
Slate, black, soft	800	850	50
Lime, blue, hard	850	980	130
Maclertown (Sewickley) Coal, black, soft	980	986	6
Lime, blue, hard	980	1075	95
Pittsburgh Coal, black, soft	1075	1081	6
Slate, black, soft	1081	1404	323
Sand, gray, hard	1404	1510	106
Big Dunkard Sand, gray, hard	1515	1730	215
Gas Sand, gray, hard	1760	1835	75
Salt Sand, white, broken	1850	1890	40
Sand shells, broken	1890	2100	210
Red rock, soft	2100	2213	113
Little Lime, blue, hard	2213	2268	55
Big Lime, blue, hard	2268	2330	62
Big Injun Sand, yellow, soft	2330	2582	252
Sand, gray, hard	3050	3100	50
Sand, dark, hard	3105	3130	25
Red rock, soft	3135	3145	10
Stray Sand, white, hard	3145	3170	25
Gordon Sand, gray, hard	3185	3235	50
Fourth Sand, dark, hard	3238	3258	20
Fifth Sand, white, hard	3260	3301	41
Sand, dark, hard	3330	3345	15
Sand, dark, soft	3460	3470	10
Slate, black, soft	3470	3500	30
Total depth		3500	

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26

Cochran & Cochran Company
Parkersburg, West Va. Address

COMPLETION DATA SHEET
NO. 2.
FORMATION RECORD

Name	Color	Character	Oil, Gas or Water	Top	Bottom	Thickness	Total Depth	Remarks
Stone	Blue	Hard	none	5 ft	50 ft	25ft	35ft	
Clay	yellow	soft	no	35	95	60	95	
Stone	blue	Hard	Water	95	150	55	150	
slate	black	soft	no	150	250	100	250	
Rock	white	hard	no	250	300	50	300	
Rock	Red	soft	no	300	340	40	340	
slate	Black	Soft	no	340	400	60	400	
Lime	Grey	Hard	no	400	450	50	450	
slate	black	soft	no	450	480	30	480	
Sand	grey	hard	no	480	510	30	510	
Waynesburgh	Black	Soft	no	510	520	10	520	
Coal	Black	Soft	no	715	720	5	720	
Lime	Blue	Hard	no	720	800	80	800	
slate	Black	Soft	no	800	830	30	830	
Line	Blue	Hard	no	830	850	20	850	
Mapletown	Black	soft	no	850	860	10	860	
Coal	Black	soft	no	860	866	6	866	
Lime	Blue	Hard	no	866	1075	209	1075	
Pittsburgh	Black	Soft	no	1075	1081	6	1081	
Coal	black	soft	no	1081	1444	363	1444	
slate	black	soft	no	1081	1444	363	1444	
Sand	grey	hard	no	1444	1510	66	1510	
Big Darke	Grey	Hard	no	1545	1780	235	1730	
Gas sand	Grey	hard	no	1780	1835	55	1835	
Salt Sand	White	broken	no	1860	1890	30	1890	
sand shells	White	broken	no	1890	2100	210	2100	
Red Rock	red	soft	no	2100	2213	113	2213	
Little Lime	blue	hard	no	2213	2268	55	2268	
Big lime	blue	hard	no	2268	2330	62	2330	
Injin sand	yellow	soft	no	2330	2598	268	2598	
Sand	grey	hard	no	3050	3100	50	3100	
sand	dark	hard	no	3105	3130	25	3130	
Red rock	Red	soft	no	3135	3145	10	3145	
Stray sand	white	hard	no	3145	3170	25	3170	
Gordon sand	grey	hard	no	3185	3235	50	3235	
fourth sand	dark	hard	no	3235	3255	20	3255	
Fifth sand	white	hard	no	3290	3301	11	3301	
Sand	dark	hard	no	3330	3345	15	3345	
Sand	dark	soft	no	3460	3470	10	3470	
slate	black	soft	no	3470	3500	30	3500	

Well Completed July 4, 1950.

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Well was not shot at _____ feet, well was shot at _____ feet.

Fresh water at 110 ft _____ feet, fresh water at _____ feet.

Well was _____ hole.
dry

August 20, 1950
Date

Approved

Cochran & Cochran
Owner

NOTE: All bottom formations must be noted as indicated above and all pay-rocks and oil and gas sands must be recorded under their proper geological names in the district as well as any local names commonly used in the district for each strata.

B-1

West-261

WEST VIRGINIA DEPARTMENT OF MINES

Oil and Gas Section

PRELIMINARY DATA SHEET NO. 1

File No. Cochran & Cochran Well No. 1
Company of Ferrisburg, N. Va.

Have completed well on the HARRY ANSALL Farm
containing 1 1/2 acres. Location 2 Mile South of Burton
Church District in Putzel County, West Virginia.

The surface of the above tract is owned in fee by Harry M. Ansall
Burton, West Va. address, and the mineral rights are owned by

The oil and gas privileges are held under lease by the above named company, and this well is drilled under
permit No. 10000 issued by the West Virginia Department of Mines, Oil and Gas Section.

April 30 1930
Elevation of surface at top of well 1858 L.A.T. Spirit
Barometric

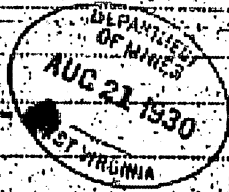
The number of feet of the different sized casings used in the well.

<u>335</u>	feet	<u>15" x 1/2"</u>	size	Wood conductor
<u>252</u>	feet	<u>10" in</u>	size	steel cas.
<u>1450</u>	feet	<u>8"</u>	size	steel cas.
<u>2226</u>	feet	<u>6 5/8</u>	size	steel cas.
<u>No</u>	feet		size	steel cas.
<u>No</u>	feet		size	steel cas.

in casing perforated at No feet to feet
in casing perforated at feet to feet

Coal was encountered at 715 feet; thickness 5 feet inches, and at 950
feet; thickness 5 feet inches, and at 1075 feet; thickness 6 feet inches.

Liners were used as follows: (Give details) No Liners



Date
Approved Cochran & Cochran Owner.
R. W. Marshall Field Supt
(Title)

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47 10300026A
3940

LATITUDE

LONGITUDE

LONGITUDE

7'5 OGIS topo location

7.5' loc 1250 15' loc 1300
(calc.) 1300

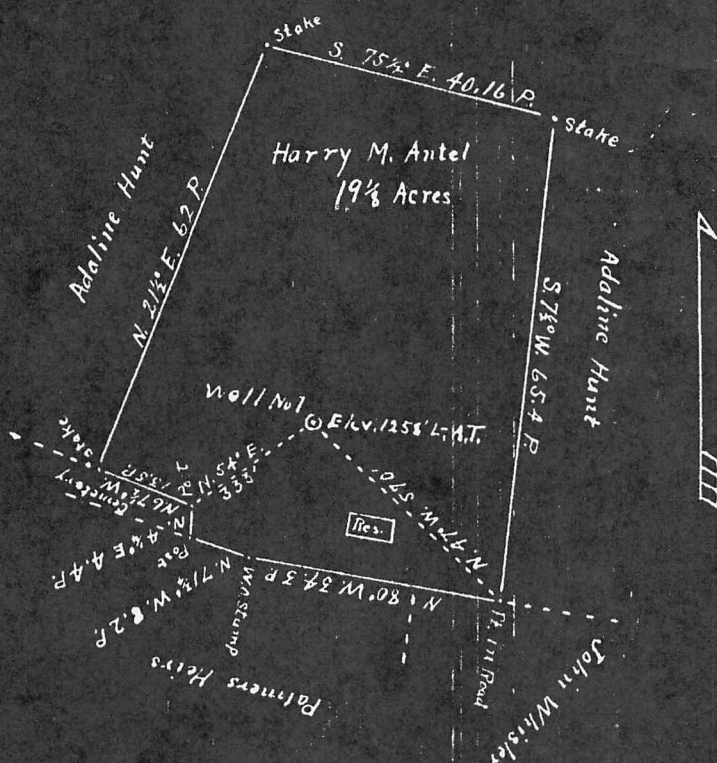
Company _____	
Farm _____	
LOCATION MAP	
Quad <u>Hundred</u> <u>Marion Co.</u>	
County _____	
District <u>Crossin</u>	

WELL LOCATION MAP

File No. 000000

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Plat of the Proposed Location of Well No. 1 of Cochran & Cochran of Parkersburg, West Virginia, on the Harry M. Antel Farm consisting of 19-1/8 Acres, Located in Church District, Wetzel County, West Virginia.



I, the undersigned, hereby certify that this map is correct and shows all the information, to the best of my knowledge and belief, required by the oil and gas section of the mining Laws of West Va.

J. N. Robinson
Engineer

Acknowledged before me a Notary Public of Wetzel County, West Virginia, this 24 day of April, 1940.

My Commission expires Jan 14, 1940

Sham A. Hunt
Notary Public

1) Date: JUNE 14, 2019

2) Operator's Well Number 4528

3) API Well No.: 47 - 103 - 00026 P

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

4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name FLOYD E. & FRANCIS POSTLETHWAIT	Name CONSOLIDATION COAL CO.
Address 517 POGUE RUN ROAD	Address 1 BRIDGE STREET
BURTON, WV 26562	MONONGAH, WV 26554
(b) Name	(b) Coal Owner(s) with Declaration
Address	Name
	Address
(c) Name	Name
Address	Address
6) Inspector DEREK HAUGHT	(c) Coal Lessee with Declaration
Address P.O. BOX 85	Name
SMITHVILLE, WV 26178	Address
Telephone (304) 206-7613	

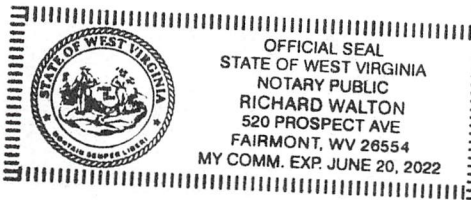
TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

- (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.

David Roddy



Well Operator	CONSOLIDATION COAL COMPANY
By:	DAVID RODDY
Its:	PROJECT ENGINEER
Address	1 BRIDGE STREET
	MONONGAH, WV 26554
Telephone	(304) 534-4748

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AUG 16 2019
WV Department of
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Subscribed and sworn before me this 15th day of August 2019
Richard Walton Notary Public
 My Commission Expires June 20 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.

WW-9
(5/16)

47 10300026P

API Number 47 - 103 - 00026 P
Operator's Well No. 4525

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

Operator Name Consolidation Coal Company OP Code 10950

Watershed (HUC 10) WEST VIRGINIA FORK OF FISH CREEK Quadrangle HUNDRED, WV, PA 7.5'

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: Yes. Gel circulated from tank thru well bore and returned to tank

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

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

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

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

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

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

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

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

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

Company Official Signature [Signature]

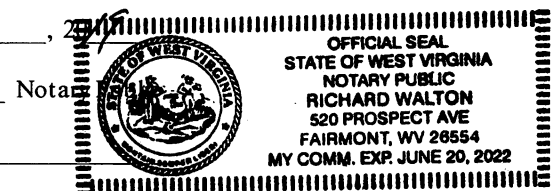
Company Official (Typed Name) DAVID RODDY

Company Official Title Project Engineer

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Subscribed and sworn before me this 15th day of August

My commission expires Dec 20 2022



Consolidation Coal Company
Northern West Virginia Operations
1 Bridge Street
Monongah, WV 26554

phone: 304-534-4748
fax: 304-534-4739
e-mail: ronnieharsh@consolenergy.com
web: www.coalsource.com

*Name: RONNIE HARSH
*title: Project Engineer

April. 7, 2014

Department of Environmental Protection
Office of Oil and Gas
601 57th Street, SE
Charleston, WV 25304-2345
Phone: (304) 926-0499
Fax: (304) 926-0452

To Whom It May Concern:

As per the Department of Environmental Protection, Office of Oil and Gas request, Consolidation Coal Company, Northern West Virginia Operations, submits the following procedures utilizing pit waste.

Upon submitting a well work application (without general permit for Oil and Gas Pit Waste Discharge Application), Consolidation Coal Company, Northern West Virginia Operations, will construct no pits, but instead will use mud tanks to contain all drilling muds.

Once the well is completed, that material (minus the cave material) will be trucked to the next well to be plugged or to DEP impoundment facilities number U-78-83, U-104-83, or U-1011-93.

Sincerely,



Ronnie Harsh
Project Engineer

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Proposed Revegetation Treatment: Acres Disturbed 1 Prevegetation pH _____

Lime 3 Tons/acre or to correct to pH 6.0

Fertilizer type 10-20-20 or equivalent

Fertilizer amount 500 lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type lbs/acre

Seed Type lbs/acre

See Attachment 100

See Attachment 100

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: Derek M. Haught

Comments: _____

Title: Oil & Gas Inspector Date: 8/16/2019

Field Reviewed? Yes No

47 10300026P

CAUDILL SEED • 1064 E MAIN HWY 60 HOUSE #2 • MOREHEAD KY 40351 • AMS # 4923



NOTICE TO CONSUMERS

"Notice: Arbitration/conciliation/mediation required by several states. Under the seed laws of several states, arbitration, mediation, or conciliation is required as a prerequisite to maintaining a legal action based upon the failure of seed, to which this notice is attached, to produce as represented. The consumer shall file a complaint (sworn for AR, FL, IN, MS, SC, TX, WA; signed only CA, ID, ND, SD) along with the required filing fee (where applicable) with the Commissioner/Director/Secretary of Agriculture, Seed Commissioner (IN), or Chief Agricultural Officer within such time as to permit inspection of the crops, plants, or trees by the designated agency and the seedsmen from whom the seed was purchased. A copy of the complaint shall be sent to the seller by certified or registered mail or as otherwise provided by state statute."

MIXTURE-COASTAL SEED 2015
 LOT NO: 7M1000 NET WT 50
 CROP: .58 INERT: 1.56 WEED SEED: .26

KIND	VARIETY
ANNUAL RYEGRASS	MAGNUM
ORCHARDGRASS	POTOMAC
COATING MATERIAL	
PERENNIAL RYEGRASS	LINN
CLOVER	NOT STATED
COATING MATERIAL	
TIMOTHY	CLIMAX
BIRDFOOT TREFOIL	NOT STATED
COATING MATERIAL	
LADINO CLOVER	SEMINOLE
COATING MATERIAL	

ORG	PURE	GERM	HARD	DORM	TEST
OR	29.40	90.00	.00	.00	10/16
OR	11.39	85.00	.00	.00	11/16
	8.00	.00	.00	.00	11/16
OR	19.60	85.00	.00	.00	11/16
OR	6.40	85.00	.00	.00	12/16
	3.40	.00	.00	.00	12/16
CAN	9.80	85.00	.00	.00	10/16
CAN	2.83	83.00	7.00	.00	11/16
	1.91	.00	.00	.00	11/16
OR	3.17	60.00	25.00	.00	8/16
	1.70	.00	.00	.00	8/16

NOTICE TO BUYER: WE WARRANT THAT SEEDS WE SELL WILL CONFORM TO THE LABEL DESCRIPTION REQUIRED UNDER STATE AND FEDERAL LAWS, WITHIN RECOGNIZED TOLERANCES. WE MAKE NO WARRANTIES, EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR PURPOSE, OR OTHERWISE, WHICH WOULD EXTEND BEYOND SUCH DESCRIPTIONS, AND IN ANY EVENT OUR LIABILITY FOR BREACH OF ANY WARRANTY OR CONTRACT WITH RESPECT TO SUCH SEED IS LIMITED TO THE PURCHASE PRICE OF SUCH SEEDS.

Herb
Treatments

NOXIOUS WEEDS PER LB:

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N/A

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

Operator Name: CONSOLIDATION COAL COMPANY
Watershed (HUC 10): WEST VIRGINIA FORK OF FISH CREEK Quad: HUNDRED, WV,PA 7.5'
Farm Name:

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

[Empty response box for question 1]

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

[Empty response box for question 2]

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

[Empty response box for question 3]

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

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[Empty response box for question 4]

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

N/A

[Empty rectangular box for response]

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

[Empty rectangular box for response]

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.

[Empty rectangular box for response]

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

[Empty rectangular box for response]

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Signature: _____

Date: _____

Well# 4528

HUNDRED WV, PA 7.5' Quad

Scale: 1" = 500'

Oil Well



1400

LINE

1300

Old Harmony Cem

1118

Well# 4528

1200

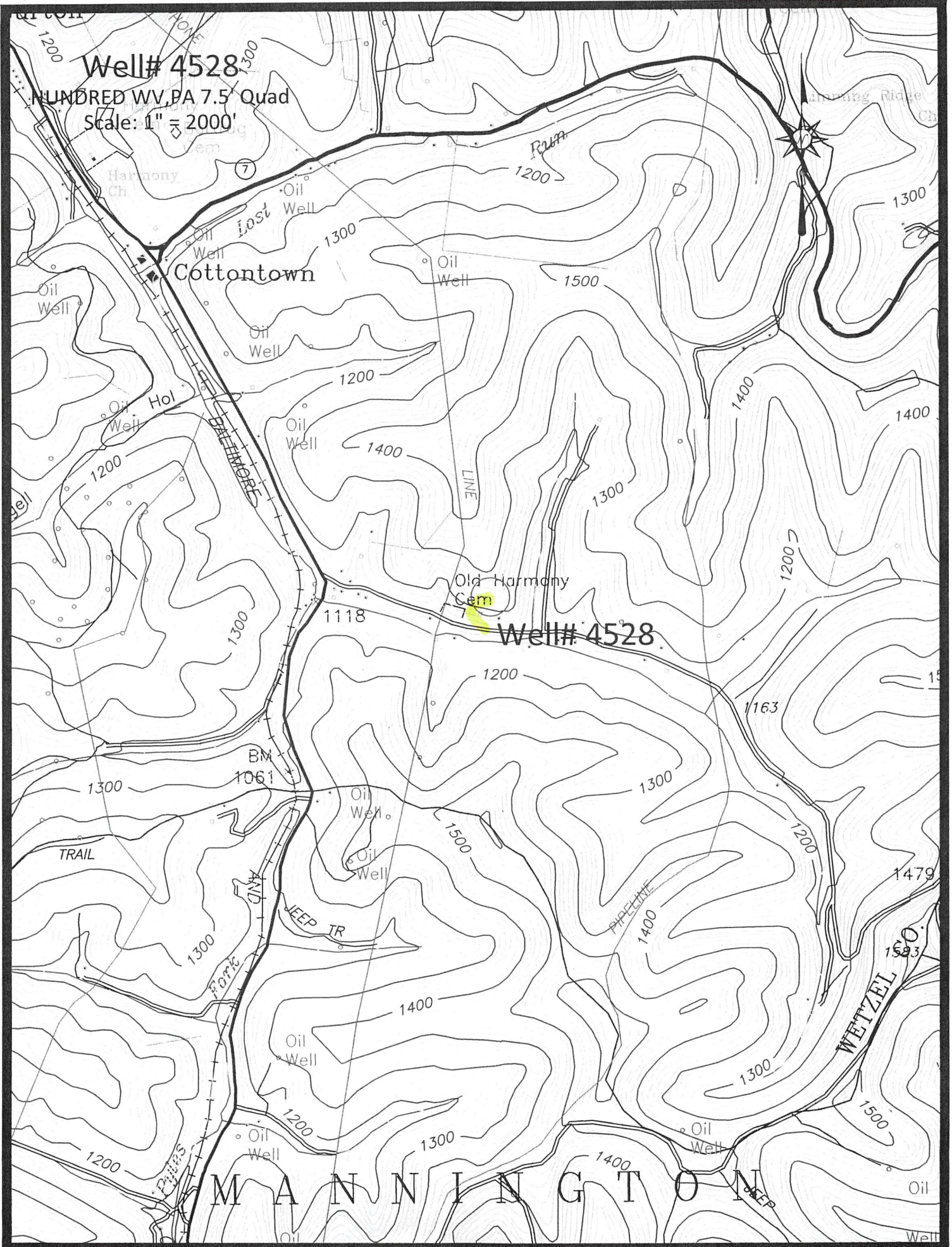
Oil Well

1300

1500

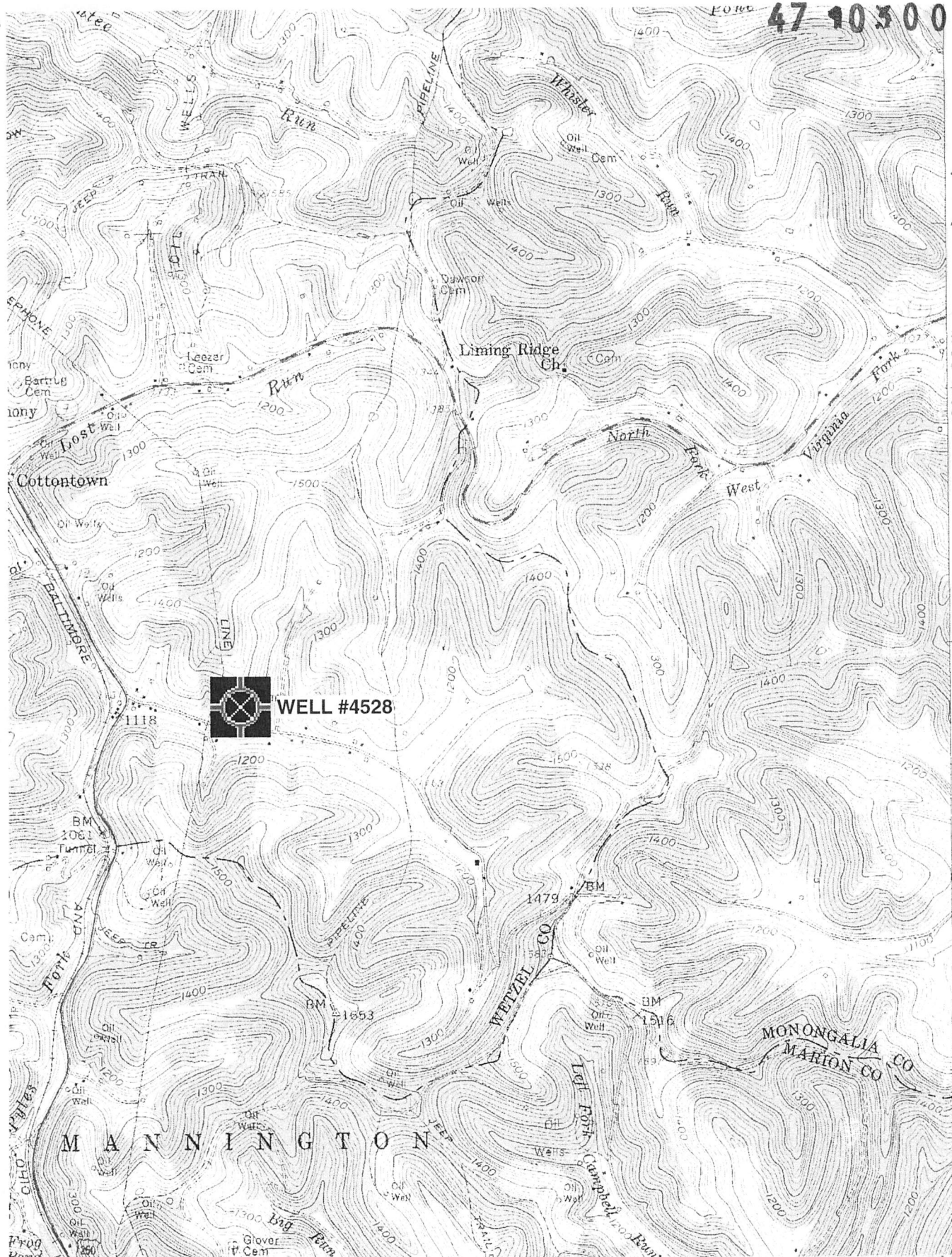
Oil

Access Road



MANNINGTON

47 10300026P



WELL #4528

4301
40'

4389

43882066°N

120 000 FEET
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39°37'30"
80°22'30"

1/4 1/2 3/4 1 MILE

7000 FEET
METER

ROAD CLASSIFICATION

- Heavy duty
- Medium duty
- Light duty
- Unimproved dirt
- U. S. Route
- State Route

(MANNINGTON)
35
45
55

'Hundred; WV, PA' Scale: 1" = 0.379Mi 610Mt 2,000Ft, 1 Mi = 2.640" , 1 cm = 240Mt

WW-7
8-30-06



West Virginia Department of Environmental Protection
Office of Oil and Gas

WELL LOCATION FORM: GPS

API: 47-103-00026 WELL NO.: 4528

FARM NAME: HARRY M. ANTILL

RESPONSIBLE PARTY NAME: CONSOLIDATION COAL COMPANY

COUNTY: WETZEL DISTRICT: CHURCH

QUADRANGLE: HUNDRED WV, PA 7.5'

SURFACE OWNER: FLOYD E. & FRANCIS POSTLETHWAIT

ROYALTY OWNER: _____

UTM GPS NORTHING: 4,388,809 m

UTM GPS EASTING: 550,471 m GPS ELEVATION: 380 m (1247')

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

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

Survey grade GPS _____: Post Processed Differential _____

Real-Time Differential _____

Mapping Grade GPS X: Post Processed Differential X

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.

[Signature]
Signature

Professional Surveyor
Title

JUNE 14, 2019
Date

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