

02/24/2023



west virginia department of environmental protection

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

Harold D. Ward, Cabinet Secretary
www.dep.wv.gov

Friday, February 24, 2023
WELL WORK PLUGGING PERMIT
Vertical Plugging

WEST VIRGINIA LAND RESOURCES, INC.
46226 NATIONAL ROAD WEST

ST. CLAIRSVILLE, OH 43950

Re: Permit approval for 2956
47-051-00577-00-00

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

A handwritten signature in blue ink, appearing to read "James A. Martin", is written over the typed name and title. The signature is fluid and cursive.

Operator's Well Number: 2956
Farm Name: MONROE, EDWIN - AGENT
U.S. WELL NUMBER: 47-051-00577-00-00
Vertical Plugging
Date Issued: 2/24/2023

Promoting a healthy environment.

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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.

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WW-4B
Rev. 2/01

1) Date DECEMBER 8, 20 22
2) Operator's
Well No. 2956
3) API Well No. 47-61-0957

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 1417.32' Watershed HARTS RUN OF PENNSYLVANIA FORK OF FISH CREEK
District LIBERTY County MARSHALL Quadrangle CAMERON WW,PA

6) Well Operator WEST VIRGINIA LAND RESOURCES INC 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 Name STRADER GOWER
Address 2525W ALEXANDER RD.
VALLEY GROVE, WV 26060
9) Plugging Contractor Name
Address

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

See Exhibit No. 1

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ASHA 101C PETITION SUMMARY
FOR MARSHALL COUNTY COAL

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Environmental Protection

Strader Gower

01/04/2023

02/24/2023

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EXHIBIT No.1

From the experience and technology developed since 1970 in plugging oil and gas wells for the mining through, West Virginia Land Resources will utilize the following method to plug all future wells.

SOLID PLUG METHOD

Well Clean Out

Producing in 2020 Clean out to the total depth and plug back according to the state regulations to a minimum of 200 feet below the lowest minable coal seam.

~~(b) If abandoned well:~~ Clean out to the first plug 200 feet below the lowest minable coal seam.

Cement

- (a) Circulate through the tubing or drill steel an expanding Class A cement plug from a minimum of 200 feet below the minable coal seam to a point 100 feet above the minable coal seam.
- (b) Circulate through the tubing or drill steel an expanding Class A cement plug from 100 feet above the coal seam to the surface

A monument will be installed with API number and stating "solid plug."

Marshall County 101C

Docket No. M-2016-016-C

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101C MSHA Petition Summary
Marshall County Coal
Ohio County Coal

I. **Definitions**

- A. Diligent Effort is defined as pulling 150% casing weight and making at least 3 attempts. Assume casing is 3,000' when length is unknown.



II. **Active Well**

- A. Check for Methane
B. Notify MSHA we are plugging an active well
C. Kill Well
D. Pull Sucker Rods and tubing
E. Make Diligent Effort to Pull Casing
F. If casing cannot be pulled...
 i. Run Bond Log
 1. Discuss Action Plan with Mine Personal
 ii. Notify MSHA that casing cannot be pulled
 iii. Cut, rip, or perforate every 200'. First cut will be 200' above the end of casing up to 200' below Pittsburgh coal
 1. MSHA can waive 200' cuts if bond log shows adequate material behind casing.
 iv. Cut, Rip, or Perforate every 50' from 200' below Pittsburgh to 100' above Pittsburgh (see Appendix A).
 v. Cut, Rip, or Perforate every 5' from 10' below Pittsburgh Coal to 10' above Pittsburgh (see Appendix A).
G. Pump Class A Cement from TD to 200' below Pittsburgh
H. Pump Thixotropic Cement from 200' below Pittsburgh to 100' above
I. Pump Class A cement from 100' above Pittsburgh to surface.
J. Install Well Marker

III. **Abandoned Well**

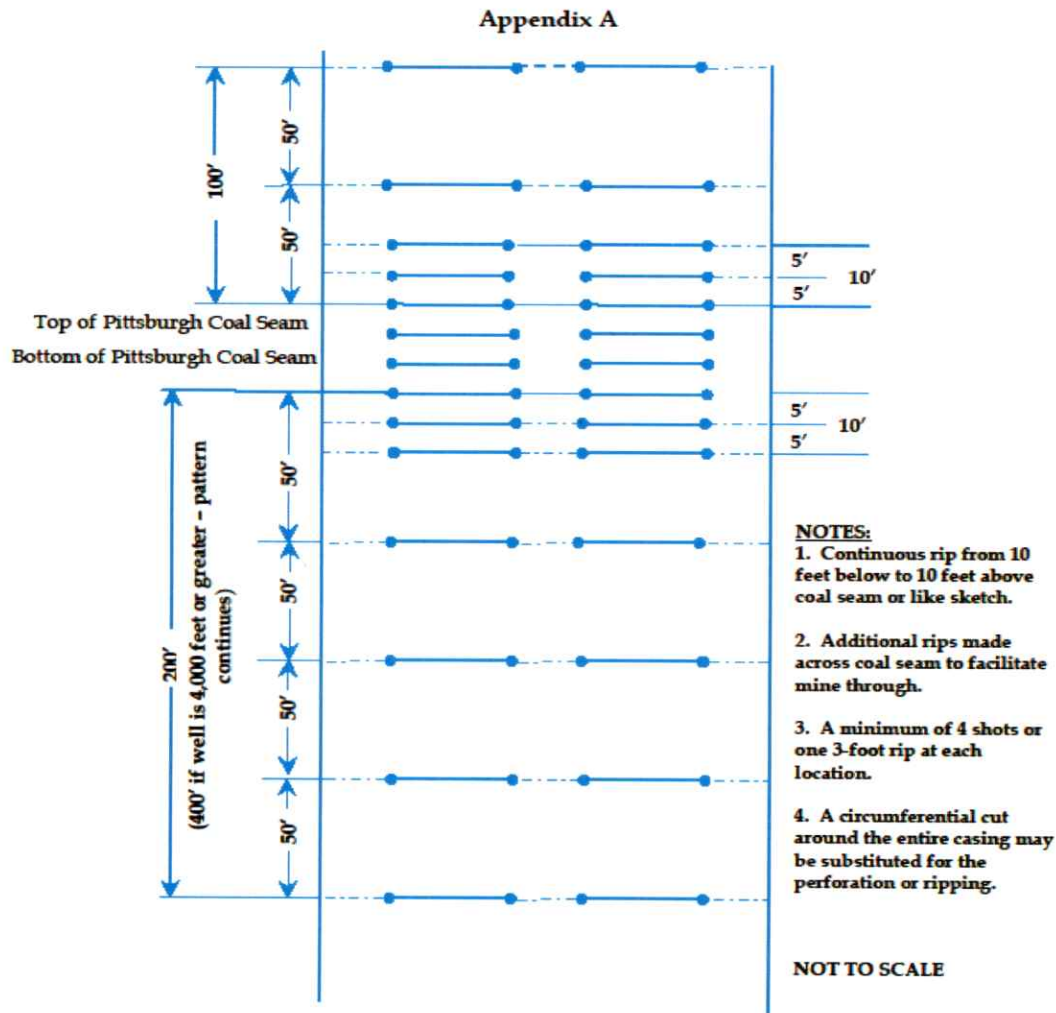
- A. Check for Methane
 i. Notify MSHA if actively producing methane
B. Kill Well
C. If well is less than 4,000' deep, clean out well 220' below Pittsburgh (cleanout an extra 20' to allow for variance in coal elevation).
D. If well has casing, make diligent effort to pull casing as defined above.
E. If casing cannot be pulled...
 i. Run Bond Log
 ii. Notify MSHA that casing cannot be pulled
 iii. Cut, Rip, or Perforate every 50' from 200' below Pittsburgh to 100' above Pittsburgh (see Appendix A).

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- iv. Cut, Rip, or Perforate every 5' from 10' below Pittsburgh Coal to 10' above Pittsburgh (see Appendix A).
- F. Pump expanding cement under 200 PSI to form a plug 200' below Pittsburgh
- G. Verify plug
- H. Pump Class A Cement from verified plug to 200' below Pittsburgh
- I. Pump Thixotropic Cement from 200' below Pittsburgh to 100' above
- J. Pump Class A cement from 100' above Pittsburgh to surface.
- K. Install well marker



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***If the depth is greater than 4,000 feet, all 200' number change to 400' respectively

In the matter of:
The Marshall County Coal Company
Marshall County Mine
I.D. No. 46-01437

Petition for modification

Docket No. M-2016-016-C

PROPOSED AMENDED 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 Marshall County Coal Company's Marshall County Mine located in Marshall County, West Virginia. The Petitioner filed the Petition to permit an alternative method of compliance with the standard with respect to vertical oil and gas wells into the underground coal seams. The Petitioner requests to amend their current PDO granted on May 15, 1989, under Docket M-1988-199-C formerly known as McElroy Coal Company, McElroy 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.

On July 27, 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-1988-199-C will be superseded and replaced by this amended modification granted under Docket No. M-2016-016-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 Marshall 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 parties' Joint Motion for Settlement, the Marshall County Coal Company is granted a modification of the application of 30 C.F.R. § 75.1700 to its Marshall 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 Marshall County Coal Company's Marshall 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 utmost protection to the miners involved in the process.
- v. All miners involved in the plugging or re-plugging operations will be trained on the contents of this Petition prior to starting the process and a copy of this Petition will be posted at the well 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 Marshall County Coal Company's Marshall County Mine is hereby GRANTED.

DISTRIBUTION

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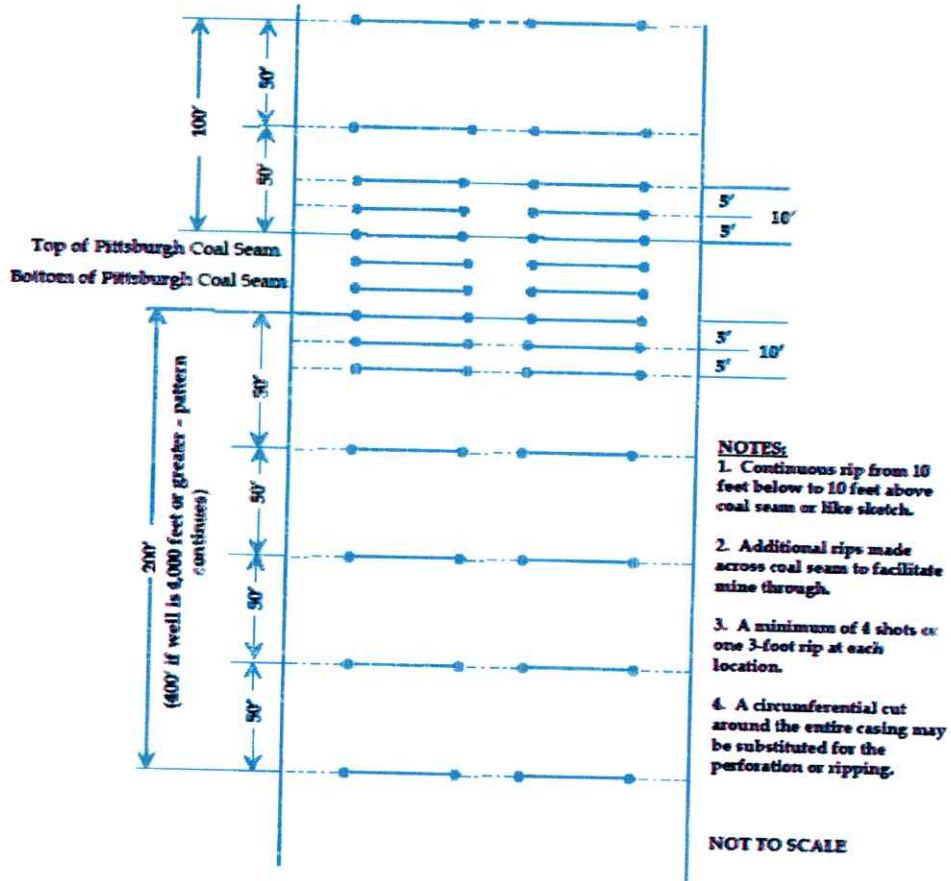
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Appendix A



Company
348 Fourth Ave., Pittsburgh, Pa.

Well No. **2956** on **Garnett Hendt** Farm **318** Acres
Cameron Full **Liberty** County **WVa** State
 Rig Commenced **Sept 18 1924** Completed **Sept 19 1924**
 Drilling Commenced **Nov 12 1924** Completed **Dec 19 1924**
 Cost per Foot **\$1.50** Contractor **Malcom M Richard** Address **Hoodruff, WVa**
 Driller Name **M Richard, Porter Richard, Art Headley, Mont Hood**

470510057

BOILER

ENGINE

E. P.	No.	Name of Maker	E. P.	No.	Name of Maker	New	Old	Height	Name of Builder
						1		82'	Richardson & Fisher

CONDUCTOR AND CASING USED IN DRILLING

Conductor	2 1/2 inch	3 inch	3 1/2 inch	4 inch	4 1/2 inch	5 inch	5 1/2 inch	6 inch	6 1/2 inch	7 inch
10		237	1582	2264						

CONDUCTOR AND CASING LEFT IN WELL

Conductor	2 1/2 inch	3 inch	3 1/2 inch	4 inch	4 1/2 inch	5 inch	5 1/2 inch	6 inch	6 1/2 inch	7 inch
12			1552	2264						

OIL WELL

GAS WELL

When Set	Size of Torpedo	1st Day's Production	Tubing	End	Thrust	Size of Packer	Depth Set	Packed with	1st Minute Pressure	Rock Pressure
----------	-----------------	----------------------	--------	-----	--------	----------------	-----------	-------------	---------------------	---------------

FORMATION

Top

Bottom

Thickness

REMARKS

Hernesburg coal	310	315	5	black soft						
Pittsburgh	1115	1122	7	black soft						
Murphy Sand	1335	1350	15	light hard						
Little Dunkard	1550	1580	30	light hard						
Big Dunkard	1615	1630	15	light hard						
Gas Sand	1790	1830	40	light hard						
1st Salt Sand	1900	2040	140	light hard						
2nd	2090	314	100	light hard						
Big L...	2210	2276	66	light hard						
Big Inyan. int. sand	2276	2550	274	Little Gas 30' in Inyan						
Thirty-foot sand	2900	2910	10	light hard						
Fifty-foot	3085	3124	39	light hard						
London Stray	3149	3156	7	light hard						
London Sand	3157	3201	44	light hard						
South Sand	3219	3227	8	Gas at 3201'						
Fifth	3252	3254	2	light broken						
Total Depth		3254								

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FEB 09 1925

WV Department of Environmental Protection

Company _____
 Record of well No. 2956
 Field _____ Farm _____ Acres _____
 District _____ County _____ State _____
 Began Commenced 19 _____ Completed 19 _____
 Drilling Commenced 19 _____ Completed 19 _____
 Contractor _____ Address 4705100577
 Driller Name _____

CASING AND TUBING RECORD

Depth	1 1/2"	2"	3"	4"	5"	6"	8"	10"	12"
Used in Drilling									
Left in Well									

PACKER RECORD			SHOOTING RECORD						
Size	Depth Set	Type Packer	Date	Type Explosive	Amount	DEPTH		Volume	Volume
						Top	Bottom	Before Co. Ft.	After Co. Ft.

VOLUME AND PRESSURE

Date	Reading in inches	Liquid	New Orifice	Volume	Sand	PRESSURE IN MIN.					24 Hour R. P.	Max. R. P.	Min	
						1	5	10	20	40				

TOTAL INITIAL OPEN FLOW _____ CUBIC FEET PER 24 HOURS

FORMATION	Top	Bottom	THICKNESS	REMARKS		
Clay brown soft	0	12	12	Slate dark soft	1515	1550
Sand, dark hard	12	25	13	Slate dark soft	1590	1615
Soap stone dark soft	25	100	75	Slate light soft	1690	1790
Lime dark broken	100	200	100	Slate dark soft	1830	1928
Red rock red soft	200	250	50	Slate dark soft	2040	2090
Lime light hard	250	300	50	Slate dark soft	2140	2160
Slate light soft	300	400	100	Lime light hard	2160	2200
Lime light broken	400	500	100	Slate dark soft	2200	2210
Slate light soft	500	600	100	Lime shells light broken	2550	2600
Lime light hard	600	650	50	Slate light soft	2600	2675
Slate dark soft	650	700	50	Lime & Slate light soft	2675	2880
Lime dark broken	700	785	85	Slate dark soft	2880	2900
Bluff Sand dark hard	785	810	25	Slate light soft	2945	2960
Lime light hard	915	1015	100	Lime light hard	2960	2970
Mapletown coal black soft	1015	1020	5	Slate dark soft	2970	3005
Lime light hard	1020	1050	30	Pink Rock pink soft	3005	3015
Slate light soft	1050	1070	20	Lime light hard	3015	3020
Lime light hard	1070	1090	20	Slate light soft	3020	3035
Slate dark soft	1090	1115	25	Lime light hard	3035	3045
Lime light hard	1122	1150	28	Slate light soft	3045	3085
Slate light soft	1150	1200	50	Slate light soft	3125	3149
Red Rock red soft	1200	1250	50	Pink Rock Pink soft	3145	3157
Slate light soft	1250	1335	85	Slate light soft	3201	3219
Red Rock red soft	1350	1375	25	Slate light soft	3227	3252
Sand light hard	1375	1425	50			
Sand light hard	1425	1450	25			
Slate light soft	1450	1495	45			
Sand light hard	1495	1515	20			

MSH-597

Examined above information and measurements and found to be correct by _____
 Examined and Approved by _____
 Contractor _____ Field Superintendent _____

NOTE—The above blank card to be filled out monthly by the contractor, with a complete and accurate record of the well, and accessories, when operated for purposes of the well. All formations and layers shall be given in their proper name, with their true measurements, and under the head of "Remarks" must be recorded in what and when such Oil, Gas or Water was struck, the quantity of each, the quality of the rock, and thickness of each.

Liberty District, Marshall County, W. Va.
By Manufacturers Light & Heat Co.
Completed Dec. 19, 1924.
Record from Mr. Schillbalm Sept. 30, 1939.

	Top.	Bottom.
Pittsburgh Coal	1115	- 1122
Murphy Sand	1335	- 1350
Little Dunkard Sand	1550	- 1580
Big Dunkard Sand	1615	- 1680
Gas Sand	1790	- 1830
1st Salt Sand	1928	- 2040
2nd Salt Sand	2090	- 2140
Big Lime	2210	- 2276
Big Injun Sand (little gas 30' in B.I.)	2276	- 2550
30-Foot Sand	2900	- 2945
50-Foot Sand 4000	3085	- 3124
Gordon Sand (Stray)	3149	- 3156
Gordon Sand	3157	- 3201
4th Sand (gas, 3221')	3219	- 3227
5th Sand	3252	- 3254
Total depth		3254

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WV Department of
Environmental Protection



Select County: (051) Marshall Location Production Plugging

Enter Permit #: 00577 Owner/Completion Stratigraphy Sample

Get Data Pay/ShowWater Logs Btm Hole Loc

Well: County = 51 Permit = 00577 [Link to all digital records for well](#)

Report Time: Friday, February 17, 2023 11:14:25 AM

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

Geological & Economic Survey:
 Well Reassignment Information: Reassigned From
 OLD_COUNTY_OLD_PERMIT_NEW_COUNTY_NEW_PERMIT
 51 70159 51 577

Location Information: [View Map](#)
 API COUNTY PERMIT TAX DISTRICT QUAD_75 QUAD_15 LAT_DD LON_DD UTIME UTMN
 4705100577 Marshall 577 Liberty Cameron Cameron 39.8019448 -80.524237 540728.1 4405884

There is no Bottom Hole Location data for this well

Owner Information:
 API CMP_DT SUFFIX STATUS SURFACE_OWNER WELL_NUM CO_NUM LEASE LEASE_NUM MINERAL_OWN OPERATOR AT_COMPLETION PROP_VD PROP_TRGT_FM TFM_EST_PR
 4705100577 12/19/1924 Original Loc. Completed Earnest Wendt 2956
 Manufacturers Light & Heat Co.

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 TI_BEF P_AFT TI_AFT BH_P_BEF I
 4705100577 12/19/1924 11/21/1924 Cameron Fifth Fifth 3221 Fourth unclassified unclassified Gas Unknown Nat/Open H 3254 3254

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
 4705100577 12/19/1924 Pay Gas Vertical 2306 Big Injun (undiff) 0 0 0 0
 4705100577 12/19/1924 Pay Gas Vertical 3221 Fourth unclassified unclassified 0 0 0 0

Production Gas Information: (Volumes in Mcf)
 API PROD_YEAR ANN_GAS JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DCM
 4705100577 1980 889 172 85 81 84 40 0 0 43 92 96 94
 4705100577 1981 482 97 98 90 101 0 0 0 0 0 0 0 96
 4705100577 1982 567 99 99 87 93 86 72 0 0 0 0 0 30
 4705100577 1983 438 159 99 187 19 2 0 0 0 0 0 0 0
 4705100577 1984 677 39 89 51 86 84 86 84 47 0 0 0 0 84
 4705100577 1985 1,016 86 89 78 89 84 86 84 86 86 86 84 86 84
 4705100577 1986 954 81 72 78 84 73 84 86 86 86 84 86 78
 4705100577 1987 1,016 86 88 78 88 84 86 86 86 86 84 86 84
 4705100577 1988 786 86 88 0 88 84 0 84 86 86 0 86 84
 4705100577 1989 980 86 139 94 69 84 0 84 86 86 0 86 84
 4705100577 1990 796 27 27 24 32 46 32 31 65 65 64 66 317
 4705100577 1992 2,073 21 110 97 156 283 194 284 189 188 192 195 183
 4705100577 1993 1,885 175 169 79 150 222 156 130 245 128 104 130 198
 4705100577 1994 2,270 214 213 340 272 222 217 191 193 75 2 114
 4705100577 1995 2,729 202 168 204 313 339 378 197 235 213 194 215 71
 4705100577 1996 2,284 225 133 289 176 225 197 289 168 135 152 146 167
 4705100577 1997 2,190 178 142 189 320 128 164 178 165 164 208 177 177
 4705100577 1998 2,572 230 198 219 154 225 272 151 179 203 179 194 148
 4705100577 1999 1,876 208 168 210 196 268 182 184 93 107 76 90 90
 4705100577 2000 411 95 154 162 0 0 0 0 432 363 350 311 483
 4705100577 2001 2,171 0 0 0 168 166 197 247 0 0 0 0 0
 4705100577 2002 3,760 324 345 280 297 270 284 241 246 375 344 291 483
 4705100577 2003 2,097 167 210 119 200 177 176 177 199 221 178 117 156
 4705100577 2004 2,581 180 194 132 231 236 132 267 286 243 243 225 212
 4705100577 2005 948 212 87 88 61 21 48 44 42 47 54 146 98
 4705100577 2006 1,853 6 7 152 157 165 156 170 158 167 181 171 163
 4705100577 2007 188 0 0 0 0 0 0 0 0 0 0 0 0
 4705100577 2008 1,158 96 96 96 96 96 96 96 96 96 96 100
 4705100577 2009 1,488 124 124 124 124 124 124 124 124 124 124 124
 4705100577 2010 2,473 206 206 206 206 206 206 206 206 206 206 207
 4705100577 2011 2,507 208 208 208 208 208 208 208 208 208 208 219
 4705100577 2012 2,460 205 205 205 205 205 205 205 205 205 205 205
 4705100577 2013 2,220 185 185 185 185 185 185 185 185 185 185
 4705100577 2014 1,067 97 97 97 97 97 97 97 97 97 97 0
 4705100577 2015 396 33 33 33 33 33 33 33 33 33 33 0
 4705100577 2016 840 70 70 70 70 70 70 70 70 70 70 0
 4705100577 2017 588 49 49 49 49 49 49 49 49 49 49 0
 4705100577 2018 1,188 99 99 99 99 99 99 99 99 99 99 0
 4705100577 2019 944 82 82 82 82 82 82 82 82 82 82 0
 4705100577 2020 485 237 212 0 0 0 0 0 0 0 0 0 0
 4705100577 2021
 4705100577 2021

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

API	PROD_YEAR	ANN_OIL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4705100577	1980	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100577	1981	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100577	1982	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100577	1983	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100577	1984	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100577	1985	0	0	0	0	0	0	0	0	0	0	0	0	0

4705100577P
02/24/2023

API	PRODUCING OPERATOR	PRD_YEAR	ANN_NGL	WTR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4705100577	Columbia Gas Transmission Corp.	1986			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Columbia Gas Transmission Corp.	1987			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Columbia Gas Transmission Corp.	1988			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Columbia Gas Transmission Corp.	1989			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Columbia Gas Transmission Corp.	1990			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Columbia Gas Transmission Corp.	1991			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Columbia Natural Resources, Inc. (CNRI)	1992			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Columbia Natural Resources, Inc. (CNRI)	1993			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Columbia Natural Resources, Inc. (CNRI)	1994			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Columbia Natural Resources, Inc. (CNRI)	1995			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Columbia Natural Resources, Inc. (CNRI)	1997			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Columbia Natural Resources, Inc. (CNRI)	1998			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Columbia Natural Resources, Inc. (CNRI)	1999			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Columbia Natural Resources, Inc. (CNRI)	2000			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Th-County Oil & Gas, Inc.	2001			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Th-County Oil & Gas, Inc.	2002			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Th-County Oil & Gas, Inc.	2003			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Th-County Oil & Gas, Inc.	2004			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Th-County Oil & Gas, Inc.	2005			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Th-County Oil & Gas, Inc.	2006			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2007			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2008			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2009			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2010			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2011			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2012			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2013			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2014			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2015			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2016			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2017			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2018			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2019			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2020			0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2021			0	0	0	0	0	0	0	0	0	0	0	0

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

API	PRODUCING OPERATOR	PRD_YEAR	ANN_NGL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4705100577	Leatherwood, Inc.	2013	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2014	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2015	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2016	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2018	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2019	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2020	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2021	0	0	0	0	0	0	0	0	0	0	0	0	0

Production Water Information: (Volumes in Gallons)

API	PRODUCING OPERATOR	PRD_YEAR	ANN_WTR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4705100577	Leatherwood, Inc.	2016	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2018	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2019	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2020	0	0	0	0	0	0	0	0	0	0	0	0	0
4705100577	Leatherwood, Inc.	2021	0	0	0	0	0	0	0	0	0	0	0	0	0

There is no Stratigraphy data for this well

Wireline (E-Log) Information:

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

* There is no Digitized Log data for this well

* There is no Scanned or Digital Logs available for download

There is no Plugging data for this well

There is no Sample data for this well

WW-4A
Revised 6-07

1) Date: DECEMBER 8, 2022
2) Operator's Well Number 2956
3) API Well No.: 47 - 051 - 00577

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 <u>ANDREW L. & DANA L. SCHRACK</u>	Name <u>WEST VIRGINIA LAND RESOURCES INC.</u>
Address <u>2008 HUPP RIDGE RD.</u>	Address <u>1 BRIDGE STREET</u>
<u>CAMERON, WV 26033</u>	<u>MONONGAH, WV 26554</u>
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name _____
	Address _____
(c) Name _____	Name _____
Address _____	Address _____
6) Inspector <u>STRADER GOWER</u>	(c) Coal Lessee with Declaration
Address <u>2525W ALEXANDER RD.</u>	Name _____
<u>VALLEY GROVE, WV 26060</u>	Address _____
Telephone <u>(304) 993-6188</u>	

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Office Of Oil and Gas
FEB 09 2023
WV Department of
Environmental Protection

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

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

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

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

Well Operator WEST VIRGINIA LAND RESOURCES INC.
 By: JAY HORES
 Its: PROJECT ENGINEER
 Address 6126 ENERGY ROAD
MOUNDSVILLE, WV 26041
 Telephone (304) 843-3565

Subscribed and sworn before me this 19th day of December

Nancy Lucido
My Commission Expires September 2, 2025



Oil and Gas Privacy Notice

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

4705100577

02/24/2023

4705100577P

U.S. Department of Environmental Protection

FEB 09 2023

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7020 0640 0001 3302 0406

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

For delivery information, visit our website at www.usps.com
CAMERON WV 26033

Certified Mail Fee	\$4.15
Extra Services & Fees (check box, add fee as appropriate)	\$13.25
<input type="checkbox"/> Return Receipt (hardcopy)	\$3.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00
Postage	\$1.98
Total Postage and Fees	\$17.43

Postmark Here
02/24/2023

Sent To
Andrew Schrack
Street and Apt. No. or PO Box No.
2008 Hupp Ridge RD
City, State, ZIP+4®
Cameron, WV 26033 **M-1639**

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

WW-9
(5/16)

47051005779 02/24/2023

API Number 47 - 051 - 00577
Operator's Well No. 2956

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

Operator Name WEST VIRGINIA LAND RESOURCES INC. OP Code

Watershed (HUC 10) HARTS RUN OF PENNSYLVANIA FORK OF FISH CREEK Quadrangle CAMERON WV,PA

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 *Jay Hores*

Company Official (Typed Name) Jay Hores

Company Official Title Project Engineer

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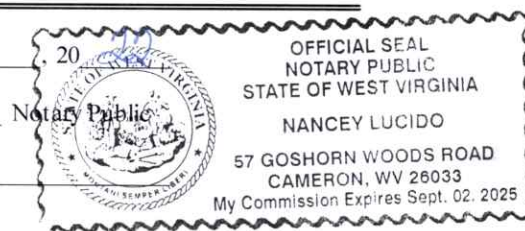
FEB 09 2023

WV Department of
Environmental Protection

Subscribed and sworn before me this 19th day of December

Nancy Lucido

My commission expires September 2, 2025



**AMERICAN CONSOLIDATED NATURAL
RESOURCES & WEST VIRGINIA LAND
RESOURCES**

02/24/2023
4705100577P

**AMERICAN CONSOLIDATED
NATURAL RESOURCES & WEST
VIRGINIA LAND RESOURCES**

46226 National Road
St. Clairsville, OH 43950

phone: 304.843.3565

fax: 304.843.3546

e-mail: JayHores@acnrinc.com

JAY HORES

Project Engineer

December 19, 2022

Department of Environmental Protection
Office of Oil and Gas
601-57th Street
Charleston, WV 25320

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Office Of Oil and Gas

FEB 09 2023

WV Department of
Environmental Protection

To Whom It May Concern,

As per the Division of Environmental Protection, Office of Oil and Gas request, Consolidation Coal Company submits the following procedures utilizing pit waste.

Upon submitting a well work application (without a general permit for Oil & Gas Pit Waste Discharge Application), Consolidation Coal Company 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 facilities number U-0033-83, O-1001-00, U-1035-91U-46-84, U-78-83, O-1044-9, or U-100-83.

Sincerely,



Jay Hores
Project Engineer

02/24/2023

Form WW-9

Operator's Well No. 4705100577A

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

Seed Mix in accordance with WVDEP Oil and Gas, Erosion and Sediment Control Field Manual

Seed Mix in accordance with WVDEP Oil and Gas, Erosion and Sediment Control Field Manual

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: *Strader Gower*

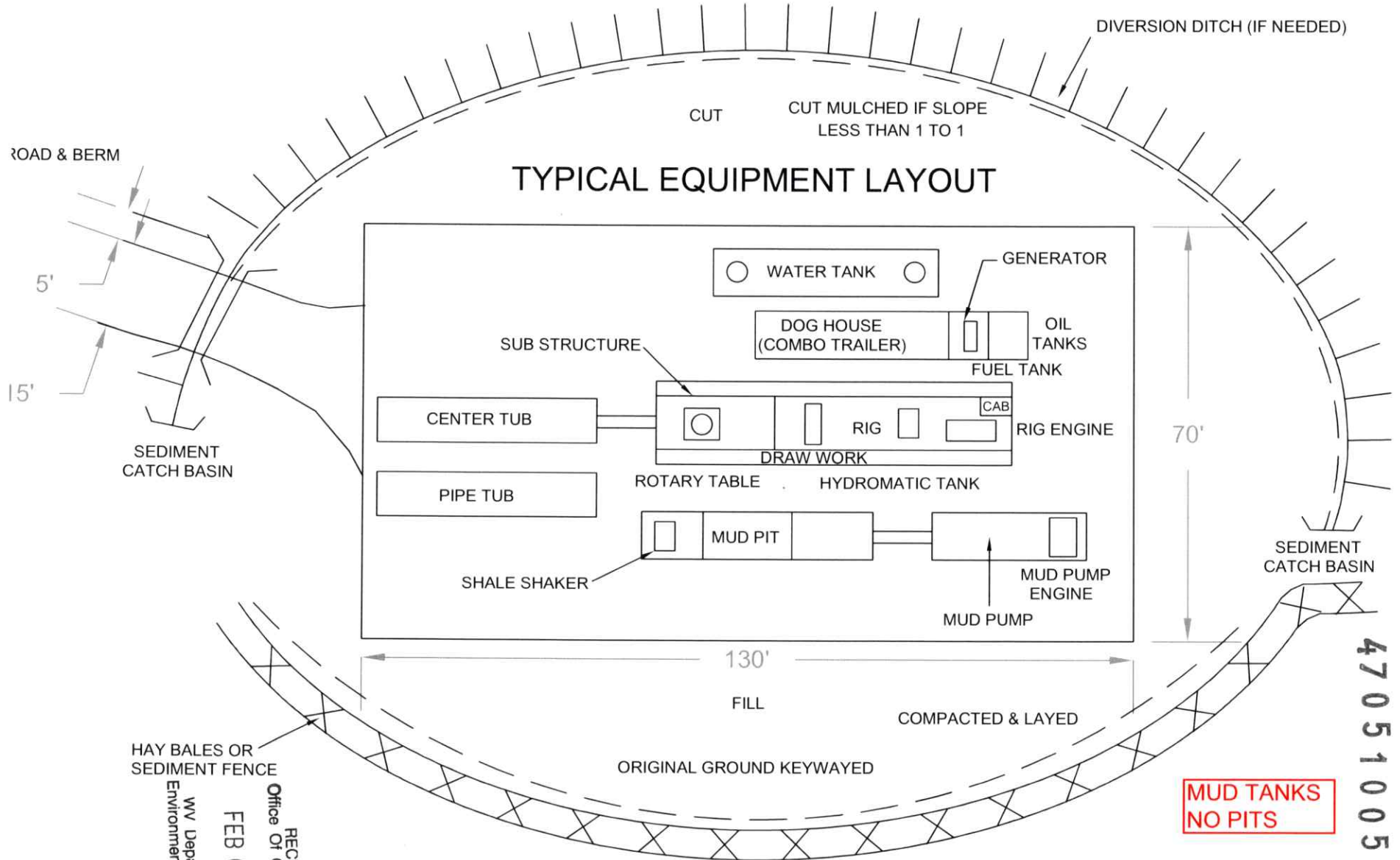
Comments:

Date Inspector Oil & Gas 01/04/2023

Field Inspected Yes No

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TYPICAL DRAWING OF
WELL PLUGGING
SITE PLAN



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MUD TANKS
NO PITS

4705100577P

Latitude

4705100577 02/24/2023

80°30'00"

Longitude

2.165
1.29w

Topo Location

7.5' Loc. _____ 15' Loc. _____
(calc.)

Company Mammoth H+H

Farm Earnest Wendt # 2956

15' Quad _____
(sec.)

7.5' Quad Cameron

District Liberty

WELL LOCATION PLAT

County OSI Permit 70159

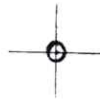
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LATITUDE 39° 50' 00"

47 05 10 05 77A

02/24/2023

LONGITUDE



7'5 OGIS topo location

7.5' loc 2.175 ✓ 15' loc _____
 1.30w (calc.)

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Company _____

Farm _____

Quad CAMERON 7 1/2'

County MARSHALL

District LIBERTY

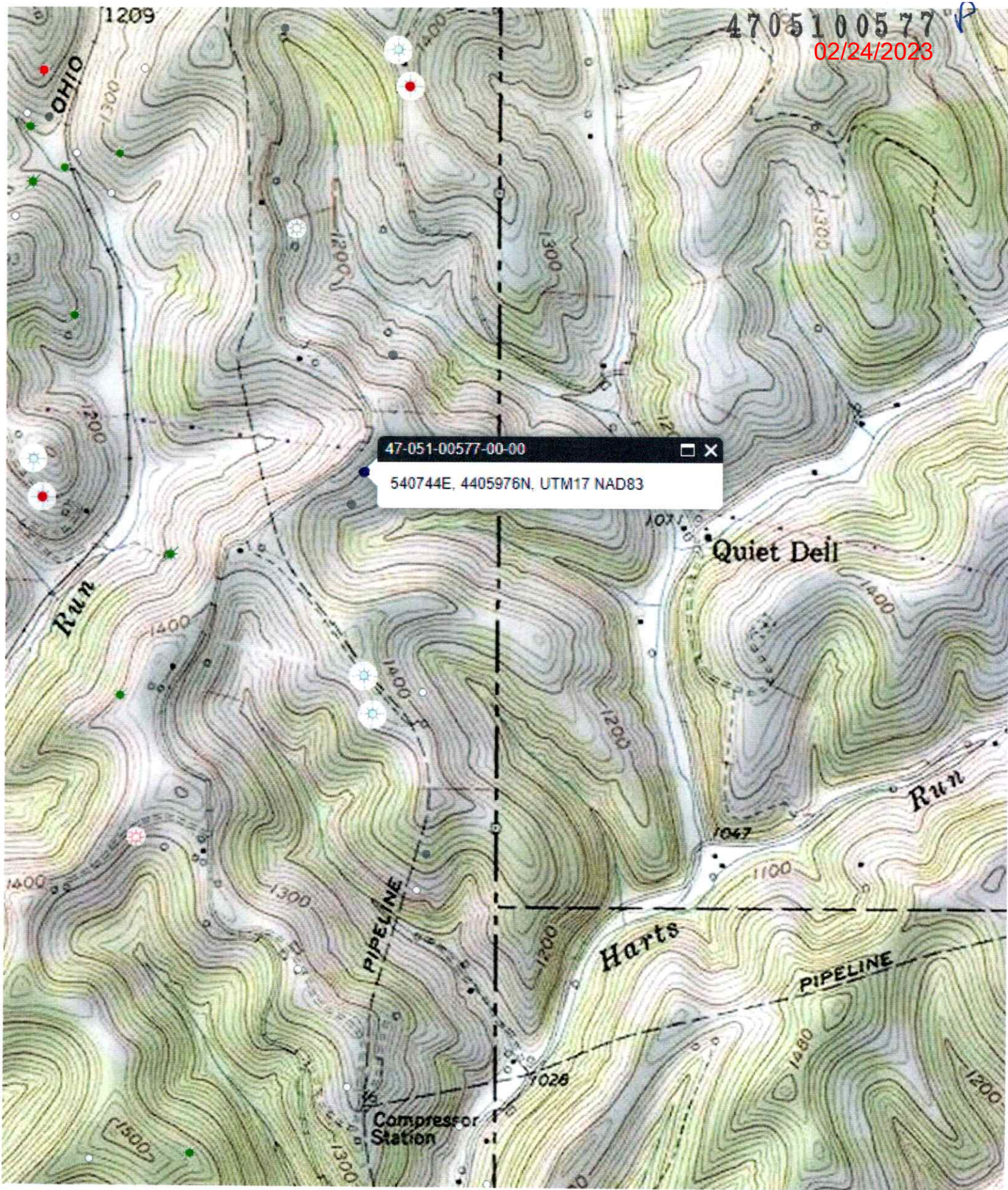
WELL LOCATION MAP

File No. 051-577

(024)

4705100577
02/24/2023

47-051-00577-00-00
540744E, 4405976N, UTM17 NAD83



WW-7
8-30-06



West Virginia Department of Environmental Protection
Office of Oil and Gas

WELL LOCATION FORM: GPS ²⁹⁵⁶

API: 47-051-00577 WELL NO.: M-1639

FARM NAME: EARNEST WENDT

RESPONSIBLE PARTY NAME: WEST VIRGINIA LAND RESOURCES INC.

COUNTY: MARSHALL DISTRICT: LIBERTY

QUADRANGLE: CAMERON WV, PA

SURFACE OWNER: ANDREW L. & DANA L. SCHRACK

ROYALTY OWNER: _____

UTM GPS NORTHING: 4,405,976 m

UTM GPS EASTING: 540,744 m GPS ELEVATION: 432 m ^(1417')

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:

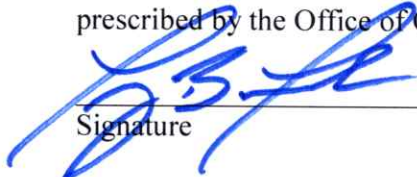
- Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
- Accuracy to Datum – 3.05 meters
- Data Collection Method:

Survey grade GPS : Post Processed Differential _____
Real-Time Differential

Mapping Grade GPS _____ : Post Processed Differential _____
Real-Time Differential _____

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

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


Signature

Professional Surveyor
Title

DECEMBER 8, 2022
Date

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Office Of Oil and Gas
FEB 09 2023
WV Department of
Environmental Protection

02/24/2023



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

plugging permits issued 4705100577 05100588

1 message

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

Fri, Feb 24, 2023 at 9:26 AM


To: "Roddy, David" <DavidRoddy@acnrinc.com>, Strader C Gower <strader.c.gower@wv.gov>, ebuzzard@marshallcountywv.org


To whom it may concern, plugging permits have been issued for 4705100577 05100588.


James Kennedy


WVDEP OOG

4 attachments

 **IR-8 4705100588.pdf**
120K

 **IR-8 4705100577.pdf**
120K

 **4705100588.pdf**
4455K

 **4705100577.pdf**
4279K