



west virginia department of environmental protection

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

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

Monday, December 6, 2021
WELL WORK PLUGGING PERMIT
Not Available Plugging

ICG TYGART VALLEY, LLC
100 TYGART DR
GRAFTON, WV 26354

Re: Permit approval for 6155
47-091-00041-00-00

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 blue ink signature of James A. Martin is written over the text of his name and title.

Operator's Well Number: 6155
Farm Name: JENNINGS, L.A.
U.S. WELL NUMBER: 47-091-00041-00-00
Not Available Plugging
Date Issued: 12/6/2021

Promoting a healthy environment.

12/10/2021

H

47-091-00041P

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.

12/10/2021

1) Date November 5, 2021
 2) Operator's
 Well No. 6155
 3) API Well No. 47-01 - 00041

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

- 4) Well Type: Oil ____/ Gas ____/ Liquid injection ____/ Waste disposal ____/
 (If "Gas, Production ____ or Underground storage ____) Deep ____/ Shallow X
- 5) Location: Elevation 1402' Watershed Little Sandy Creek
 District Knottsville County Taylor Quadrangle Thornton (638)
- 6) Well Operator ICG Tygart Valley, LLC 7) Designated Agent Charles E. Duckworth
 Address 100 Tygart Drive Address 100 Tygart Drive
Grafton, WV 26354 Grafton, WV 26354
- 8) Oil and Gas Inspector to be notified 9) Plugging Contractor
 Name Bryan Harris Name Coastal Drilling East, LLC
 Address P.O. Box 157 Address 130 Meadows Ridge Road
Volga, WV 26238 Mt. Morris, PA 15349

- 10) Work Order: The work order for the manner of plugging this well is as follows:
 See Exhibit Nos. 1 and 2 and MSHA 101-C Exemption

ICG Tygart Valley, LLC (47-091-01089)
 Leer Mine (MSHA ID# 46-09192)
 MSHA 101-C Docket No. M-2012-065-C

WELL WAS PREVIOUSLY
 PLUGGED JULY 19, 1945.

Appropriate coal seam top = 269.87'
 Approximate coal seam bottom = 276.96'

RECEIVED
 Office of Oil and Gas
 NOV. 30 2021
 WV Department of
 Environmental Protection

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

Work order approved by inspector Bryan Harris Date 11/29/21

12/10/2021

EXHIBIT NO. 1

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

SOLID PLUG METHOD

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

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

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

PREVIOUSLY PLUGGED JULY 19, 1945.



EXHIBIT II

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

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

"A Shaft Drillers International Company"

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

Mr. Duckworth,

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

Plugging Plan

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

12/10/2021

MSHA 101C Exemption

37652

Federal Register / Vol. 77, No. 89 / Tuesday, May 8, 2012 / Notices

face area will be available. The fire hose will be located near the working face.

(5) Sufficient supplies of roof support and ventilation materials will be available and located near the working face. In addition, an emergency plug and/or plugs will be available within the immediate area of the well intersection.

(6) Equipment involved in mining through the well will be checked for permissibility and serviced on the maintenance shift prior to mining through the well. The methane monitor on the continuous mining machine involved in mining through the well will also be calibrated on the maintenance shift prior to mining through the well.

(7) When mining is in progress, tests for methane will be made with a handheld methane detector at least every 10 minutes, from the time that mining with the continuous mining machine is within 30 feet of the well until the well is intersected, and immediately prior to mining through. During the actual cutting-through process, no individual will be allowed on the return side until mining-through has been completed and the area has been examined and declared safe.

(8) The working area will be free from accumulations of coal dust and coal spillages, and rock dust will be placed on the roof, rib, and floor to within 20 feet of the face when mining through the well.

(9) When the well is intersected, all equipment will be deenergized and the place thoroughly examined and determined safe before mining is resumed.

(10) Any casing will be removed and no open flame will be permitted in the area until adequate ventilation has been established around the well.

(11) After a well has been intersected and the working place determined safe, mining will continue in by the well at a distance sufficient to permit adequate ventilation around the area of the well.

(12) No person will be permitted in the area of the mining-through operation except those actually engaged in the operation, company personnel, personnel from MSHA, and personnel from the Kentucky OMSL.

(13) The mining-through operation will be under the direct supervision of a certified individual. Instructions concerning the mining-through operation will be issued only by the certified individual in charge. MSHA personnel may interrupt or halt the mining through operation when necessary for the safety of the miners.

(14) Within 30 days after this Order becomes final, the petitioner will submit

proposed revisions for his approved mine emergency evacuation and firefighting plan required by 30 CFR 75.1501. The petitioner will revise the plans to include the hazards and evacuation procedures to be used for well intersections.

The petitioner further states that this petition will apply to all types of mining (conventional, continuous, and longwall) and asserts that the proposed alternative method will at all times provide a measure of protection no less than that of the existing standard.

Docket Number: M-2012-064-C.
Petitioner: Lone Mountain Processing, Inc., Drawer C, St. Charles, Virginia 24282.

Mine: Mine No. 1, MSHA I.D. No. 16-18734, Route 836 Benedict Road, St. Charles, Virginia 24282, located in Harlan County, Kentucky.

Regulation Affected: 30 CFR 75.200 (Warning devices).

Modification Request: The petitioner requests a modification of the existing standard to permit a readily visible warning to be posted at the second row of permanent roof support outby unsupported roof or a physical barrier to be installed to impede travel beyond permanent support, except during the installation of roof supports. The petitioner states that:

(1) The Kentucky Office of Mine Safety and Licensing requires "a warning device to be installed on the second row of permanent roof support outby unsupported roof."

(2) MSHA's approved Precautions for Remote Control Operation of Continuous Mining Machines states that "While using remote controls, the continuous mining machine operator and all other persons will position themselves no closer than the second 'full row' of installed roofbolts outby the face."

(3) This petition is necessary to improve safety and to attain commonality between State and Federal regulations.

(4) Safety increases when the distance an employee keeps from unsupported roof increases.

The petitioner asserts that the proposed alternative method will at all times guarantee no less than the same measure of protection afforded by the existing standard.

Docket Number: M-2012-065-C.
Petitioner: ICC Tygart Valley, LLC, 1200 Tygart Drive, Grafton, West Virginia 26334.

Mine: Tygart #1 Mine, MSHA I.D. No. 46-09192, located in Taylor County, West Virginia.

Regulation Affected: 30 CFR 75.1700 (Oil and gas wells).

Modification Request: The petitioner requests a modification of the existing standard requiring that barriers be established and maintained around oil and gas wells penetrating coalbeds or underground areas of coal mines to permit an alternative method of compliance. The petitioner states that:

(1) The mine is projected to encounter vertical in-seam boreholes, typical of oil and natural gas wells, as mine development progresses.

(2) The active development section is approaching these boreholes, and is projected to encounter additional boreholes in the future as mining operations continue.

(3) The procedure presented in this petition will be used to ensure that mining through these boreholes is accomplished safely and, as an alternative to compliance with 30 CFR 75.1700, will provide no less than the same measure of protection to the miners, as required by the MSHA standard.

The petitioner proposes to use the following procedures when plugging oil or gas wells:

(1) Prior to plugging an oil or gas well, a diligent effort will be made to clean the borehole to the original total depth. If this depth cannot be reached, the borehole will be cleaned out to a depth that would permit the placement of at least 200 feet of expanding cement below the base of the lowest minable coal bed.

(2) When cleaning the borehole, a diligent effort will be made to remove all of the casing in the borehole. If it is not possible to remove all of the casing, the casing that remains will be perforated or ripped at intervals spaced close enough to permit expanding cement slurry to infiltrate the annulus between the casing and the borehole wall for a distance of at least 200 feet below the base of the lowest minable coal bed.

(3) If the cleaned-out borehole produces gas, a mechanical bridge plug will be placed in the borehole in a competent stratum at least 200 feet below the base of the lowest minable coal bed, but above the top of the uppermost hydrocarbon-producing stratum. If it is not possible to set a mechanical bridge plug, a substantial brush plug may be used in its place.

The District Manager may allow the use of other effective methods of stopping any and all gas flow emitting from the wellbore before placement of cement through the minable coal seam(s). Such approval will be documented in a written response to the operators' submittal of a detailed explanation of the method to be used

and an engineering evaluation of the relative effectiveness of the alternative.

(4) A suite of logs will be made, consisting of a caliper survey, directional deviation survey, and log(s) suitable for determining the top and bottom of the lowest minable coal bed and potential hydrocarbon-producing strata and the location for the bridge plug.

(5) If the uppermost hydrocarbon-producing stratum is within 200 feet of the base of the lowest minable coal bed, properly placed mechanical bridge plugs or a suitable brush plug described in paragraph (3) above will be used to isolate the hydrocarbon-producing stratum from the expanding cement plug. Nevertheless, a minimum of 200 feet of expanding cement will be placed below the lowest minable coal bed.

(6) The wellbore will be completely filled and circulated with a gel that inhibits any flow of gas, supports the walls of the borehole, and increases the density of the expanding cement. This gel will be pumped through open-end tubing run to a point approximately 20 feet above the bottom of the cleaned out area of the borehole or bridge plug.

The petitioner proposes to use the following procedures when plugging gas and oil wells to the surface:

(1) A cement plug will be set in the wellbore by pumping expanding cement slurry down the tubing to displace the gel and fill the borehole to the surface. As an alternative, the cement slurry may be pumped down the tubing so that the borehole is filled. There will be at least 200 feet of expanding cement below the base of the lowest minable coal bed.

(2) A marker conforming to the requirements of the state regulatory authority will be installed at the borehole, or a small quantity of steel turnings or other small magnetic particles will be embedded in the top of the cement near the surface. The method used will be suitable to serve as a permanent magnetic monument of the borehole.

The following procedures will be used for the vent pipe method for plugging oil and gas wells:

(1) A 2 1/2-inch or larger pipe will be run into the wellbore to a depth of 100 feet below the lowest minable coal bed and wedged to a smaller diameter pipe that, if desired, will extend to a point approximately 20 feet above the bottom of the cleaned-out area of the borehole or bridge plug.

(2) A cement plug will be set in the wellbore by pumping expanding cement slurry, Portland cement, or a Portland cement-fly ash mixture down the tubing to displace the gel so that the borehole is filled with cement. The borehole and

the vent pipe will be filled with expanding cement for a minimum of 200 feet below the base of the lowest minable coal bed. The top of the expanding cement will extend upward to a point approximately 100 feet above the top of the lowest minable coal bed.

(3) All fluid will be evacuated from the vent pipe to facilitate testing for gases. During the evacuation of fluid, the expanding cement will not be disturbed.

(4) The top of the vent pipe will be protected to prevent liquids or solids from entering the wellbore, but permit ready access to the full internal diameter of the vent pipe when necessary.

The petitioner proposes to use the following procedures when plugging oil or gas wells for subsequent use as degasification boreholes:

(1) A cement plug will be set in the wellbore by pumping expanding cement slurry down the tubing to displace the gel and provide at least 200 feet of expanding cement below the lowest minable coal bed. The top of the expanding cement will extend upward to a point above the top of the coal bed being mined. This distance will be based on the average height of the roof strata breakage for the mine.

(2) To facilitate methane drainage, degasification casing of suitable diameter, slotted or perforated throughout its lower 150 to 200 feet, will be set in the borehole to a point 10 to 30 feet above the top of the expanding cement.

(3) The annulus between the degasification casing and the borehole wall will be cemented from a point immediately above the slots or perforations to the surface.

(4) The degasification casing will be cleaned out for its total length.

(5) The top of the degasification casing will be fitted with a wellhead equipped as required by the District Manager. Such equipment may include check valves, shut-in valves, sampling port, flame arrestor equipment, and security fencing.

The following alternative procedures for preparing and plugging oil and gas wells will apply to wells that the petitioner and the District Manager agree cannot be completely cleaned out due to damage to the well caused by subsidence, caving, or other factors; as determined by the petitioner and agreed to by the District Manager. These provisions will apply unless alternative measures are agreed upon and based upon a plan submitted to the District Manager:

(1) The petitioner will drill a hole adjacent and parallel to the well to a

depth of at least 200 feet below the lowest minable coal seam.

(2) The petitioner will use a geophysical sensing device to locate any casing that may remain in the well.

(3) If the well contains casing(s), the petitioner will drill into the well from the parallel hole. From 10 feet below the coal seam to 10 feet above the coal seam, the petitioner will perforate or rip all casings at intervals of at least 5 feet.

Beyond this distance, the petitioner will perforate or rip at least every 50 feet from at least 200 feet below the base of the lowest minable coal seam up to 100 feet above the seam being mined. The petitioner will fill the annulus between the casing, and between the casings and the well wall with expanding cement (minimum 0.5 percent expansion upon setting), and will ensure that these areas contain no voids. If the petitioner, 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 petitioner 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 that remains will 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 petitioner determines and the District Manager agrees that there is insufficient casing in the well to allow the method outlined in paragraph (3) above to be used, then the petitioner will use a horizontal hydraulic fracturing technique to intercept the original well. From at least 200 feet below the base of the lowest minable coal seam to a point at least 50 feet above the seam being mined, the petitioner will fracture at least six

places at intervals to be agreed upon by the petitioner and the District Manager after considering the geological strata and the pressure within the well. The petitioner will then pump expanding cement into the fractured well in sufficient quantities and in a manner that fills all intercepted voids.

(5) The petitioner will prepare down-hole logs for each well. The logs will consist of a caliper survey and log(s) suitable for determining the top, bottom, and thickness of all coal seams and potential hydrocarbon-producing strata and the location for the bridge plug. The petitioner may obtain the logs from the adjacent hole rather than the well if the condition of the well makes it impractical to insert the equipment

necessary to obtain the log. The District Manager may approve the use of a down-hole camera survey in lieu of down-hole logs if, in his or her judgment, such logs would not be suitable for obtaining the data or are impractical to obtain due to the condition of the drill hole. A journal will be maintained describing the length and type material used to plug the well; the length of casing(s) removed, perforated, or ripped or left in place; and other pertinent information concerning sealing the well.

(6) After the petitioner has plugged the well, the petitioner will plug the open portions of both holes from the bottom to the surface with Portland cement or a lightweight cement mixture. The petitioner will 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 1/4-inch or larger casing set in cement will extend at least 36 inches above the ground level. A combination of the methods outlined in paragraph (2) and (4) above may have to be used in a single well, depending upon the conditions of the hole and the presence of casings. The petitioner and the District Manager may discuss the nature of each hole and the District Manager may require the use of more than one method.

The petitioner proposes to use the following cut-through procedures whenever the safety barrier diameter is reduced to a distance less than the District Manager would approve pursuant to § 75.1700 or the petitioner proceeds with an intent to cut through a plugged well:

(1) Prior to reducing the safety barrier to a distance less than the District Manager would approve or proceeding with intent to cut through a plugged well, the petitioner will notify the District Manager.

(2) Mining in close proximity to or through a plugged well will be done on a shift approved by the District Manager.

(3) The District Manager, a representative of the miners, and the appropriate State agency will be notified by the operator in sufficient time prior to the mining-through operation to provide an opportunity for them to have a representative present.

(4) When using continuous mining equipment, drifage sights will be installed at the last open crosscut near the place to be mined to ensure intersection of the well. The drifage sights will not be more than 50 feet from the well. When using longwall mining methods, drifage sights will be installed

on 10-foot centers for a distance of 50 feet in advance of the well face. The drifage sights will be installed in the headgate and tailgate.

(5) Firefighting equipment, including fire extinguishers, rock dust, and sufficient fire hose to reach the working face area of the mining-through will be available when either the conventional or continuous mining method is used. The fire hose will be located in the last open crosscut of the entry or road. All fire hoses will be ready for operation during the mining-through.

(6) Sufficient supplies of roof support and ventilation materials will be available and located at the last open crosscut. In addition, an emergency plug and/or plugs will be available in the immediate area of the cut-through.

(7) The quantity of air required by the approved mine ventilation plan, but not less than 6,000 cubic feet per minute (cfm) of air for scrubber-equipped continuous miners or not less than 9,000 cfm for continuous miner sections using auxiliary fans or line brattices only, will be used to ventilate the working face during the mining-through operation. The quantity of air required by the ventilation plan, but not less than 30,000 cfm, will reach the working face of each longwall during the mining-through operation.

(8) Equipment will be checked for permissibility and serviced on the shift prior to mining-through the well. The methane monitors on the continuous mining machine or the longwall shear and face will be calibrated on the shift prior to mining through the well.

(9) When mining is in progress, tests for methane will be made with a hand-held methane detector at least every 10 minutes from the time that mining with the continuous mining machine is within 30 feet of the well until the well is intersected and immediately prior to mining through. When mining with longwall mining equipment, tests for methane will be made at least every 10 minutes when the longwall face is within 10 feet of the well. During the actual cutting-through process, no individual will be allowed on the return side until mining through has been completed and the area has been examined and declared safe.

(10) When using continuous mining methods, the working area will be free from accumulations of coal dust and coal spillages, and rock dust will be placed on the roof, rib, and floor to within 20 feet of the face when mining through or near the well on the shift or shifts during which the cut-through will occur. On longwall sections, rock-dusting will be conducted and placed

on the roof, rib, and floor up to both headgate and tailgate job.

(11) When the wellbore is intersected, all equipment will be deenergized and the area thoroughly examined and determined safe before mining is resumed. Any well casing will be removed and no open flame will be permitted in the area until adequate ventilation has been established around the wellbore.

(12) After a well has been intersected and the working area determined safe, mining will continue in by the well at a distance sufficient to permit adequate ventilation around the area of the wellbore.

(13) No person will be permitted in the area of the mining-through operation except those actually engaged in the operation, company personnel, representatives of the miners, personnel from MSHA, and personnel from the appropriate State agency.

(14) The mining-through operation will be under the direct supervision of a certified official. Instructions concerning the mining-through operation will be issued only by the certified official in charge. MSHA personnel may interrupt or halt the mining-through operation when necessary for the safety of the miners.

(15) The petitioner will file a plugging affidavit setting forth the persons who participated in the work, a description of the plugging work, and a certification by the petitioner that the well has been plugged as described.

(16) Within 60 days after the Proposed Decision and Order (PDO) becomes final, the petitioner will submit proposed revisions for its approved 30 CFR Part 48 training plan to the District Manager. The provisions will include initial and refresher training regarding compliance with the terms and conditions stated in the PDO.

The petitioner asserts that the proposed alternative method will at all times guarantee miners no less than the same measure of protection as afforded by the existing standard.

Docket Number: M-2012-002-M.
Petitioner: Hocla Greens Creek Mining Company, P.O. Box 32199, Juneau, Alaska 99803.

Mine: Greens Creek Mine, MSHA I.D. No. 50-01267, located in Juneau County, Alaska.

Regulation Affected: 30 CFR 57.14130 (Roll-over protective structures (ROPS) and seat belts for surface equipment).

Modification Request: The petitioner requests a modification of the existing standard to permit employees to be transported 1,800 feet to and from the surface dry facility to work sites underground using underground mine



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

AFFIDAVIT OF PLUGGING AND FILLING WELL

AFFIDAVIT SHOULD BE MADE IN TRIPPLICATE, ONE COPY MAILED TO THE DEPARTMENT, ONE COPY TO BE RETAINED BY THE WELL OPERATOR AND THE THIRD COPY (AND EXTRA COPIES IF REQUIRED) SHOULD BE MAILED TO EACH COAL OPERATOR AT THEIR RESPECTIVE ADDRESSES.

COAL OPERATOR OR OWNER <u>"No Coal"</u>	NAME OF WELL OPERATOR <u>Pittsburgh & West Virginia Gas Co.</u>
ADDRESS _____	COMPLETE ADDRESS <u>Clarksburg, West Va.</u>
COAL OPERATOR OR OWNER _____	WELL AND LOCATION <u>July 26th, 1945.</u>
ADDRESS _____	<u>Knottsville</u> District
LEASE OR PROPERTY OWNER <u>Mrs L. A. Jennings</u>	<u>Taylor</u> County
ADDRESS <u>R. D. #1, Thornton, West Va.</u>	Well No. <u>6155</u>
	<u>L. A. Jennings</u> Farm

STATE INSPECTOR SUPERVISING PLUGGING "No Coal"

AFFIDAVIT

STATE OF WEST VIRGINIA,
County of Harrison } SS:

C. C. Toothman and Wesley P. Murphy,
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 Pittsburgh & West Va. Gas Co., well operator, and participated in the work of plugging and filling the above well, that said work was commenced on the 9th day of July, 1945, and that the well was plugged and filled in the following manner:

SAND OR ZONE RECORD FORMATION	FILLING MATERIAL		PLUGS USED SIZE & KIND	CASING	
	CONTENT	FROM TO		CSG PULLED	CSG LEFT IN
	Total Depth	4265'			
	Hole Bridged	2390'			
Slate & Shells	Cement	2390'	2385'	6-5/8"	1590'
Slate & Shells					501'
Slate & Shells-Elizabeth				2-1/4"	443'
Sand-Bayard Stray-Bayard					624'
Sand-Red Rock-Lime-Shells	Clay	2385'	2146'	10"	322'
Fifth Sand	6-5/8" Wood Plug	2146'	2143'		49'
Fifth Sand	6-5/8" Lead Plug	2143'	2142'		
Fifth Sand	Cement	2142'	2139'		
Fifth Sand	6-5/8" Wood Plug	2132'	2129'	(3-1/4" casing shot at 1000'-940'-	
Slate & Shells	Hole Bridged	1276'		880'-650'-590'-550'-480'-400'-	
Slate & Shells	Cement	1276'	1275'	& 355 feet.)	
Slate & Shells-Red-Rock-					
& Big Injun Sand	Clay	1273'	1116'		
Big Lime	6-1/4" Wood Plug	1116'	1113'		
Big Lime	8-1/4" Lead Plug	1113'	1112'	(10" casing shot at 322 feet.)	
Big Lime	Cement	1112'	1102'		
Big Lime	8-1/4" Wood Plug	1102'	1099'		
Lime	Hole Bridged	760'			
Lime	Cement	760'	737'		
Lime-Salt-Slate-Shells				(6 feet 6-5/8" casing and 10 feet	
1st Salt & Homewood Sand	Clay	757'	540'		
Homewood Sand	Cement	540'	530'	2" tubing in marker, 2" tubing	
Homewood Sand	8-1/4" Wood Plug	530'	527'	perforated above marker.)	
Homewood Sand	Clay	527'	490'		
Homewood Sand SEAMS	Cement	400'	390'		
Homewood Sand	8-1/4" Wood Plug	390'	387'		
Homewood Sand-Slate				Cement Iron Pipe Post	
Gritty Lime-Freeport Sand-				Cast Iron Plate Lettered	
Highoning Sand-Mud-Clay	Clay	387'	5'		
Clay	Cement	5'	Surface	Pgh. & West Va. Gas Co. #6155	

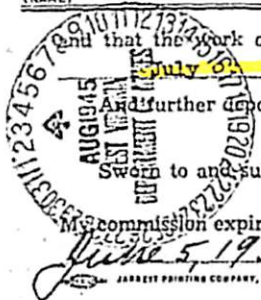
(NAME)
and that the work of plugging and filling said well was completed on the 19th day of July, 1945.

And further deponents saith not.

Sworn to and subscribed before me this 1 day of August, 1945.

My commission expires: June 5, 1951

Notary Public: _____
Permit No. TAY-41-P



C. C. Toothman
W. P. Murphy
T. E. Edward & Son

Thornton SW



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

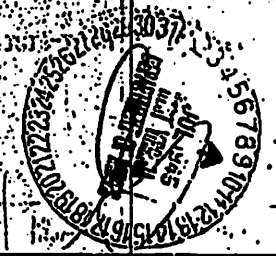
WELL RECORD

Permit No. TAY-41

Oil or Gas Well "DRY"

Company <u>Pittsburgh & West Va. Gas Company</u>	Casing and Tubing	Used in Drilling	Left in Well	Packers
Address <u>Clarksburg, West Va.</u>				
Farm <u>L. A. Jennings</u>				
Location (waters) <u>Thornton: S/W. 2-3</u>				
Well No. <u>6155</u>				Kind of Packer
District <u>Knottville</u>				
The surface of tract is owned in fee by <u>Mrs. L. A. Jennings</u>				Size of
R.O.P. <u>Thornton, W. Va.</u>				
Mineral rights are owned by <u>Mrs. L. A. Jennings</u>				Depth set
R.O.P. <u>Thornton, W. Va.</u>				
Drilling commenced <u>March 3, 1945</u>				Perf. top
Drilling completed <u>July 5, 1945</u>				Perf. bottom
Date Shot From To				Perf. top
Well				Perf. bottom
Open Flow <u>12</u> /10ths Water in <u>1/4</u> Inch				
Volume <u>2,680</u> Cu. Ft.				
Rock Pressure				
Oil				
Fresh water				
Salt water				

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Clay	Yellow	Soft	0	12			
Sand	White	Hard	12	28			
Mud	Blue	Soft	28	58	Water	50'	Hole full.
Mahoning Sand	White	Hard	58	95			
Slate	Black	Soft	95	102			
Lime	White	Hard	102	130			
Slate	Black	Soft	130	154			
Lime	White	Hard	154	160			
Freeport Sand	White	Hard	160	198			
Slate	Dark	Soft	198	220			
Lime	White	Hard	220	269			
Slate	Black	Soft	269	276			
Lime	White	Hard	276	286			
Slate	Dark	Soft	286	298			
Gritty Lime	White	Hard	298	316			
Slate	Black	Soft	316	324			
Homewood Sand	White	Hard	324	352			
Slate	Black	Soft	352	358	Sh. Gas	553'	
Sand	Dark	Hard	358	602			
Slate	Dark	Soft	602	615			
1st. Salt Sand	White	Hard	615	659			
1st. Salt Sand	White	Hard	659	677			
Slate/Shell	Dark	Hard/Soft	677	715			
2nd. Salt Sand	White	Hard	715	730			
Slate	Dark	Soft	730	735			
Lime	White	Hard	735	770			
Red Rock	Red	Soft	770	792			
Red Sand	White	Hard	792	883			
Slate	Black	Soft	883	886			
Lime	White	Hard	886	927			
Maxon Sand	White	Hard	927	946			
Red Rock	Red	Soft	946	962			
Lime	White	Hard	962	988			
Slate	Black	Soft	988	998			
Lime	Dark	Hard	998	1007			
Slate	Black	Soft	1007	1017			
Lime	White	Hard	1017	1022			
Red Rock	Red	Soft	1022	1024			



12/10/2021

Formation	Color	Hard or Soft	Top of Layer	Bottom	Oil, Gas or Water	Depth Found	Remarks
Lime	Gray	Hard	1034	1046			
Slate	Black	Soft	1046	1048			
Big. Lime	Gray	Hard	1048	1116			
Big. Injun	White	Hard	1116	1172	Fluor		
Red Rock	Red	Soft	1172	1180			
Big. Injun	Light	Hard	1180	1190			
Red Rock	Red	Soft	1190	1246	Sh. Gas	1218-1222	S.L. 1222
Slate&Shells	Dark	Hard&Soft	1246	1255	Salts		
Squaw Sand	Gray	Hard	1255	1308			
Slate&Shells	Dark	Hard&Soft	1308	1328			
Wair Sand	White	Hard	1328	1382			
Slate	Dark	Soft	1382	1400			
Slate&Shells	Dark	Hard&Soft	1400	1417			
Lime	Gray	Hard	1417	1450			
Bergs Sand	White	Soft	1450	1524			
Slate	White	Soft	1524	1541			
Gen's Sand	White	Hard	1541	1574			
Slate&Shells	Dark	Hard&Soft	1574	1585			
50 Ft. Sand	White	Hard	1585	1666			
Slate&Shells	Dark	Hard&Soft	1666	1685			
Lime	Gray	Hard	1685	1705			
Slate&Shells	Dark	Hard&Soft	1705	1734			
Lime	Blue	Hard	1734	1760			
Slate&Shells	Dark	Hard&Soft	1760	1784			
Red Rock	Red	Soft	1784	1805			
Gordon Sand	White	Hard	1805	1817			
Slate&Shells	Dark	Hard&Soft	1817	1835			
Red Rock Shells	Red	Hard	1835	1952			
Sand	Brown	Hard	1952	2012			
Red Rock Shells	Red	Hard&Soft	2012	2068			
5th Sand	White	Hard	2068	2146	Fluor		
Lime Shells	White	Hard	2146	2156			
Lime	Blue	Hard	2156	2169			
Red Rock	Red	Soft	2169	2180			
Bayard Sand	White	Hard	2180	2235			
Slate Shells	White	Hard&Soft	2235	2270			
Bayard Stray	Sd. Dark	Hard	2270	2301	Gas	2277-2281	S.L. 2279
Slate	White	Soft	2301	2310	Oil		18/10 Water 1/2"
Lime	Gray	Hard	2310	2336			
Elizabeth Sand	White	Hard	2336	2360	Gas	2341-2343	70/10 Water 1"
Slate&Shells	Dark	Hard&Soft	2360	2455			S.L. 2343
Lime	White	Hard	2455	2494			
Slate&Shells	Dark	Hard&Soft	2494	2550			
Gritty Lime	White	Hard	2550	2575			
Slate&Shells	Dark	Hard&Soft	2575	2597			
Sand	White	Hard	2597	2655			
Slate&Shells	Dark	Hard&Soft	2655	2787			
Sand	White	Hard	2787	2824			
Slate&Shells	Dark	Hard&Soft	2824	2852			
Speechley Sand	White	Hard	2852	2885			
Slate&Shells	White	Hard&Soft	2885	3149			
Sand	White	Hard	3149	3180			
Slate&Shells	White	Hard&Soft	3180	3275			
Lime	Gray	Hard	3275	3370			
Slate&Shells	Dark	Hard&Soft	3370	3508			
Lime	White	Hard	3508	3700			
Slate&Shells	White	Broken	3700	3885			
Donson Sand	White	Open	3885	4015			
Slate&Shells	White	Hard&Soft	4015	4068			
Lime	White	Hard	4068	4225			
Slate&Shells	White	Hard&Soft	4225	4265			
Total Depth				4265			

DATE OF RECORD July 6, 1945
 APPROVED *W. C. Mcasters* W. C. Mcasters
 By

12/10/2021

WW-4A
Revised 6-07

1) Date: November 5, 2021
2) Operator's Well Number
6155

3) API Well No.: 47 - 91 - 00041

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

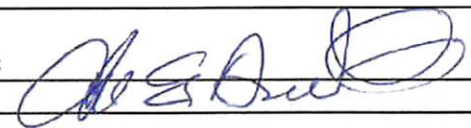
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Gerald & Deanna Clarkson</u>	Name <u>CoalQuest Development, LLC</u>
Address <u>6162 Thornton Pike</u>	Address <u>100 Tygart Drive</u>
<u>Thornton, West Virginia 26440</u>	<u>Grafton, West Virginia 26354</u>
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name _____
	Address _____
(c) Name _____	Name _____
Address _____	Address _____
6) Inspector <u>Bryan Harris</u>	(c) Coal Lessee with Declaration
Address <u>P.O. Box 157</u>	Name _____
<u>Volga, WV 26238</u>	Address _____
Telephone <u>(304) 553-6087</u>	

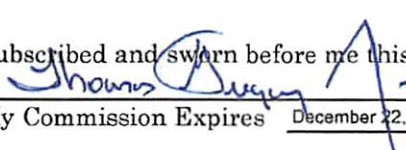
TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

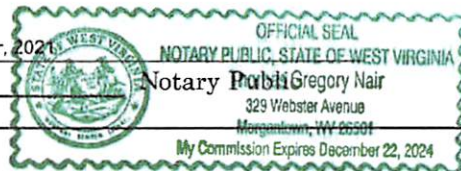
- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

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

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

Well Operator ICG Tygart Valley, LLC
 By: Charles E. Duckworth 
 Its: Designated Agent
 Address 100 Tygart Drive
Grafton, West Virginia 26354
 Telephone (304) 265-9704

Subscribed and sworn before me this 10 day of November, 2021

 My Commission Expires December 22, 2024



Oil and Gas Privacy Notice

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

12/10/2021

SURFACE OWNER WAIVEROperator's Well
Number

6155

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW4-A

The well operator named on page WW-4A is applying for a permit from the State to plug and abandon a well. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

**NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.
WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:**

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

Time Limits and methods for filing comments. The law requires these materials to be served on or before the date the operator files his Application. You have **FIVE (5) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Comments must be in writing. Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation..."

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application For A Permit To Plug And Abandon on Forms WW-4A and WW-4B, and a survey plat.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON
ETC.

FOR EXECUTION BY A CORPORATION,

Signature

Date

Name

By

Its

Date

Signature

Date
12/10/2021

A Subsidiary of



ICG TYGART VALLEY, LLC

100 Tygart Drive, Grafton, West Virginia 26354

November 18, 2021

Gerald & Deanna Clarkson
6162 Thornton Pike
Thornton, West Virginia 26440

Re: Plugging Permit – API # 47-091-00041 – Well No. 6155

Dear Mr. & Mrs. Clarkson:

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Greg Nair", with a horizontal line extending to the right.

Greg Nair
Manager Surface Mine Planning

Enclosures

CERTIFIED MAIL NO. 7021 0350 0000 1726 9777
RETURN RECEIPT REQUESTED

12/10/2021

7021 0350 0000 1726 9777

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

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


OFFICIAL USE

Certified Mail Fee	\$ 3.75
Extra Services & Fees (check box, add fee as appropriate)	
<input checked="" type="checkbox"/> Return Receipt (hardcopy)	\$ 3.05
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$
Postage	\$ 1.96
Total Postage at	\$ 8.76

Sent To: Gerald & Deanna Clarkson
 6162 Thornton Pike
 Thornton, West Virginia 26440
 47-091-00041

Street and Apt. #
 City, State, ZIP+4

PS Form 3800

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY												
<ul style="list-style-type: none"> Complete items 1, 2, and 3. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	<p>A. Signature <input checked="" type="checkbox"/> D. Clarkson <input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) E. Adams C-19</p> <p>C. Date of Delivery</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p>												
<p>1. Article Addressed to:</p> <p>Gerald & Deanna Clarkson 6162 Thornton Pike Thornton, West Virginia 26440 47-091-00041</p> <p> 9590 9402 6516 0346 9526 87</p>	<p>3. Service Type</p> <table border="0"> <tr> <td><input checked="" type="checkbox"/> Adult Signature</td> <td><input type="checkbox"/> Priority Mail Express®</td> </tr> <tr> <td><input type="checkbox"/> Adult Signature Restricted Delivery</td> <td><input type="checkbox"/> Registered Mail™</td> </tr> <tr> <td><input checked="" type="checkbox"/> Certified Mail®</td> <td><input type="checkbox"/> Registered Mail Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Certified Mail Restricted Delivery</td> <td><input type="checkbox"/> Signature Confirmation™</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery</td> <td><input type="checkbox"/> Signature Confirmation Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery Restricted Delivery</td> <td></td> </tr> </table>	<input checked="" type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®	<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™	<input checked="" type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery	<input type="checkbox"/> Certified Mail Restricted Delivery	<input type="checkbox"/> Signature Confirmation™	<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery	<input type="checkbox"/> Collect on Delivery Restricted Delivery	
<input checked="" type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®												
<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™												
<input checked="" type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery												
<input type="checkbox"/> Certified Mail Restricted Delivery	<input type="checkbox"/> Signature Confirmation™												
<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery												
<input type="checkbox"/> Collect on Delivery Restricted Delivery													
<p>2. Article Number (Transfer from service label)</p> <p>7021 0350 0000 1726 9777</p>	<p><input type="checkbox"/> Restricted Delivery</p>												

WW-4B

API No. 47-091-00041

Farm Name L.A. Jennings

Well No. 6155

INSTRUCTIONS TO COAL OPERATORS OWNERS AND LESSEE

The well operator named on the obverse side of WW-4 (B) is about to abandon the well described in the enclosed materials and will commence the work of plugging and abandoning said well on the date the inspector is notified. Which date shall not be less than five days after the day on which this notice and application so mailed is received, or in due course should be received by the Department of Environmental Protection Office of Oil & Gas.

This notice and application is given to you in order that your respective representatives may be present at the plugging and filling of said well. You are further notified that whether you are represented or not the operator will proceed to plug and fill said well in the manner required by Section 24, Article 6, Chapter 22 of the Code and given in detail on obverse side of this application.

NOTE: If you wish this well to be plugged according to 22-6-24(d) then as per Regulation 35CSR4-13.9 you must complete and return to this office on form OB-16 "Request by Coal Operator, Owner, or Lessee for plugging" prior to the issuance of this plugging permit.

WAIVER

The undersigned coal operator X / owner ____ / lessee ____ / of the coal under this well location has examined this proposed plugging work order. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: 11/10/2021

CoalQuest Development, LLC

By: Greg Nair

Its Power of Attorney

RECEIVED
Office of Oil and Gas

NOV 30 2021

WV Department of
Environmental Protection

12/10/2021

POWER OF ATTORNEY

**COALQUEST DEVELOPMENT LLC
TO
GREG NAIR**

Dated: January 1, 2021

Expires: December 31, 2021

KNOW ALL MEN BY THESE PRESENTS: That CoalQuest Development LLC, a limited liability company formed under the laws of the State of Delaware (the "Company"), acting by and through Rosemary L. Klein, its duly authorized Vice President, has and does hereby appoint Greg Nair its true and lawful Attorney-in-Fact with power and authority, for and on behalf, and in the name of the Company, during the period herein specified, and subject to the restrictions and limitations set forth in this Power, to execute, acknowledge and deliver in the ordinary and regular course of the Company's business, applications for mining, environmental, safety, and health permits, permit transfers, or permit bond releases or bond adjustments, amendments, supplements or modifications to such permits, certificates, gas well plugging applications, shallow well drilling permit applications, or other instruments directly related to such amendments, supplements or modifications, monthly production reports, air quality, water quality or other environmental reports, quarterly discharge monitoring reports and any other like or similar reports required to be filed with any local, state or federal governmental agency.

The Attorney herein appointed shall be authorized to act pursuant to this Power from the date hereof only so long as such Attorney shall remain an employee of Arch Resources, Inc. or any subsidiary thereof, or until December 31, 2021, or until such earlier time as this instrument has been revoked, annulled, rescinded or set aside by an instrument of revocation filed with the Secretary of the Company, whichever first occurs.

IN WITNESS WHEREOF, the Company has caused this Power of Attorney to be executed on its behalf, and its seal to be hereunto affixed as of the day and year first above written, by the undersigned, Rosemary L. Klein, duly authorized Vice President of the Company.

COALQUEST DEVELOPMENT LLC

By: RKL
Rosemary L. Klein
Vice President

RECEIVED
Office of Oil and Gas

NOV. 30 2021

WV Department of
Environmental Protection

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

On this 21 day of December, 2020, before me, the undersigned notary public, personally appeared Rosemary L. Klein, known to me to be the person whose name is subscribed to the within instrument and acknowledged that he executed the same for the purposes therein contained.

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

Sarah Tribout
Notary Public

My Commission Expires: 11/8/2024



RECEIVED
Office of Oil and Gas
NOV 30 2021
WV Department of
Environmental Protection

WW-9
(5/16)

API Number 47 - 091 - 00041
Operator's Well No. 6155

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

Operator Name ICG Tygart Valley, LLC OP Code _____

Watershed (HUC 10) Little Sandy Creek Quadrangle Thornton (638)

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a pit be used? Yes No

If so, please describe anticipated pit waste: N/A

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

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain Tanks - See attached letter)

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. freshwater

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

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

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

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

-Landfill or offsite name/permit number? ICG Tygart Valley, LLC - Permit No. O-2017-06

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]

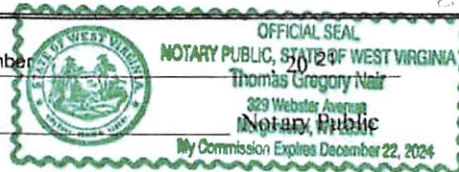
Company Official (Typed Name) Charles E. Duckworth

Company Official Title Designated Agent

RECEIVED
Office of Oil and Gas
NOV 30 2021
WV Department of
Environmental Protection

Subscribed and sworn before me this 10 day of November

[Signature]



My commission expires 12/22/2024

12/10/2021

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

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20 or equivalent

Fertilizer amount 500 lbs/acre

Mulch Hay Bales Tons/acre

Seed Mixtures

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

Attach:

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Bryan Harris

Comments: _____

Title: Inspector

Date: 11/29/21

Field Reviewed? () Yes (x) No

RECEIVED
Office of Oil and Gas
NOV 30 2021
WV Department of
Environmental Protection

ICG TYGART VALLEY, LLC

100 Tygart Drive, Grafton, West Virginia 26354

November 5, 2021

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

To Whom It May Concern:

As per the WV Department of Environmental Protection, Office of Oil and Gas request, ICG Tygart Valley, LLC, submits the following procedures utilizing pit waste.

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

Once the well is completed, that material (minus the cave material) will be trucked to the next well to be plugged or to DEP impoundment facilities O-2017-06 or to an approved facility that can handle the material.

Sincerely,



Charles E. Duckworth
Designated Agent

12/10/2021

ICG TYGART VALLEY, LLC

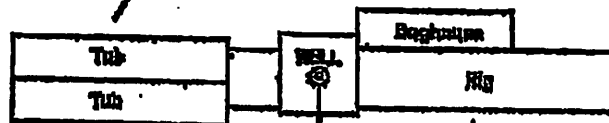
Typical Drawing
Of Well Plugging Site
Plan

Diversion Ditch (as Needed)

CUT

Cut Mulched if Slope
Less than 1 to 1

Sediment
Catch Basin



Mud Tank

Sediment
Catch Basin

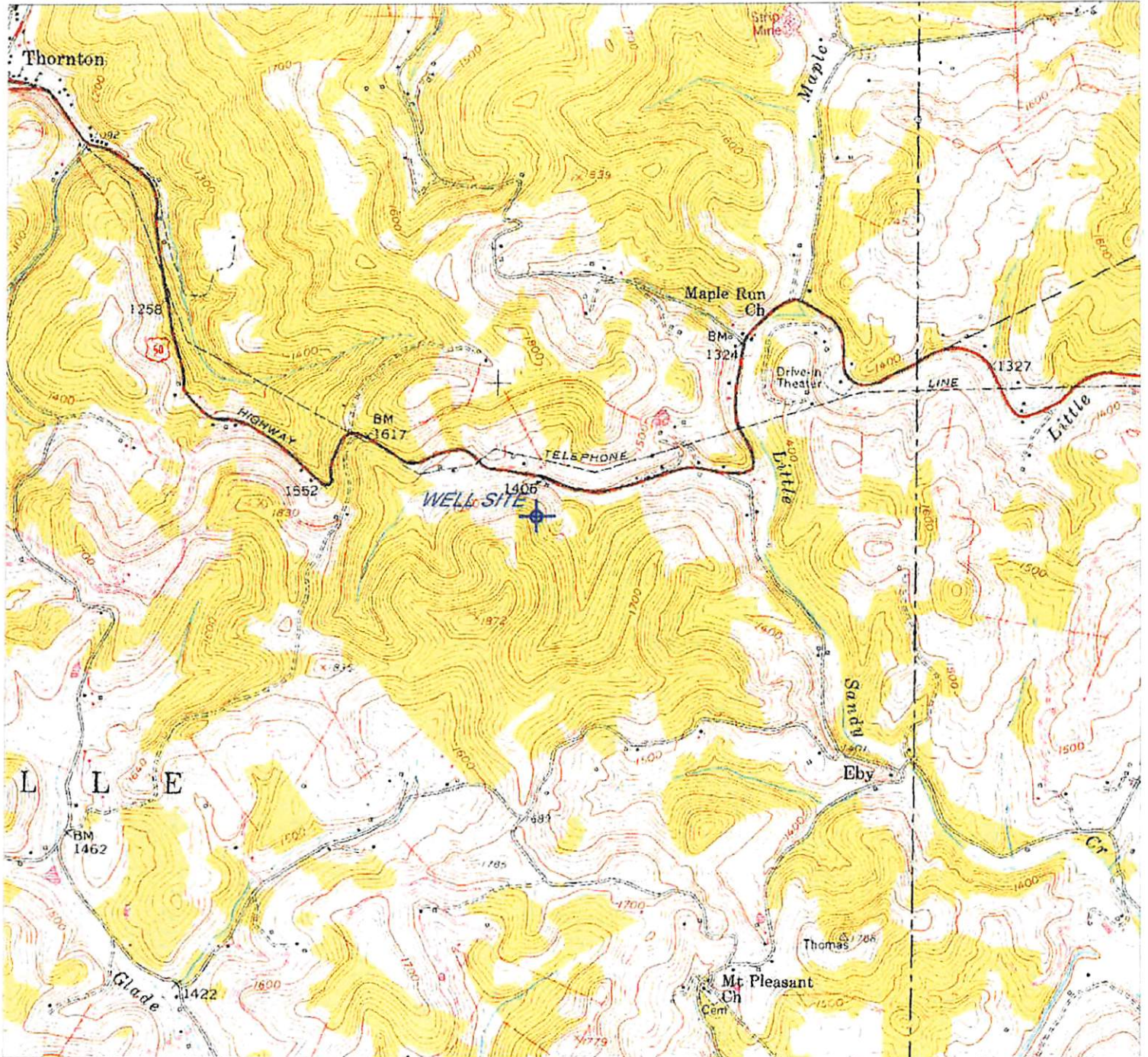
Compacted and Layed

Hay Bales
or
Sediment Fences

FILL

Original Ground Keywayed

4709100041P



LATITUDE: 39° 19' 41"
 LONGITUDE: 79° 54' 53"
 NEAREST WATERCOURSE: Little Sandy Creek
 NEAREST TOWN: Thornton

OPERATOR'S WELL NO. 6155
 API WELL NO. 47-091-00041
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 1402' WATERSHED Little Sandy Creek
 DISTRICT Knottsville COUNTY Taylor
 QUADRANGLE Thornton 7 1/2'
 SURFACE OWNER: Gerald and Deanna Clarkson ACREAGE 125.00
 OIL & GAS ROYALTY OWNER: Gerald and Deanna Clarkson LEASE ACREAGE 125.00
 LEASE NO. 23978
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR
 STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW
 FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY)

PLUG AND ABANDON CLEAN OUT AND REPLUG
 TARGET FORMATION Benson ESTIMATED DEPTH 4285'
 WELL OPERATOR ICG Tygart Valley, LLC DESIGNATED AGENT Chuck E. Duckworth
 ADDRESS 1200 Tygart Drive, Grafton, WV 26354 ADDRESS 100 Tygart Drive, Grafton, WV 26354

DRAWN	DATE	BY
11/21	TAN	
REVISED	DATE	BY
APPROVED	DATE	BY

ARCH ICG Tygart Valley, LLC
 A Subsidiary of Arch Resources, Inc.
 1200 Tygart Drive, Grafton, WV 26354

API WELL No. 47-091-00041
 6155
 SITE LOCATION MAP

Fetterman District
 Thornton, WV 7.5' Quadrangle
 Taylor County
 West Virginia

TOPOGRAPHIC
 CONTOUR
 INTERVAL = 20'

Scale:
 1"=2000'

File No.:
 47-091-00041
 6155 dgn

Sheet No.:
 1 of 1

12/10/2021

Path: V:\L1\DWG\TYG VALLEY\TYG #1 PERMITS\J-2004\DWG\OIL\6155-00041.MXD

POWER OF ATTORNEY
ICG TYGART VALLEY, LLC
TO
GREG NAIR

Dated: January 1, 2021

Expires: December 31, 2021

KNOW ALL MEN BY THESE PRESENTS: That ICG Tygart Valley, LLC, a limited liability company formed under the laws of the State of Delaware (the "Company"), acting by and through Rosemary L. Klein, its duly authorized Vice President, has and does hereby appoint Greg Nair its true and lawful Attorney-in-Fact with power and authority, for and on behalf, and in the name of the Company, during the period specified above, and subject to the restrictions and limitations set forth in this Power of Attorney to execute and deliver in the ordinary and regular course of the Company's business, applications for mining, environmental, safety and health permits, permit transfers, or permit bond releases or bond adjustments, amendments, supplements or modifications to such permits, certificates or other instruments directly related to such amendments, supplements or modifications, monthly production reports, air quality, water quality or other environmental reports, quarterly discharge monitoring reports and any other like or similar reports required to be filed with any local, state or federal governmental agency.

The Attorney herein appointed shall be authorized to act pursuant to this Power from the date hereof only so long as such Attorney shall remain an employee of Arch Resources, Inc. or any subsidiary thereof, or until December 31, 2021, or until such earlier time as this instrument has been revoked, annulled, rescinded or set aside by an instrument of revocation filed with the Secretary of the Company, whichever first occurs.

IN WITNESS WHEREOF, the Company has caused this Power of Attorney to be executed on its behalf, and its seal to be hereunto affixed as of the day and year first above written, by the undersigned, Rosemary L. Klein, duly authorized Vice President of the Company.

ICG TYGART VALLEY, LLC

By: _____

Rosemary L. Klein
Vice President

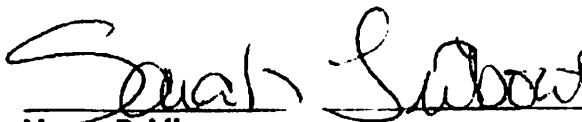
RECEIVED
Office of Oil and Gas
NOV 30 2021
Department of
Natural Resources

12/10/2021

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

On this 21 day of December, 2020, before me, the undersigned notary public, personally appeared Rosemary L. Klein, known to me to be the person whose name is subscribed to the within instrument and acknowledged that he executed the same for the purposes therein contained.

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


Notary Public

My Commission Expires: 11/8/2024



RECEIVED
Office of Oil and Gas

NOV 30 2021

WV Department of
Environmental Protection



Stansberry, Wade A <wade.a.stansberry@wv.gov>

Plugging Well Work Permit (API: 47-091-00041)

1 message

Stansberry, Wade A <wade.a.stansberry@wv.gov>

Mon, Dec 6, 2021 at 11:11 AM

To: Charles Duckworth <cduckworth@archcoal.com>, C Kinsey <ckinsey@wvassessor.com>, "Harris, Bryan O" <bryan.o.harris@wv.gov>

I have attached a copy of the newly issued well [permit](#) numbers:

47-091-00041 - 6155

This will serve as your copy.

Thank you,

Wade A. Stansberry

Environmental Resource Specialist 3

West Virginia Department of Environmental Protection

Office of Oil & Gas

601 57th St. SE


Charleston, WV 25304

(304) 926-0499 ext. 41115

(304) 926-0452 fax

Wade.A.Stansberry@wv.gov

2 attachments

 **47-091-00041 - Copy.pdf**
6158K

 **IR-8 Blank.pdf**
183K

12/10/2021