



west virginia department of environmental protection

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

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

June 14, 2016

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-9100636, issued to ICG TYGART VALLEY, LLC, 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 all 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. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalties being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.

James Martin
Chief

Operator's Well No: FREEZE D-38
Farm Name: FREEZE, GERALD & KATHLEEN
API Well Number: 47-9100636
Permit Type: Plugging
Date Issued: 06/14/2016

Promoting a healthy environment.

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.

1) Date April 27, 2016
2) Operator's
Well No. D-38
3) API Well No. 47-91 - 00636

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 1391 Watershed Flag Run
District Knottsville County Taylor Quadrangle Grafton (378)

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 Name Kenneth Greynolds
Address 613 Broad Run Road
Jane Lew, WV 26378
9) Plugging Contractor Name Coastal Drilling East, LLC
Address 130 Meadows Ridge Road
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

*MSHA 101C Petition for Tygart #1 Mine / Leer Mine
(U-2004-06)
JPA*

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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 *Kenneth Greynolds* Date 6-3-16

POWER OF ATTORNEY
ICG TYGART VALLEY, LLC
TO
GREG NAIR

Dated: January 1, 2016

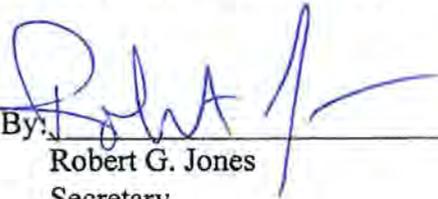
Expires: December 31, 2016

KNOW ALL MEN BY THESE PRESENTS: That ICG Tygart Valley, LLC, a limited liability company organized and existing under the laws of the State of Delaware (the "Company"), acting by and through Robert G. Jones, its duly authorized Secretary, has and does hereby appoint 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 Coal, Inc. or any subsidiary thereof, or until December 31, 2016, or until such earlier time as this instrument has been revoked, annulled, rescinded or set aside by an instrument of revocation filed with the Secretary of the Company, whichever first occurs.

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

ICG TYGART VALLEY, LLC

By: 
Robert G. Jones
Secretary

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Office of Oil and Gas
JUN 06 2016
WV Department of
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STATE OF MISSOURI)
) ss
COUNTY OF ST. LOUIS)

On this 16th day of December, 2015, before me, the undersigned notary public, personally appeared Robert G. Jones, known to me to be the person whose name is subscribed to the within instrument and acknowledged that he executed the same for the purposes therein contained.

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



Notary Public

My Commission Expires: December 1, 2017

PEGGY FELDMANN
Notary Public - Notary Seal
State of Missouri
Commissioned for St. Louis County
My Commission Expires: December 01, 2017
Commission Number: F13552693

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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".

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EXHIBIT No. 2

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"

05/26/2016

Mr. Chuck Duckworth
 Gas Well & Property Manager
 Arch Coal, Inc. – Leer Mine Complex
 100 Tygart Drive
 Grafton, WV 26354

Mr. Duckworth,

Below is the proposed plugging plan we discussed that can be used on wells similar to the wells we have been plugging for the last few years.

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Plugging Plan

- Move to site, rig up, mix mud, drill rathole
- Attempt to clean out well to original total depth (TD).
- Run cement bond log on 4 ½" casing to determine top of cement
- Set bottom hole cement plug as required by the WV DEP from TD to top of cement determined by the bond log.
- Tag top of bottom hole plug to insure plug is at correct depth. Re-cement if necessary.
- Cut and pull 4 ½" casing from the free point determined by the bond log.
- Clean out wellbore to top of remaining 4 ½" casing
- Run suite of logs to determine casing size, bottom of casing, depth of coal seams, deviation of wellbore and cement bond to casing.
- Cement hole from top of bottom hole plug to a depth within 25' of the bottom of the 8 5/8" casing.
- If necessary cut and pull any free casing.
- Perforate, cut, rip or mill any remaining casing at depths determined by MSHA's 101C Petition.

- Cement hole from top of intermediate plug to surface using cement required by MSHA's 101C Petition.
- Rig down and set monument as required by WV DEP.

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WW-4A
Revised 6-07

1) Date: April 27, 2016
2) Operator's Well Number
D-38

3) API Well No.: 47 - 91 - 00636

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 and Kathleen Freeze</u>	Name <u>CoalQuest Development, LLC</u>
Address <u>1095 Park View Road</u>	Address <u>2708 Cranberry Square</u>
<u>Grafton, West Virginia 26354</u>	<u>Morgantown, West Virginia 26508</u>
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name _____
	Address _____
(c) Name _____	Name _____
Address _____	Address _____
6) Inspector <u>Kenneth Greynolds</u>	(c) Coal Lessee with Declaration
Address <u>613 Broad Run Road</u>	Name _____
<u>Jane Lew, WV 26378</u>	Address _____
Telephone <u>(304) 206-6613</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.

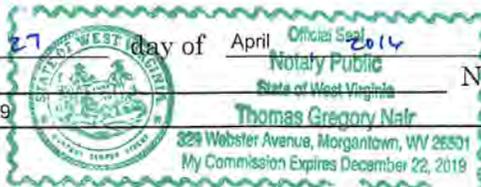
Well Operator ICG Tygart Valley, LLC
 By: Charles E. Duckworth
 Its: Designated Agent
 Address 100 Tygart Drive
Grafton, West Virginia 26354
 Telephone (304) 265-9704

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JUN 06 2016

Subscribed and sworn before me this 27 day of April, 2016
Thomas Gregory Nair Notary Public
 My Commission Expires December 22, 2019

WV Department of Environmental Protection



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.



ICG TYGART VALLEY, LLC

100 Tygart Drive, Grafton, West Virginia 26354

May 24, 2016

Gerald and Kathleen Freeze
1095 Park View Road
Grafton, West Virginia 26354

Re: Plugging Permit – API # 47-91-00636 – D-38

Dear Mr. & Mrs. Freeze:

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 to my attention to the address listed on the letterhead.

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@archcoal.com.

Sincerely,

Greg Nair
Manager Surface Mine Planning

Enclosures

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WV Department of
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CERTIFIED MAIL NO. 7015 3010 0001 7053 1563
RETURN RECEIPT REQUESTED

WW-4B

API No.	<u>47-91-00636</u>
Farm Name	<u>Gerald and Kathleen Freeze</u>
Well No.	<u>D-38</u>

**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.

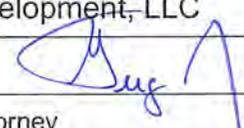
This notice and application is given to you in order that your respective representatives may be present at the plugging and filling of said well. You are further notified that whether you are represented or not the operator will proceed to plug and fill said well in the manner required by Section 24, 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: 4/27/16

CoalQuest Development, LLC
 By: Greg Nair 
 Its Power of Attorney

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 JUN 06 2016
 WV Department of
 Environmental Protection

POWER OF ATTORNEY

**COALQUEST DEVELOPMENT LLC
TO
GREG NAIR**

Dated: January 1, 2016

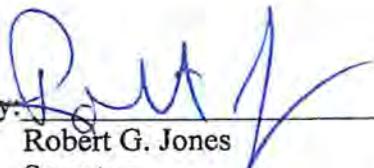
Expires: December 31, 2016

KNOW ALL MEN BY THESE PRESENTS: That CoalQuest Development LLC (“Company”), a limited liability company organized and existing under the laws of the State of Delaware, acting by and through Robert G. Jones, its duly authorized Secretary, 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 Coal, Inc. or any subsidiary thereof, or until December 31, 2016, or until such earlier time as this instrument has been revoked, annulled, rescinded or set aside by an instrument of revocation filed with the Secretary of the Company, whichever first occurs.

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

COALQUEST DEVELOPMENT LLC

By: 
Robert G. Jones
Secretary

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Office of Oil and Gas
JUN 16 2015
WV Department of
Environmental Protection

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

On this 16th day of December, 2015, before me, the undersigned notary public, personally appeared Robert G. Jones, known to me to be the person whose name is subscribed to the within instrument and acknowledged that he executed the same for the purposes therein contained.

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

Peggy Feldmann
Notary Public

My Commission Expires: *December 1, 2017*

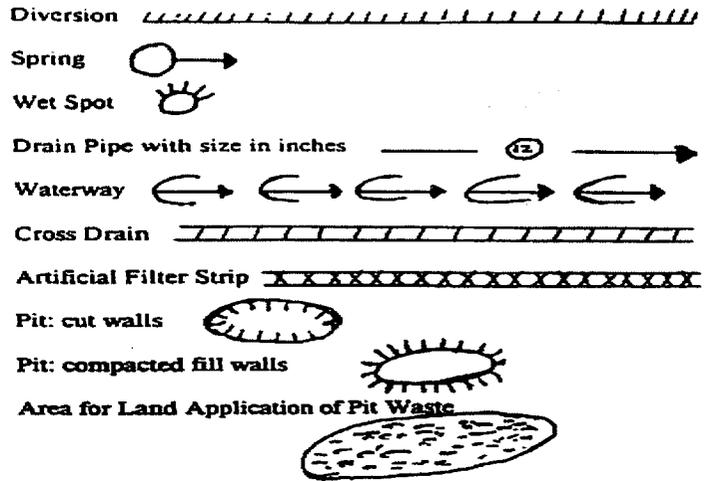
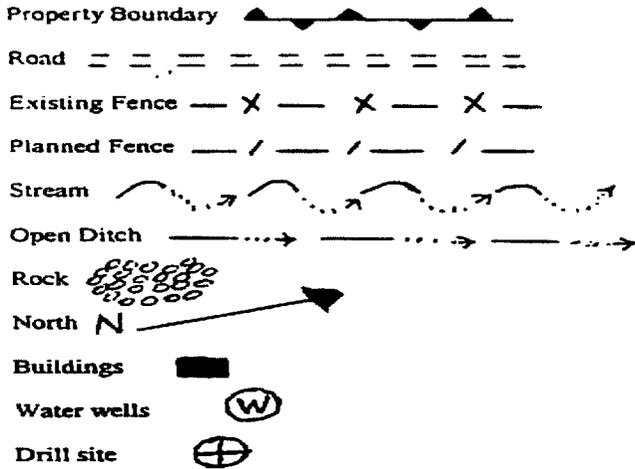
PEGGY FELDMANN
Notary Public - Notary Seal
State of Missouri
Commissioned for St. Louis County
My Commission Expires: December 01, 2017
Commission Number: F13552693

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LEGEND



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

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20 or equivalent) 500 lbs/acre (500 lbs minimum)

Mulch Hay Bales Tons/acre

Seed Mixtures

Area I		Area II	
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:
Drawing(s) of road, location, pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

See attached

Plan Approved by: [Signature]

Comments: RECD 211 + DES 220 15 AP

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Title: OIL & GAS INSPECTOR

Date: 6-3-16

Field Reviewed? () Yes () No

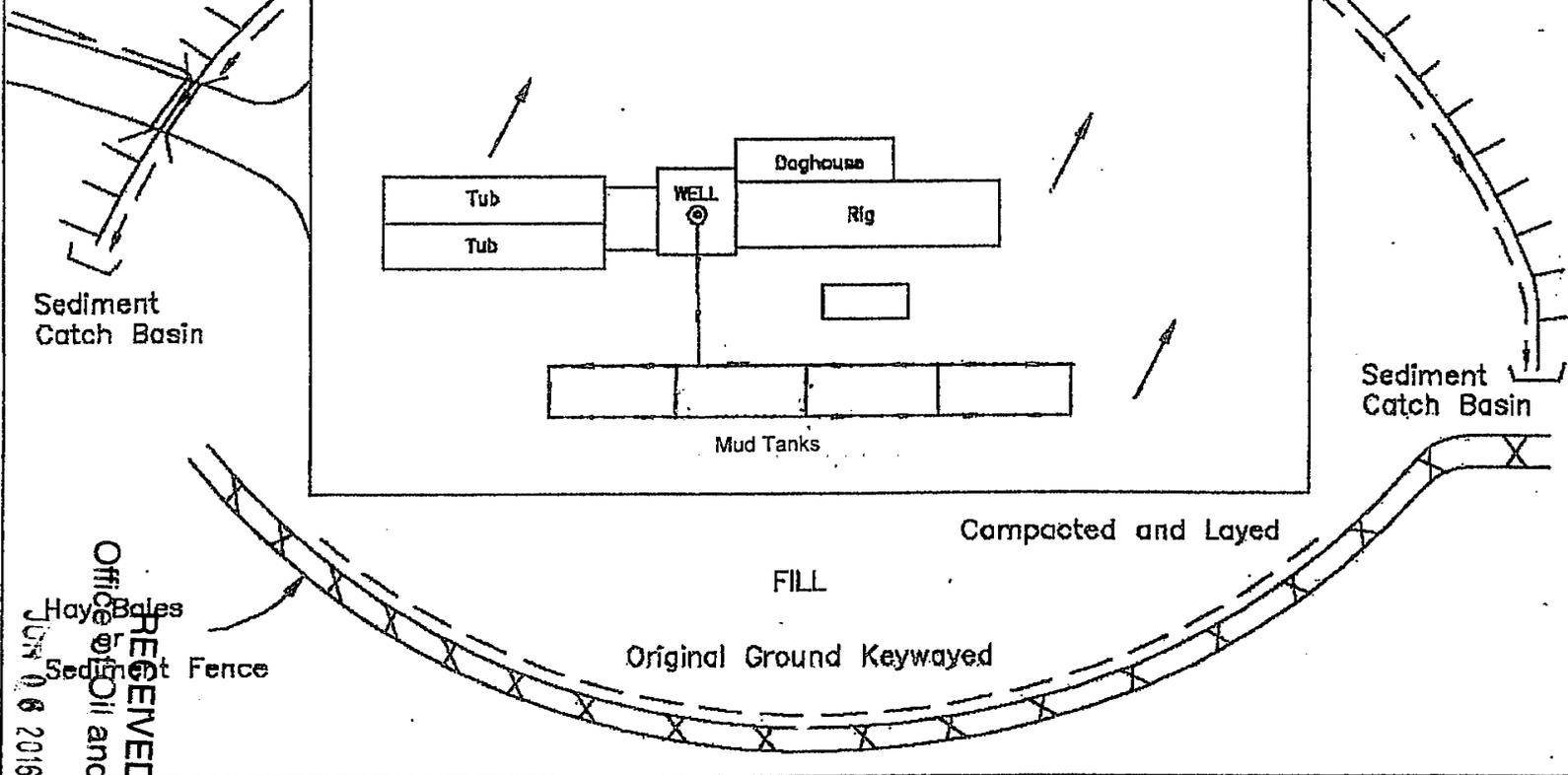
ICG TYGART VALLEY, LLC

Diversion Ditch (as Needed)

Typical Drawing
Of Well Plugging Site
Plan

CUT

Cut Mulched if Slope
Less than 1 to 1



Sediment
Catch Basin

Sediment
Catch Basin

Mud Tanks

Compacted and Layed

FILL

Original Ground Keywayed

Sediment Fence
Hay Bales

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JUN 08 2016



ICG TYGART VALLEY, LLC

100 Tygart Drive, Grafton, West Virginia 26354

April 27, 2016

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.

Sincerely,

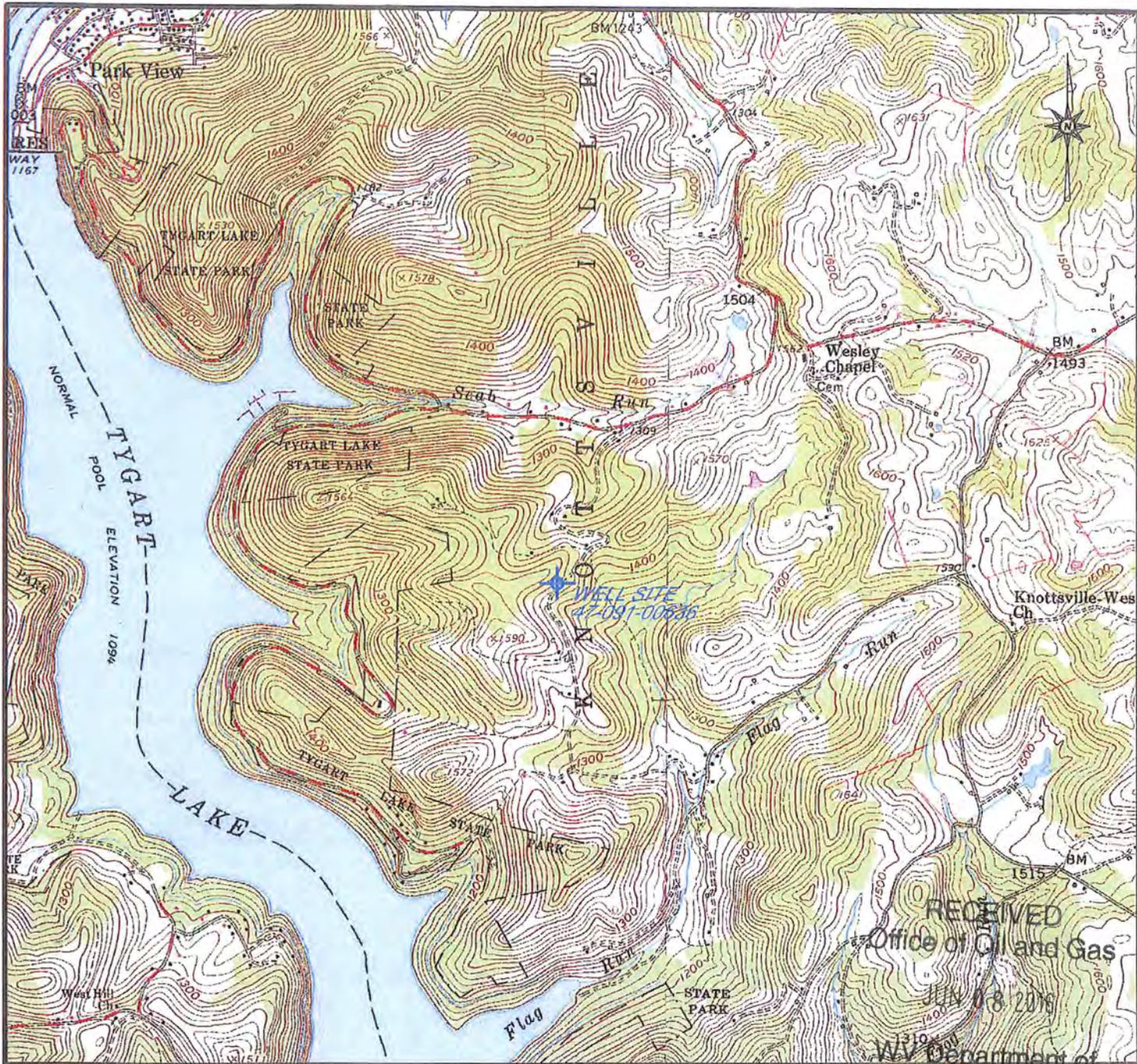
A handwritten signature in blue ink, appearing to read "Charles E. Duckworth".

Charles E. Duckworth
Designated Agent

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JUL 08 2016
WV Department of
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LATITUDE: 39° 17' 46"
 LONGITUDE: 80° 00' 20"
 NEAREST WATERCOURSE: Flag Run
 NEAREST TOWN: Knottsville

OPERATOR'S WELL NO. _____
 API WELL NO. D-38
47 - 091 - 00636
 STATE COUNTY PERMIT

WELL TYPE: OIL _____ GAS X LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS") PRODUCTION X STORAGE _____ DEEP _____ SHALLOW X
 LOCATION: ELEVATION 1480 WATERSHED Flag Run
 DISTRICT Knottsville COUNTY Taylor
 QUADRANGLE Grafton 7 1/2
 SURFACE OWNER: Gerald and Kathleen Freeze ACREAGE 16.75
 OIL & GAS ROYALTY OWNER: Gerald and Kathleen Freeze LEASE ACREAGE 16.75
 LEASE NO. _____
 PROPOSED WORK: DRILL X CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR
 STIMULATE X PLUG OFF OLD FORMATION _____ PERFORATE NEW
 FORMATION _____ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____
 TARGET FORMATION Haverly ESTIMATED DEPTH 5900'
 WELL OPERATOR ICG Tygart Valley, LLC DESIGNATED AGENT Charles E. Duckworth
 ADDRESS 100 Tygart Drive, Grafton, WV 26354 ADDRESS 100 Tygart Drive, Grafton, WV 26354

REVISED BY:	DATE:	API WELL NO. 47-091-00636 D-38	
		ICG TYGART VALLEY, LLC	
		DRAWN BY: <u>Jerry A. Hill</u>	SCALE: 1" = 2000'
		DIRECTORY: <u>DIG/TYG/TIG #1</u> <u>WV OIL & GAS PERMIT MAPS</u>	DATE ORIGINATED: <u>April, 2016</u>
		DRAWING NO.: <u>47-091-00636 D-38.dgn</u>	PLOTTING: <u>JD4753</u>

PREPARED BY:

Eastern Operations
 100 Tygart Drive, Grafton, WV 26354
 Phone: 304-265-9700 Fax: 304-265-2564

WW-7
8-30-06



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

API: 47-091-000636 WELL NO.: D-38

FARM NAME: Gerlad and Kathleen Freeze

RESPONSIBLE PARTY NAME: ICG Tygart Valley, LLC

COUNTY: Taylor DISTRICT: Knottsville

QUADRANGLE: Grafton

SURFACE OWNER: Gerald and Kathleen Freeze

ROYALTY OWNER: Gerald and Kathleen Freeze

UTM GPS NORTHING: 4350117.833

UTM GPS EASTING: 585765.844 GPS ELEVATION: 1466.14

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

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

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

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

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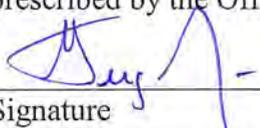
JUN 30 2016

WV Department of
Environmental Protection

CWD

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

Power of Attorney
Title

April 27, 2016
Date