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

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

Wednesday, August 10, 2016
WELL WORK PERMIT
Vertical / Plugging

ICG TYGART VALLEY, LLC
100 TYGART DR

GRAFTON, WV 26354

Re: Permit approval for
47-091-00462-00-00

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

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

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

James A. Martin
Chief

Operator's Well Number:
Farm Name: GOUGH, CHARLES N. ETUX.
U.S. WELL NUMBER: 47-091-00462-00-00
Vertical / Plugging
Date Issued: 8/10/2016

Promoting a healthy environment.

9100462P

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.

WW-4B
Rev. 2/01

1) Date May 26, 2016
2) Operator's Well No. CNGD-1389
3) API Well No. 47-91-00462 P

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 1628.9 Watershed Scab Run
District Knottsville County Taylor Quadrangle Thornton (638)

6) Well Operator ICG Tygart Valley, LLC
Address 100 Tygart Drive
Grafton, WV 26354

7) Designated Agent Charles E. Duckworth
Address 100 Tygart Drive
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 ID # FOR LEAR MINE IS 46-09192.
WVOMHST # IS U-2004-06A
101 C MODIFICATION DOCKET # M-2012-065 C

Received
Office of Oil & Gas
AUG 03 2016

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

Work order approved by inspector [signature] Date 8-2-16

91 00462 P

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".

THIS IS AN ACTIVE WELL.

TOP OF COAL @ 770.1 FROM SURFACE.
BOTTOM OF COAL @775.1 FROM SURFACE

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Office of Oil & Gas
AUG 03 2016

91 00462 P

EXHIBIT No. 2

COASTAL DRILLING EAST
"A Shaft Drillers International Company"

Coastal Drilling East LLC • 130 Meadow Ridge Road, Mt. Morris, PA 15349
Phone 304-296-1120 Fax 304-413-0061

05/26/2016

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

PERFORATIONS MUST BE COVERED BY CLASS A CEMENT.

PERFORATIONS. 1634' - 1644'
4163' - 4250'
4479 - 4482'
5182' - 5277'
5534' - 5539'

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.

Plugging Plan

- Move to site, rig up, mix mud, drill rathole
- CLEAN out well to original PBTD AT ≈ 5550'.
- Run cement bond log on 4 ½" casing to determine top of cement
- START ★1 Set bottom hole cement plug as required by the WV DEP from TD to top of cement determined by the bond log.
- (SEE NEXT PAGE) 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.
- END ★1 If necessary cut and pull any free casing.
- Perforate, cut, rip or mill any remaining casing at depths determined by MSHA's 101C Petition.

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Office of Oil & Gas
AUG 03 2016

9100462P

- 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.

START ★ 1. BOTTOM HOLE PLUG FROM PBTD (≈5550') TO 4000' WITH CLASS A CEMENT. GEL HOLE FROM 4000' TO 2000'. SET CLASS A CEMENT PLUG FROM 2000' TO ABOVE PERFORATION IN 4½" @ 1634' - 1644' TO 1500'

- FREEPOINT OF 4½ SHOULD BE ABOVE 1500'. CUT & PULL 4½" CASING AT ≈ 1500'.
- SET CLASS A CEMENT PLUG FROM 1500' (CUT) TO 975', 200' BELOW COAL SEAM.

END ★ 1

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Office of Oil & Gas
AUG 03 2016

COASTAL DRILLING - EAST

9100462P

IV-35
(Rev 8-81)

RECEIVED
APR 5 - 1985
OIL & GAS DIVISION
DEPT. OF MINES

State of West Virginia
Department of Mines
Oil and Gas Division

Date March 14, 1985
Operator's
Well No. CNGD WN 1389
Farm Charles Gough
API No. 47 - 091 - 0462

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil ___ / Gas X / Liquid Injection ___ / Waste Disposal ___ /
(If "Gas," Production X / Underground Storage ___ / Deep ___ / Shallow X /)

LOCATION: Elevation: 1628.9 Watershed Scab Run
District: Knottsville County Taylor Quadrangle Thornton 7.5' 1958

COMPANY CNG Development Company
ADDRESS P.O.Box 15746, Pittsburgh, PA 15244
DESIGNATED AGENT Gary A. Nicholas
ADDRESS Rt. 2 Box 698, Bridgeport, WV 26330
SURFACE OWNER Charles N. & Betty J. Gough
ADDRESS Rt. 2 Box 140, Keyser, WV 26726
MINERAL RIGHTS OWNER Charles N. & Betty J.Gough
ADDRESS Rt. 2 Box 140, Keyser, WV 26726
OIL AND GAS INSPECTOR FOR THIS WORK
Donald Ellis ADDRESS 2604 Crab Apple Lane Fairmont, WV 26554
PERMIT ISSUED 2-5-85
DRILLING COMMENCED 2-12-85
DRILLING COMPLETED 2-20-85
IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"			
9 5/8			
8 5/8	967	967	To Surf
7			
5 1/2			
4 1/2	5718	5718	760 sks
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Haverty Depth 5690 feet
Depth of completed well 5861 feet Rotary X / Cable Tools
Water strata depth: Fresh 800 feet; Salt feet
Coal seam depths: 228 - 230, 715 - 720, 780 - 785 Is coal being mined in the area? No

OPEN FLOW DATA
Producing formation Haverty, 3rd Elk, Benson, Riley Pay zone depth 5534 - 5539, 5182 - 5277, 4479 - 4482, 4163 - 4250 feet
Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
Final open flow 1163 Mcf/d Final open flow Bbl/d
Time of open flow between initial and final tests hours
Static rock pressure 400 psig (surface measurement) after 1 hours shut in
(If applicable due to multiple completion--)
Second producing formation Pay zone depth feet
Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
Final open flow Mcf/d Oil: Final open flow Bbl/d
Time of open flow between initial and final tests hours
Static rock pressure psig (surface measurement) after hours shut in

(Continue on reverse side)

9100462P

FORM IV-35
(REVERSE)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Perfco ran Corrlog & CBL, Perforated Haverty 1st Stage 5534-5539; 12 holes (.39) 2-1/8" strip gun Halliburton Foam Frac (50Q) Haverty Sand - Break 3150, Avg. TPSI 3800, Avg. Rate 16 BPM, ISI 2950. Used 500 gals MOD 202 + 35,000# 20/40 Sand + 338,000 SCFN2, 3# Max Sand Conc.. Perfco Perf. 3rd Elk 5275-5277, 3 holes, 5235-5237, 2 holes, 5207-5211, 3 holes, 5182-5184, 2 holes (.39) HSC Select Fire. Halliburton Foam Frac (50Q) 3rd Elk Sand - Break 3800, Avg. TPSI 3800, Avg. Rate 16 BPM, ISI 2900, used 500 gals MOD 202 + 35,000# 20/40 Sand + 390,000 SCFN2. 2# max Sand Conc. Perfco Perf. Benson 4479-44 10 holes, (.39) HSC Halliburton Foam Frac (75Q) Benson Sand - Break 3800, Avg. TPSI 375C Avg. Rate 16 BPM, ISI 2700, used 500 gals MOD 202 + 40,000# 20/40 Sand + 480,000 SCFN2, 3# Max Sand Conc. Perfco Perf, Riley 4242-4250, 7 holes, 4163-4165, 2 holes (.39) HSC Select Fire. Halliburton Foam Frac (75Q) Riley Sand - Break 1900, Avg. TPSI 3100, Avg. Rate 20 BPM, ISI 1700, used 500 gals MOD 202 + 40,000# 20/40 Sand + 370,000 SCFN2.

WELL LOG

FORMATION COLOR HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Clay	0	5	Coal 228 - 230 780 - 785
Sand & Shale	5	228	
Coal	228	230	
Sand & Shale	230	780	
Coal	780	785	
Sand & Shale	785	1275	
Lime & Shale	1275	1305	
Big Lime	1305	1355	
Red Rock	1355	1370	
Big Injun	1370	1450	
Sand & Shale	1450	5861	
LOG TOPS			
See Attached Sheet			

Office of Oil & Gas
AUG 03 2016

(Attach separate sheets as necessary)

CNG Development Company
Well Operator

By: [signature]

Date: March 14, 1985

Note: Regulation 2.02(i) provides as follows:
"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."

91 00462P

CNGD WELL NO. 1389

FARM NAME Charles Gough

API NO. 47-091-0462

LOG TOPS

B.LIME/B. INJ.	1510	1704
POCONO	1798	1838
GANTZ/GANTZ A	1982	2040
50'	2098	2127
GORD. ST/GORD.	2242	2378
4TH/4TH A	2390	2496
5TH/L. 5TH	2506	2633
SPEECHLEY	3239	3280
BALLTOWN	3400	3540
BRADFORD	3714	3820
RILEY	4144	4343
BENSON	4474	4483
1ST ELK	4710	4760
2ND ELK	4860	5102
3RD ELK	5113	5292
4TH ELK	5362	5462
HAVERTY	5516	5610

T.D. 5861

Breaker @ TD

Received
Office of Oil & Gas
AUG 03 2016

APR 15 1985

APR 1 5 1985

9100462P

WR-35

API # 47- 91 - 00462W

State of West Virginia
DEPARTMENT OF ENERGY
Division of Oil and Gas

Well Operator's Report of Well Work

Farm name: Charles Gough Operator Well No.: CNGP 1389W

LOCATION: Elevation: 1628.9' Quadrangle: Thornton 7.5'

District: Knottsville County: Taylor
Latitude: 39 Deg. 20' 00"
Longitude 79 Deg. 57' 30"

Company: CNG PRODUCING CO., A DEL. CORP.
1450 POYDRAS ST.
NEW ORLEANS, LA 70112

Agent: RODNEY J. BIGGS

Inspector:
Permit Issued:
Well work Commenced: 04-13-94
Well work Completed: 04-26-94
Verbal Plugging
Permission granted on:
Rotary ____ Cable ____ Rig
Total Depth (feet) 5587'
Fresh water depths (ft)
Salt water depths (ft)
Is coal being mined in area (Y/N)?
Coal Depths (ft):

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Size			
No Additional casing ran in well.			

OPEN FLOW DATA

Producing formation Keener Pay zone depth (ft) 1634 - 1644'
Gas: Initial open flow N/A MCF/d Oil: Initial open flow N/A Bbl/d
Final open flow * 335 MCF/d Final open flow N/A Bbl/d
Time of open flow between initial and final tests 4 Hours
Static rock Pressure 385 psig (surface pressure) after 12 Hours
* Commingle with existing production
Second producing formation Pay zone depth (ft)
Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d
Final open flow MCF/d Final open flow Bbl/d
Time of open flow between initial and final tests Hours
Static rock Pressure psig (surface pressure) after Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: CNG PRODUCING CO. A DELAWARE CORP.

By: Rodney J. Biggs, District Manager - Production
Date: 05-17-94

91 004620

PERFORATED KEENER, 20 shots, 1634 - 1644
WATER FRAC:

Total Fluid	460 bbls 25# gel	
Total Sand	5,000 80/100	35,000 20/40
Total Acid	750 gal. 15%	
Ave. Rate	21 BPM	
Ave. Press	1660#	
Max. Sand	4 ppg	
Frac Grade	1.2	
Br. Form.	2400	ISIP - 1270

TURN WELL BACK IN LINE 04-26-94

-5/c 51

9100462P

WW-4A
Revised 6-07

1) Date: May 26, 2016
2) Operator's Well Number
CNGD-1389

3) API Well No.: 47 - 91 - 00462

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE 0F APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Owner(s) to be served:
(a) Name: Charles N. & Betty J. Gough ✓ waiver
Address: 203 Rocket Center Road
Keyser, West Virginia 26726
(b) Name
Address
(c) Name
Address

5) (a) Coal Operator
Name: CoalQuest Development, LLC ✓ waiver
Address: 100 Tygart Drive
Grafton, West Virginia 26354
(b) Coal Owner(s) with Declaration
Name
Address
Name
Address

6) Inspector: Kenneth Greynolds
Address: 613 Broad Run Road
Jane Lew, WV 26378
Telephone: (304) 206-6613

(c) Coal Lessee with Declaration
Name
Address

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

Received
Office of Oil & Gas
AUG 03 2016

Subscribed and sworn before me this 31 day of May, 2016
Notary Public
My Commission Expires December 22, 2019

Official Seal
Notary Public
State of West Virginia
Thomas Gregory Nair
329 Webster Avenue, Morgantown, WV 26501
My Commission Expires December 22, 2019

Oil and Gas Privacy Notice

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

9100462P

A Subsidiary of

ArchCoal

ICG TYGART VALLEY, LLC

100 Tygart Drive, Grafton, West Virginia 26354

June 7, 2016

Charles and Betty Gough
203 Rocket Center Road
Keyser, West Virginia 26726

Re: Plugging Permit – API # 47-91-00462 – CNGD-1389

Dear Mr. & Mrs. Gough:

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 a 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@archcoal.com.

Sincerely,

Greg Nair
Manager Surface Mine Planning

Enclosures

Received
Office of Oil & Gas
AUG 03 2016

CERTIFIED MAIL NO. 7015 3010 0001 7053 1570
RETURN RECEIPT REQUESTED

9100462P

SURFACE OWNER WAIVER

Operator's Well Number CNGD-1389

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.

Received
Office of Oil & Gas
AUG 03 2016

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.

Betty J. Dough Date 6-14-16
Signature

FOR EXECUTION BY A CORPORATION,

Name
By
Its Date

Signature Date

WW-4B

9100462P

API No. 47-91-00462
Farm Name Charles Gough
Well No. CNGD-1389

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 then 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: 5/31/16

CoalQuest Development, LLC

By: Greg Nair

Its Power of Attorney

Received
Office of Oil & Gas
AUG 03 2016

9100462P

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

Received
Office of Oil & Gas
AUG 03 2016

91004628

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

Received
Office of Oil & Gas
AUG 03 2016

9100462P

WW-9
Rev. 5/08

Page _____ of _____
API Number 47 - 91 - 00462
Operator's Well No. CNGD-1389

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

CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator Name ICG Tygart Valley, LLC OP Code _____

Watershed Scab Run Quadrangle Thornton (638)

Elevation 1628.9 County Taylor District Knottsville

Description of anticipated Pit Waste: N/A

Will a synthetic liner be used in the pit? N/A.

Proposed Disposal Method For Treated Pit Wastes:

_____ Land Application
_____ Underground Injection (UIC Permit Number _____)
_____ Reuse (at API Number _____)
_____ Off Site Dispposal (Supply form WW-9 for disposal location)
X Other (Explain Tanks - See attached letter

Proposed Work For Which Pit Will Be Used:

_____ Drilling _____ Swabbing
_____ Workover X Plugging
_____ Other (Explain _____

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, 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 _____

Company Official (Typed Name) Charles E. Duckworth

Company Official Title Designated Agent

Subscribed and sworn before me this 31 day of May, 2016

Thomas Gregory Nair
Notary Public

Official Seal
Notary Public
State of West Virginia
Thomas Gregory Nair
329 Webster Avenue, Morgantown, WV 26501
My Commission Expires December 22, 2019

My commission expires December 22, 2019

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9100462P

A Subsidiary of

ArchCoal

ICG TYGART VALLEY, LLC

100 Tygart Drive, Grafton, West Virginia 26354

May 26, 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,

Charles E. Duckworth
Designated Agent

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Form WW-9

Operator's Well No. CNGD-1389

9100462

LEGEND

Property Boundary
Road
Existing Fence
Planned Fence
Stream
Open Ditch
Rock
North N
Buildings
Water wells W
Drill site

Diversion
Spring
Wet Spot
Drain Pipe with size in inches 12
Waterway
Cross Drain
Artificial Filter Strip
Pit: cut walls
Pit: compacted fill walls
Area for Land Application of Pit Waste

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 Seed Type	lbs/acre	Area II 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: RECLAIM, SEED + MULCH ASAP

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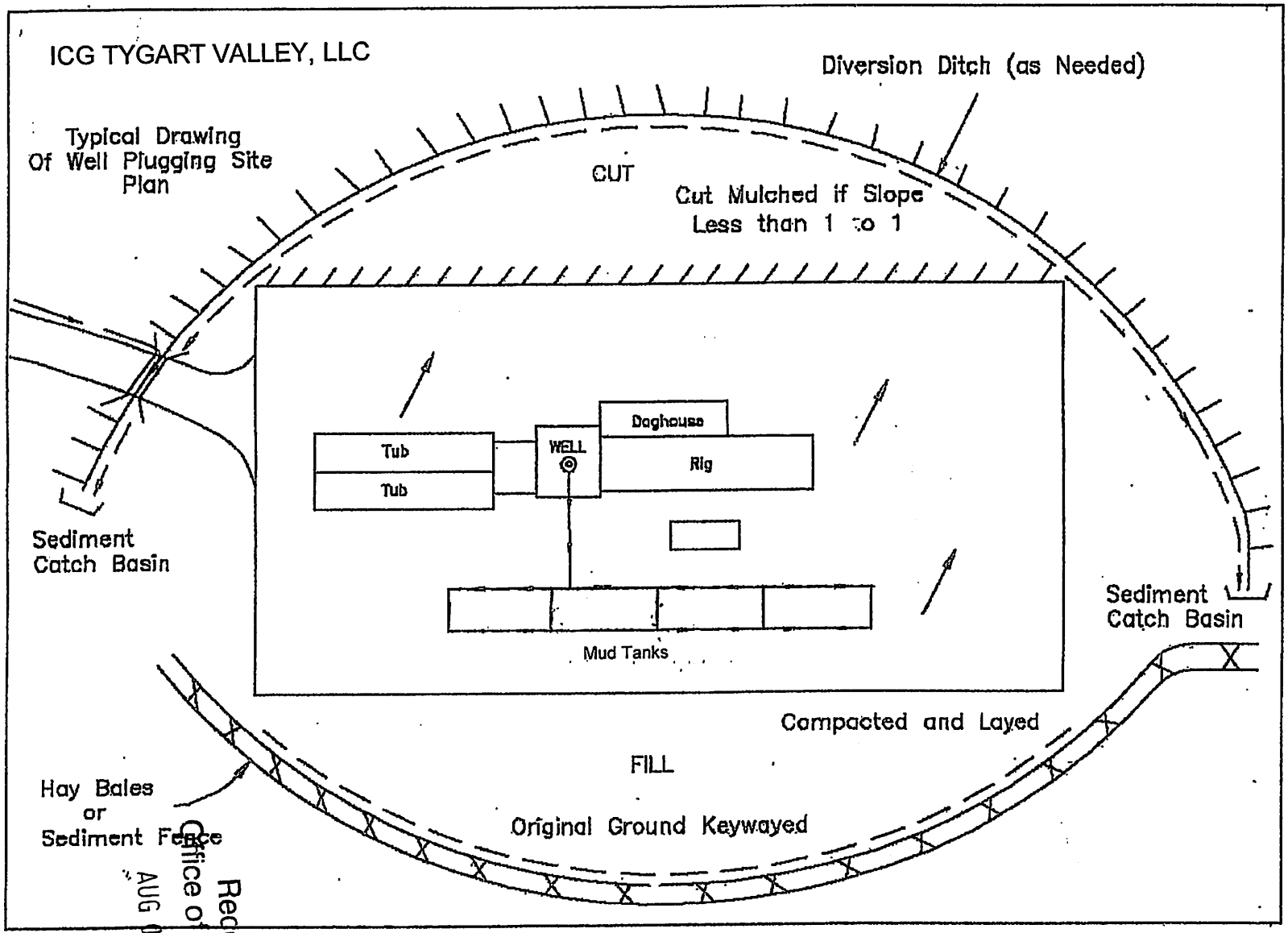
Title: OIL + GAS INSPECTOR Date: 8-2-16

Field Reviewed? (_____) Yes (✓) No



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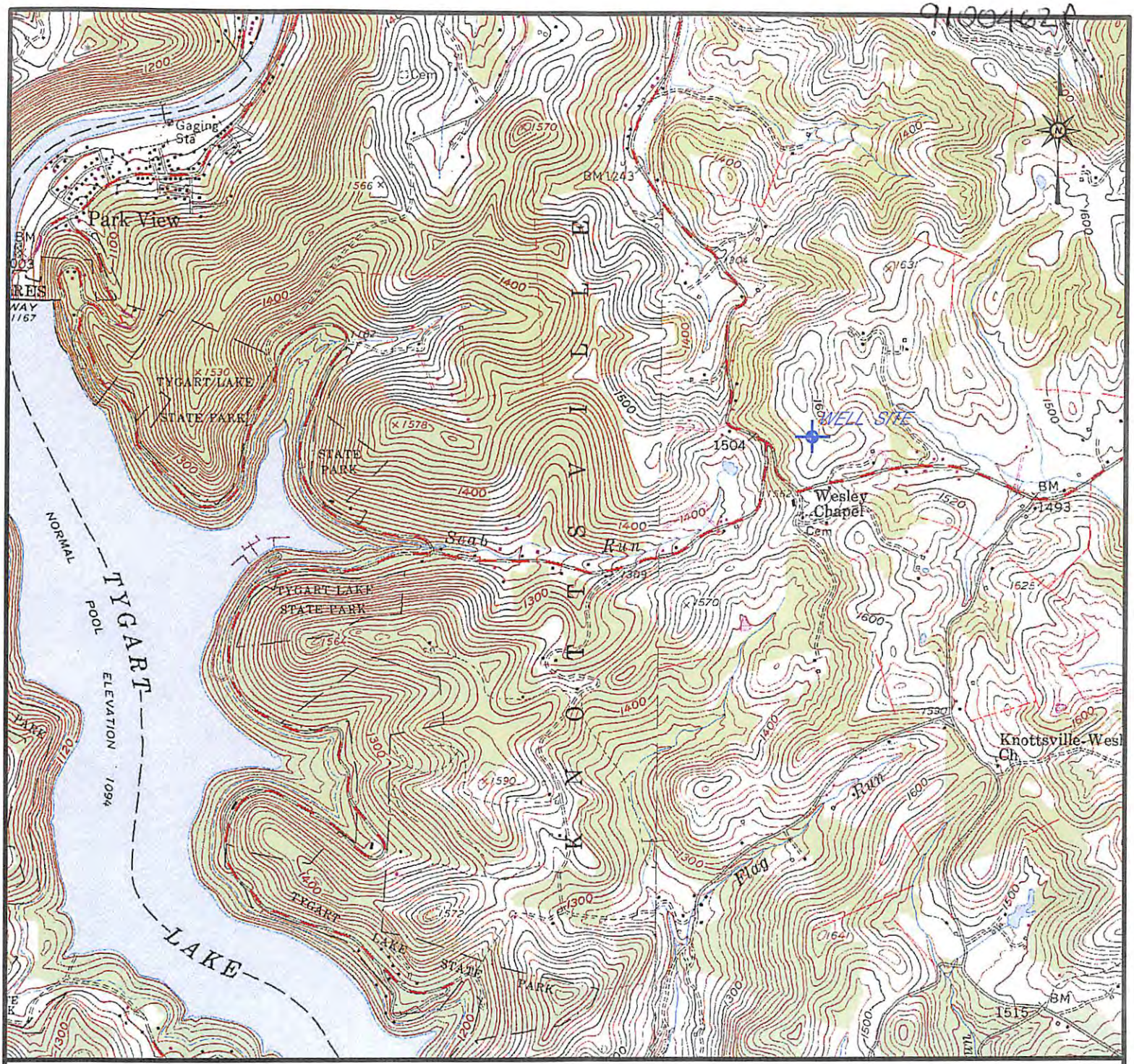

9100462A

LATITUDE: 39° 18' 45"
LONGITUDE: 79° 59' 53"
NEARTEST WATERCOURSE: Scab Run
NEAREST TOWN: Knottsville

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Rec - 8-2-16

OPERATOR'S WELL NO.
API WELL NO. CNGD-1389

47 — 091 — 00462
STATE COUNTY PERMIT

WELL TYPE: OIL ____ GAS X LIQUID INJECTION ____ WASTE DISPOSAL ____
(IF "GAS") PRODUCTION X STORAGE ____ DEEP ____ SHALLOW X
LOCATION: ELEVATION 1628.9 WATERSHED Scab Run to Tygart Lake
DISTRICT Knottsville COUNTY Taylor
QUADRANGLE Thornton 7 1/2'
SURFACE OWNER: Charles & Betty J. Gough ACREAGE 68
OIL & GAS ROYALTY OWNER Charles & Betty J. Gough LEASE ACREAGE 65
LEASE NO. 75684
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 X CLEAN OUT AND REPLUG ____
TARGET FORMATION Benson, Elk ESTIMATED DEPTH 5690'
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. 47-091-00462 CNGD-1389
		ICG TYGART VALLEY, LLC
		DRAWN BY: Terry A. Nair — SCALE: 1" = 2000'
		DIRECTORY: DWG/TYG/TYG #V WV OIL & GAS PERMIT MAPS/ — DATE ORIGINATED: April 2016
		DRAWING NO.: 47-091-00462 CNGD-1389.dgn — PLOTTING SCALES

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

9100462P

WW-7
8-30-06

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

API: 47-091-~~000692~~ 00462 **WELL NO.:** CNGD-1389

FARM NAME: Charles Gough

RESPONSIBLE PARTY NAME: ICG Tygart Valley, LLC

COUNTY: Taylor **DISTRICT:** Knottsville

QUADRANGLE: Thornton

SURFACE OWNER: Charles N. & Betty J. Gough

ROYALTY OWNER: Charles N. & Betty J. Gough

UTM GPS NORTHING: 4351407.530

UTM GPS EASTING: 586902.324 **GPS ELEVATION:** 1633.09

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 X : Post Processed Differential ____

Real-Time Differential X

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	Power of Attorney Title	May 31, 2016 Date

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6/6/16

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7015 3010 0001 7053 1570

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$ 3.45

Extra Services & Fees *(check box, add fee as appropriate)*
- ☒ Return Receipt (hardcopy) $ 2.80
- ☐ Return Receipt (electronic) $
- ☐ Certified Mail Restricted Delivery $
- ☐ Adult Signature Required $
- ☐ Adult Signature Restricted Delivery $

Postage
$ 1.86

Total Postage and
$ 8.11

THORNTON WV 26440
Postmark Here
USPS

Sent To Charles and Betty Gough
Street and Apt. No. 203 Rocket Center Road
City, State, ZIP+4® Keyser, West Virginia 26726

PS Form 3800, A

SENDER: *COMPLETE THIS SECTION*

- 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.

1. Article Addressed to:

Charles and Betty Gough
203 Rocket Center Road
Keyser, West Virginia 26726

9590 9402 1319 5285 3856 13

2. Article Number *(Transfer from service label)*
7015 3010 0001 7053 1570

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Betty Gough
☐ Agent
☐ Addressee

B. Received by *(Printed Name)*
C. Date of Delivery 6-13-16

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
- ☐ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☐ Certified Mail®
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Restricted Delivery

PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

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