



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

September 14, 2015

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-9100430, 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: B-577
Farm Name: ST. AUGUSTINE'S CATH. CH.
API Well Number: 47-9100430
Permit Type: Plugging
Date Issued: 09/14/2015

Promoting a healthy environment.

9/18/2015

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 August 10, 2015
2) Operator's
Well No. B-577
3) API Well No. 47-91 - 00430

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 1485 Watershed Three Fork Creek
District Knottsville County Taylor Quadrangle Grafton (378)

6) Well Operator ICG Tygart Valley, LLC 7) Designated Agent Charles E. Duckworth
Address 2708 Cranberry Square Address 1200 Tygart Drive
Morgantown, WV 26508 Grafton, WV 26354

8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Kenneth Greynolds Name Coastal Drilling East, LLC
Address 613 Broad Run Road Address 130 Meadows Ridge Road
Jane Lew, WV 26378 Mt. Morris, PA 15349

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

See Plugging Plans - Exhibit Nos. 1 and 2

101C .

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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 8-18-15

ICG
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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"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

07/29/2015

Mr. Chuck Duckworth
 Gas Well & Property Manager
 Arch Coal, Inc. – Leer Mine Complex
 1200 Tygart Drive
 Grafton, WV 26354

Mr. Duckworth,

Coastal Drilling East, LLC. is pleased to provide you and your company with a plugging plan to complete Well #B-577 near Grafton, WV.

Please keep in mind this plugging plan is based on the information taken from the Well Operator's Report of Well Work. If the information provided on the report is not correct it could change the plan to plug this well. Also, if well conditions are different than expected it could change the plugging plan as well.

KLC
8-18-15

Cleanout/Plugging Plan

- Day 1 – Move to site, rig up, mix mud, drill rathole
- Day 2 – Finish drilling rathole, start picking up 2 3/8" drill pipe and cleanout well with a 3 3/4" bit to total depth (T.D) at 5,650'
- Day 3 – Continue to pick up 2 3/8" drill pipe and cleanout to T.D at 5,650'. Trip out of the hole (T.O.H) with 2 3/8" drill pipe.
- Day 4 – Run cement bond log on 4 1/2" casing, (calculations reached from the cement information taken from the report indicate the estimated top of the cement on the outside of the 4 1/2" is 2,930'). No perforations or cuts are required by the State of WV since the 4 1/2" casing is already perforated in the pay zones.
- Day 5 – Trip in hole (T.I.H) with 2 3/8" drill pipe to T.D. Cement hole from 5,650' back to 2,930' with 227 sacks of Class A Cement with a gas

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blocker additive. Circulate hole, condition mud, T.O.H.

- Day 6 – T.I.H with 3 ¾” bit to tag top of cement plug at 2,930’. T.O.H, T.I.H with 4 ½” pressure pipe cutter, cut 4 ½” casing just above top of bonded casing at 2,930’. Lay down 2 3/8” drill pipe.
- Day 7 – Continue to lay down 2 3/8” drill pipe. Rig up 4 ½” casing spear. Hook to 4 ½” casing at the surface, release slips from wellhead and attempt to work 4 ½” casing free to 2,930’. Lay down 4 ½” casing.
- Day 8 – Rig up 7 7/8” bit. Pick up drill collars and drill pipe, start cleaning hole to top of remaining 4 ½” casing at 2,930’.
- Day 9 – Continue to clean hole with 7 7/8” bit to top of remaining 4 ½” casing at 2,930’. Circulate hole. T.O.H with 7 7/8” bit. T.I.H with open ended 3 ½” drill pipe.
- Day 10 – Cement hole from 2,930’ to within 50’ of bottom of 8 5/8” casing at 1,217’ with 1000 gallons of mud flush and 540 sacks of Class A cement with 4% gel. Circulate hole and condition mud. T.O.H Log hole (Caliper, Natural Gamma, Directional and Bond logs). Calculations reached from the cement information taken from the report indicates that the 8 5/8” casing was cemented to surface.
- Day 11 - T.I.H with 8 5/8” section mill. Section mill 30’ window in 8 5/8” casing through Lower Kittaning coal seam.
- Day 12 – Continue to section mill 8 5/8” casing through Lower Kittaning coal seam.
- Day 13 – Finish section milling 8 5/8” casing. T.O.H with 8 5/8” section mill. T.I.H with 7 7/8” bit.
- Day 14 – Clean hole with 7 7/8” bit to top of cement plug at 1,217’. Circulate hole at 1,217’. T.O.H with 7 7/8” bit. Run caliper log to verify window in 8 5/8” casing. Lay down drill collars and fishing tools. Prepare to cement hole to surface.
- Day 15 – Cement hole from 1,217’ to surface using 212 sacks of Class A cement with 4% gel and 149 sacks of Thixotropic cement with green dye. Clean out mud tank. Rig down equipment and prepare to move rig to next site.

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IV-35
(Rev 8-81)

Date November 30, 1984
Operator's Well No. B-577
Farm St. Augustine's Catholic Church
API No. 47 - 091 - 0430

State of West Virginia
Department of Mines
Oil and Gas Division

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

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

LOCATION: Elevation: 1485' Watershed Three Fork Creek
District: Knottville County Taylor Quadrangle Grafton 7X1

COMPANY Berry Energy Consultants & Mgrs. Inc.

ADDRESS P.O. Box 5, Clarksburg, W. Va. 26301

DESIGNATED AGENT W.B. Berry

ADDRESS P.O. Box 5, Clarksburg, W. Va. 26301

SURFACE OWNER St. Augustine's Catholic Church
% Eugene O'Loughlin, 17 West Washington St.
ADDRESS Grafton, W. Va. 26354

MINERAL RIGHTS OWNER SAME AS SURFACE

ADDRESS SAME AS SURFACE

OIL AND GAS INSPECTOR FOR THIS WORK Donald
Ellis, 2604 Crab Apple Lane, Fairmont, W. Va 26554

PERMIT ISSUED August 27, 1984

DRILLING COMMENCED 10-24-84

DRILLING COMPLETED 11-01-84

IF APPLICABLE: PLOGGING OF DRY HOLE OR
CONTINUOUS PROGRESSION FROM DRILLING OR
REWORKING. VERBAL PERMISSION OBTAINED
ON

Casing Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size <u>11-3/4</u> <u>REGUL</u> <u>COND.</u>	<u>None</u>		
<u>13-10"</u>			
<u>9 5/8</u>			
<u>8 5/8</u>	<u>1167'</u>	<u>1167'</u>	<u>255 Sks.</u>
<u>7</u>			
<u>5 1/2</u>			
<u>4 1/2</u>	<u>4484'</u>	<u>4484'</u>	<u>300 Sks.</u>
<u>3</u>			<u>50/50 POT</u>
<u>2</u>			
Liners used			

GEOLOGICAL TARGET FORMATION Haverty Depth 5500' feet

Depth of completed well 5680' feet Rotary XX / Cable Tools

Water strata depth: Fresh 40,135' feet; Salt None feet

Coal seam depths: 340 - 505' Is coal being mined in the area? No

OPEN FLOW DATA Benson 4325-4328
Producing formation Riley Pay zone depth 4106-4118 feet

Gas: Initial open flow No Show Mof/d Oil: Initial open flow N/A Ebl/d

Final open flow 750 Mof/d Oil: Final open flow N/A Ebl/d

Time of open flow between initial and final tests. hours
DAYS

Static rock pressure 1775# psig (surface measurement) after 14 hours shut in
(if applicable due to multiple completion--)

Second producing formation Pay zone depth feet

Gas: Initial open flow Mof/d Oil: Initial open flow Ebl/d

Final open flow Mof/d Oil: Final open flow Ebl/d

Time of open flow between initial and final tests hours

Static rock pressure psig (surface measurement) after hours shut in

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Foam Fraced; 11-16-84

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

Benson: 60,000#, 20/40, 280 Bbls. Fluid, 1040 Bbls. Foam, 924,000 SCF N₂

Riley: 80,000#, 20/40, 331 Bbls. Fluid, 1324 Bbls. Foam, 1,028,000 SCF N₂

Perforations: Benson: 4325-4328

Riley: 4106-4118

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Sand	Brown	H	0	10	
Shale	Grey	S	10	45	
Sand & Shale	Grey	H	45	80	1/2" Stream @ 47'
Sand	White	H	80	105	
Coal	Black	S	105	111	Coal
Sand & Shale	Grey	M	111	120	
Sand	White	H	120	175	
Sand & Shale	Grey	M	175	190	
Red Rock	Red	S	190	210	
Sand & Shale	Grey	N	210	281	
Shale	R/Grey	S	281	340	
Sand	White	H	340	360	
Sand & Shale	G/W/B/	M	360	519	
Sand	White	H	519	551	
Sand & Shale	Grey	N	551	569	
Coal	Black	S	569	574	Coal
Sand & Shale	W/G	M/H	574	858	
Coal	Black	S	858	863	Coal
Sand & Shale	Grey	M	863	1280	
Red Rock	Red	S	1280	1340	
Little Lime	Grey	S	1340	1355	
Shale	Grey	H	1355	1396	
Big Lime	Grey	S	1396	1500	
Big Injun	Grey	H	1500	1570	
Sand	Grey	S	1570	1668	
Weir	Grey	H	1668	1708	
Sand & Shale	Grey	S	1708	2208	
4th Sand	Grey	S	2208	2224	
Shale & R/R	Grey & Red	S	2224	2360	
5th Sand	Grey	M	2360	2370	
Sand & Shale	Grey	H	2370	2475	
Bayard	Red	S	2475	2498	
Sand & Shale	Grey	S	2498	2570	
Red Rock	Red	S	2570	3000	Gas Ck @ 2719' - No Show
Sandy Shale	Grey	M	3000	3275	
Sand	Grey	S	3275	3280	
Sand & Shale	Grey	H	3280	3472	Gas Ck @ 3312' - No Show
Sand	Grey	S	3472	4103	

(CONTINUED ON PAGE 2)
(Attach separate sheets as necessary)

SEE PAGE 2

Note: Regulation 2.02(f) 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."

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9100430P

Berry Energy Consultants & Mgrs. Inc.

WELL NO: B-577

PERMIT NO: 47-091-0430

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fres and salt water, coal, oil and gas
Riley	Grey	M	4103	4133	
Sand & Shale	Grey	S	4133	4332	Gas Ck @ 4214' - No Show
Benson	Grey	H	4332	4382	
Sand & Shale	Grey	M	4382	4755	
Sand	Grey	M	4755	4800	
Shale	Grey	H	4800	4955	
3rd Elk	Grey	S	4955	4966	Gas Ck @ 5212' - No Show
Sand	Grey	M	4966	5010	
Shale	Grey	H	5010	5085	
Sand & Shale	Grey	N	5085	5850 TD	

(Attach separate sheets as necessary)

Berry Energy Consultants & Mgrs.
 Well Operator
 by: *[Signature]*
 Date: 12-7-84

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

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BERRY ENERGY CONSULTANTS & MGR'S INC.

Well No. B-577
 Permit No. Taylor-430
 Lease No. _____

Well Activity Report

Drilling Commenced 10-24-84
 Drilling Completed 11-01-84
 Driller's T.D. 5650
 Logger's T.D. 5550 Mr. Craig J. W.

Date of This Report 11-5-84
 By Pat Rittles
 Drilling Co. Development Drilling
 Rig No. #7 Tool Pusher Tommy Miller

FORMATION DEPTHS FROM OPEN HOLE LOG

Biglime 1396-1560
Biglime 1500-1570
Clay 1668-1708
4th Sand 2208-2224
5th Sand 2360-2372
Bayard 2475-2495
Riley 4103-4133
Benson 4332-4382
2nd Elk 4955-4966

CASING (in Place)			
Size	Date Ran	Footage	Socks/Fill Up
8 5/8	10-26-84	1167	25 socks
4 1/2	11-02-84	4484	200 socks

Latch Down @ 4474

Bottle Size	Depth	CEMENTER
3 9/16	4170	
		CONDUCTOR
		PROTECTIVE STG.
		PRODUCTION STG.
		OTHER

Logger Superior Wireline Controls Engineer
 Well was scraped to T.D. Red 8" job

FRAC. TREATMENT DATA:		Service Co.				
Date of Treatment	<u>11-16-84</u>	<u>Nowaco</u>	Perforating Co. <u>SUPERIOR WIRELINE</u>			
	1st Stage	2nd Stage	3rd Stage	4th Stage	5th Stage	JOB TOTALS
Formation	<u>BEHSON</u>	<u>RILEY</u>				
Sand	<u>60,000</u>	<u>80,000</u>				<u>140,000</u>
Sand						
Fluid bbl.	<u>260</u>	<u>331</u>				<u>591</u>
Foam	<u>1040</u>	<u>1324</u>				<u>2364</u>
N2	<u>924,000</u>	<u>1,028,000</u>				<u>1,952,000</u>
Avg. Treat. Pres.	<u>3215</u>	<u>3131</u>				
Perforations	<u>4325-4328</u>	<u>4106-4118</u>				
Perforations	<u>12 .41</u>	<u>14 .39</u>				
No. Size						
Test Date	<u>O.F.</u>	<u>R. Rock</u>	Days Shut In _____			

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WW-4A
Revised 6-07

1) Date: August 10, 2015
2) Operator's Well Number
B-577

3) API Well No.: 47 - 91 - 00430

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>St. Augustine Catholic Church</u>	Name <u>CoalQuest Development, LLC</u> <i>Waiver</i>
Address <u>17 W. Washington Street</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:

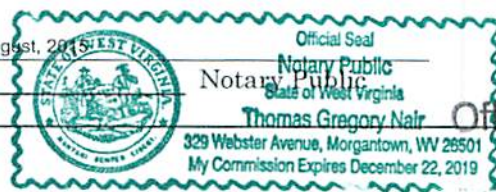
- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

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 2708 Cranberry Square
Morgantown, West Virginia 26508
 Telephone (304) 594-1616

Subscribed and sworn before me this 10 day of August, 2015
Thomas Gregory Nair
 My Commission Expires December 22, 2019



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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.

9/18/2015

SURFACE OWNER WAIVER

Operator's Well
Number

B-577

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,
PARTNERSHIP, ETC.

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AUG 10 2015

_____	Date _____	Name _____
Signature		By _____
		Its _____
		Date _____

Signature _____ Date **9/18/2015**

WW-4B

API No. 47-91-00430
Farm Name _____
Well No. B-577

**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.

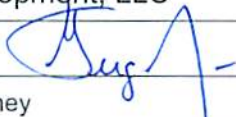
This notice and application is given to you in order that your respective representatives may be present at the plugging and filling of said well. You are further notified that whether you are represented or not the operator will proceed to plug and fill said well in the manner required by Section 24, 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: 8/11/15

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

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AUG 19 2015
19 2015

9/18/2015

POWER OF ATTORNEY

**COALQUEST DEVELOPMENT LLC
TO
GREG NAIR**

Dated: January 1, 2015

Expires: December 31, 2015

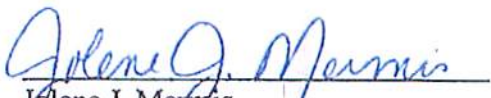
KNOW ALL MEN BY THESE PRESENTS: That CoalQuest Development LLC ("Company"), a limited liability company organized and existing under the laws of the State of Delaware, acting by and through James E. Florczak, its duly authorized Vice President and Treasurer, has and does hereby appoint Greg Nair its 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, 2015, 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 and attested as of the day and year first above written, by the undersigned, James E. Florczak, duly authorized Vice President and Treasurer of the Company, and Jolene J. Mermis, duly elected Assistant Secretary of the Company.

Attest:

COALQUEST DEVELOPMENT LLC



Jolene J. Mermis
Assistant Secretary of the Company



James E. Florczak
Vice President and Treasurer

Received
Office of Oil & Gas
AUG 19 2015

9/18/2015

POWER OF ATTORNEY
ICG TYGART VALLEY, LLC
TO
GREG NAIR

Dated: January 1, 2015

Expires: December 31, 2015

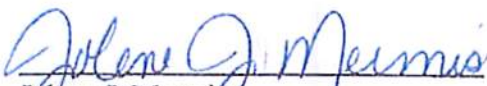
KNOW ALL MEN BY THESE PRESENTS: That ICG Tygart Valley, LLC, a limited liability company organized and existing under the laws of the State of Delaware (the "Company"), acting by and through James E. Florczak, its duly authorized Vice President and Treasurer, has and does hereby appoint Greg Nair its 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.

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Attest:

ICG TYGART VALLEY, LLC



Jolene J. Mermis
Assistant Secretary of the Company



James E. Florczak
Vice President and Treasurer

Received
Office of Oil & Gas

AUG 19 2015

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 Three Fork Creek Quadrangle Grafton (378)

Elevation 1485 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 Disposal (Supply form WW-9 for disposal location)
- Other (Explain Tanks - See attached letter)

Proposed Work For Which Pit Will Be Used:

- Drilling
- Workover
- Other (Explain _____)
- Swabbing
- Plugging

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.

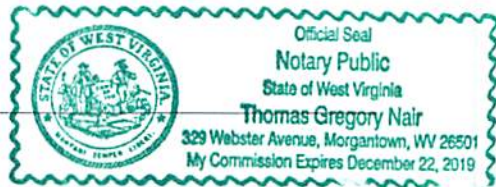
Company Official Signature [Signature]
Company Official (Typed Name) Charles E. Duckworth
Company Official Title Designated Agent

Received
Office of Oil & Gas
AUG 19 2015

Subscribed and sworn before me this 11 day of August, 2015

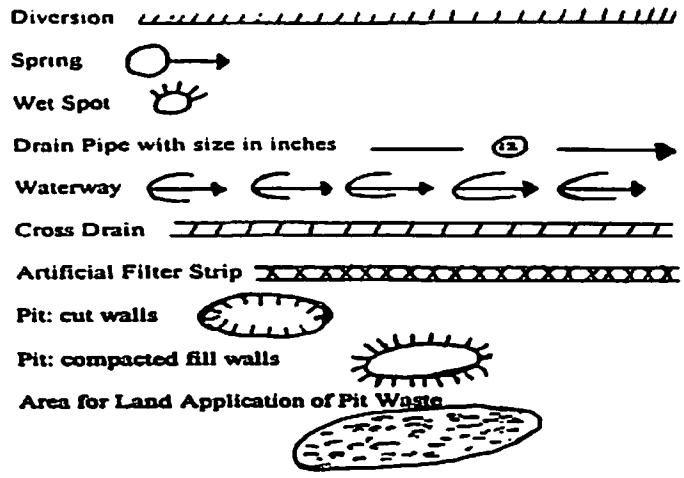
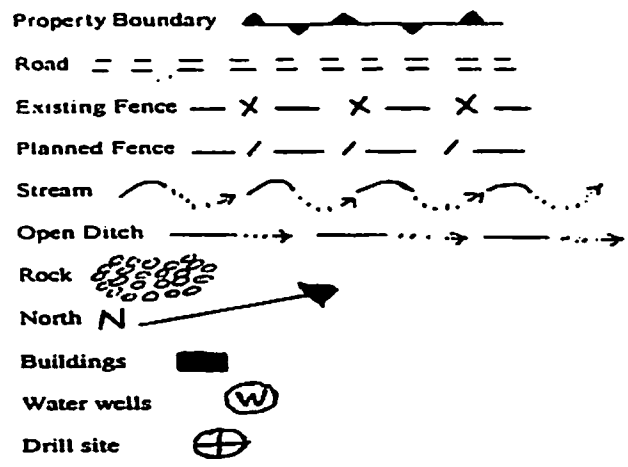
[Signature] Notary Public

My commission expires December 22, 2019



[Signature]
9/18/2015

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

Seed Type	Area I lbs/acre
Orchard Grass	12
Landino Clover	3
Timothy	10

Seed Type	Area II lbs/acre
Orchard Grass	12
Landino Clover	3
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: *Amos Reynolds*

Comments: RECLAIM, SLOPE + MULCH AS AP

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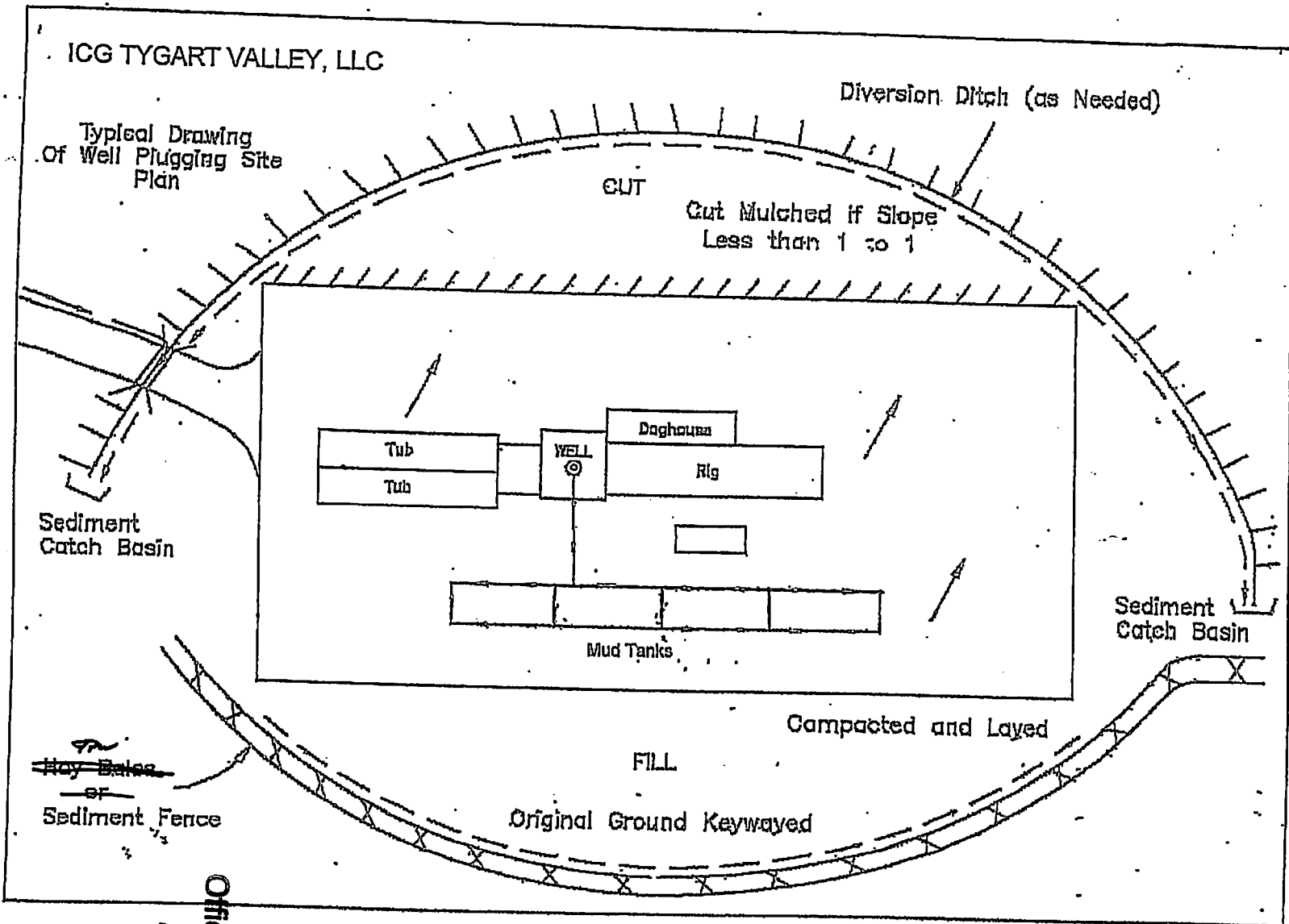
Title: AL & GAS INSPECTION

Date: 8-18-15

Field Reviewed? () Yes () No

ICG TYGART VALLEY, LLC

Typical Drawing
Of Well Plugging Site
Plan



Sediment
Catch Basin

~~Hay Bales~~
or
Sediment Fence

Compacted and Layed

Sediment
Catch Basin

Mud Tanks

CUT

Cut Mulched if Slope
Less than 1 to 1

Diversion Ditch (as Needed)

FILL

Original Ground Keywayed

Received
Office of Oil & Gas
AUG 19 2015

9/20/15



ICG TYGART VALLEY, LLC

2708 Cranberry Square, Morgantown, West Virginia 26508

August 10, 2015

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,

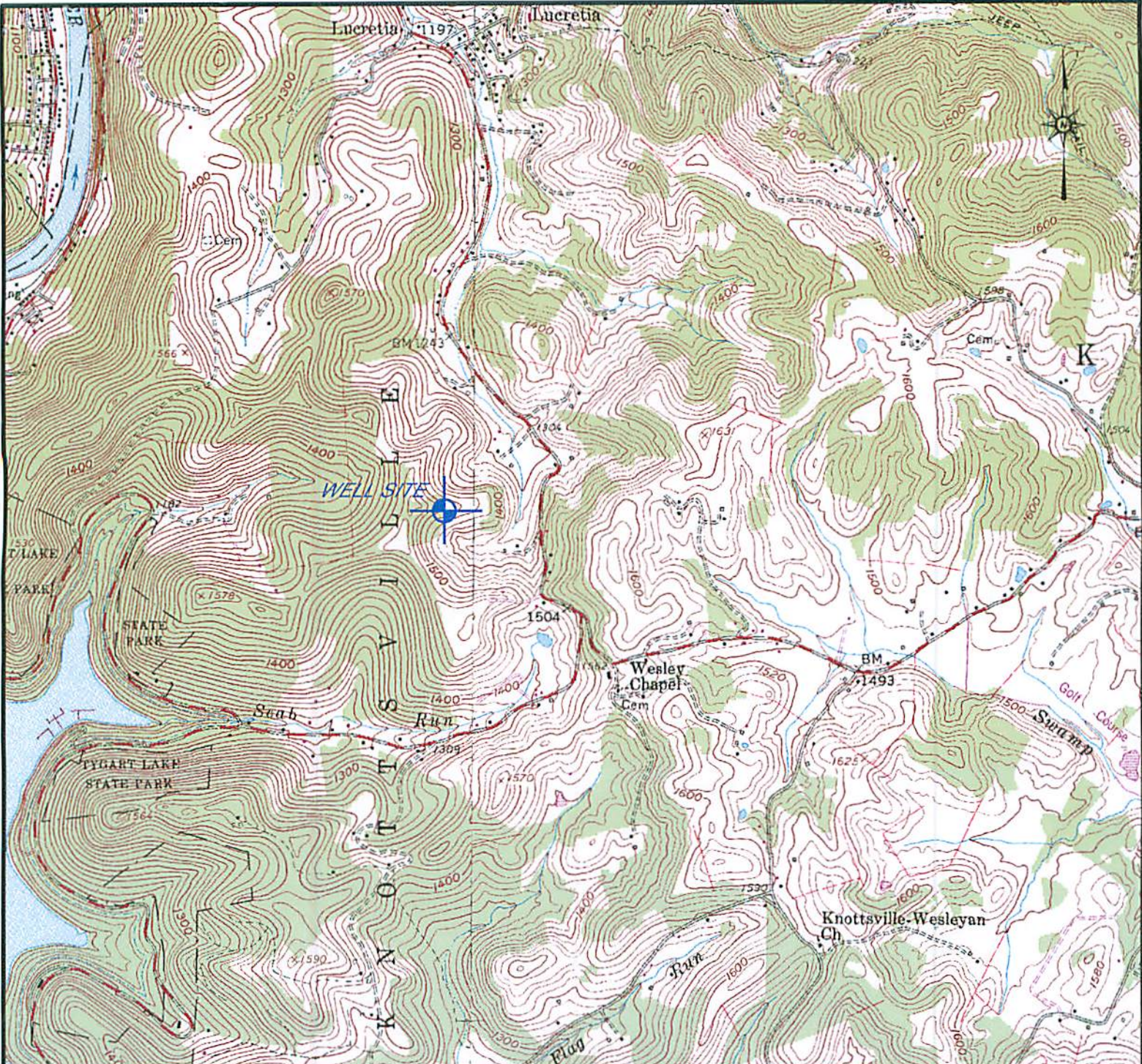
A handwritten signature in blue ink, appearing to read "C. Duckworth", is written over a large, stylized blue scribble.

Charles E. Duckworth
Designated Agent

Received
Office of Oil & Gas
AUG 19 2015

9/18/2015

9100430P



Received
Office of Oil & Gas

116 8-18-14

AUG 19 2015

LATITUDE: 39° 18' 41"
 LONGITUDE: 80° 00' 05"
 NEAREST WATERCOURSE: Three Fork Creek
 NEAREST TOWN: Knottsville

OPERATOR'S WELL NO. B-577
 API WELL NO. D-79
 47 - 091 - 00430
 STATE COUNTY PERMIT

WELL TYPE: OIL _____ GAS X LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS") PRODUCTION X STORAGE _____ DEEP _____ SHALLOW X
 LOCATION: ELEVATION 1485 WATERSHED Three Fork Creek
 DISTRICT Knottsville COUNTY Taylor
 QUADRANGLE Thornton 7 1/2"
 SURFACE OWNER: St. Augustine Catholic Church ACREAGE _____
 OIL & GAS ROYALTY OWNER: St. Augustine Catholic Church LEASE ACREAGE _____
 LEASE NO. _____
 PROPOSED WORK: DRILL X 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, Elk, Havery ESTIMATED DEPTH 5600'
 WELL OPERATOR ICG Tygart Valley, LLC DESIGNATED AGENT Charles E. Duckworth
 ADDRESS 2708 Cranberry Square, Morgantown, WV 26508 ADDRESS 1200 Tygart Drive, Grafton, WV 26508

REVISED BY	DATE	API WELL NO. 47-091-00430 B-577
ICG TYGART VALLEY, LLC		
DRAWN BY: <u>Tom A. Hill</u>	SCALE: 1" = 200'	
DIRECTORY DIGITIZING #1 WV OIL & GAS PERMIT MAPS	DATE ORIGINATED JANUARY 2015	
DRAWING NO.: 47-091-00430.dgn	PLOTTING DATES	



Appalachia - Northern Region
 2708 Cranberry Square, Morgantown, WV 26508
 Phone: 304-594-1616 Fax: 304-594-1617

9/18/2015

WW-7
8-30-06



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

API: 47-091-00430 WELL NO.: B-577

FARM NAME: St. Augustine Catholic Church

RESPONSIBLE PARTY NAME: ICG Tygart Valley, LLC

COUNTY: Taylor DISTRICT: Knottsville

QUADRANGLE: Grafton

SURFACE OWNER: St. Augustine Catholic Church

ROYALTY OWNER: St. Augustine Catholic Church

UTM GPS NORTHING: 4351819.312

UTM GPS EASTING: 586101.830 GPS ELEVATION: 1488.35

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:

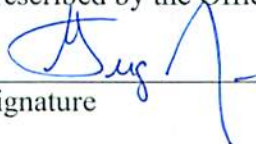
1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

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

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

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.

	Power of Attorney	August 10, 2015
Signature	Title	Date

Received
Office of Oil & Gas

AUG 19 2015