



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

April 23, 2014

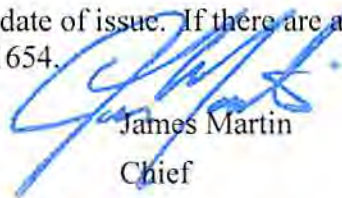
WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-9100507, 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: J-1220
Farm Name: SHACKLEFORD, HOWARD
API Well Number: 47-9100507
Permit Type: Plugging
Date Issued: 04/23/2014

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 March 12, 2014
2) Operator's Well No. J-1220
3) API Well No. 47-91 - 00507

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 1590 Watershed Three Fork Creek
District Knottsville County Taylor Quadrangle Thornton (638)

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 EXHIBIT NOS. 1 and 2


Received

MAR 24 2014

Office of Oil and Gas
WV Dept. of Environmental Protection

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

Work order approved by inspector *James Greynolds* Date 3-21-14

 ICG TYGART, LLC API 47- 091- 00507 WELL J-1220 WELL PLUGGING (SOLID PLUG METHOD)

BACKGROUND INFORMATION

From well records provided by the WV DEP- Office of Oil and Gas, it appears that the above referenced well was drilled and completed in 1985. The IV-35 indicates that 1000.00 feet of 8 5/8" casing was set and cemented with 260 sacks of cement. This amount of cement should have circulated to the surface with a 40% excess.

The well record also indicates that 5229.00 feet of 4 ½ " casing was set with 510 sacks of cement. Since, so much cement was used and hydrostatic pressure would have been a concern, it is reasonable to assume that a lighter weight cement than Class A Portland was used. It was, and still is common to use cement with yields above 2.00 cubic feet per sack to cement production strings set to this depth. It then follows that the top of cement (TOC) around the 4 ½" casing is probably above the 8 5/8" casing seat. Therefore, when you free-point or bond log the 4 ½" casing, the subsequent 4 ½" casing cut will probably be above the 8 5/8" casing seat. This could be problematic and OO&G wants to make you aware of this possibility.

If the above scenario becomes evident and changes to the plugging procedure are needed, notify Kenneth Greynolds, Oil and Gas Inspector by phone at 304-206-6613.

Jeff McLaughlin, 04/21/2014



WV DEP, Office of Oil and Gas

04/25/2014

EXHIBIT NO. 2

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.). *CHECK TD. ORIGINAL WELL DRILLED TO 5409'*
- **Day 3** - Continue to pick up 2 3/8" drill pipe and cleanout to T.D. 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 3,191'), *?* perforate/cut 4 1/2" casing every 100' from 5,137' to 3,291'. ~~Total shots needed 120.~~
- **Day 5** - Trip in hole (T.I.H) with 2 3/8" drill pipe to T.D. Cement hole from 5,239' back to 3,191' with 160 sacks of Class A Cement with a gas blocker additive. Circulate hole, condition mud, T.O.H. *SEE ★*
- **Day 6** - T.I.H with 3 3/4" bit to tag top of cement plug. T.O.H, T.I.H with 4 1/2" pressure pipe cutter, cut 4 1/2" casing just above top of bonded casing at 3,185'. Lay down 2 3/8" drill pipe. *MAKE SURE PERFORATIONS ARE COVERED*
TOC OF 4 1/2" WILL PROBABLY BE ABOVE 8 5/8" CASING SEAT.
- **Day 7** - Continue to lay down 2 3/8" drill pipe. Rig up 4 1/2" casing spear. Hook to 4 1/2" casing at the surface, release slips from wellhead and attempt work 4 1/2" casing free to *CUT* 3,185'. Lay down 4 1/2" casing.
- **Day 8** - Rig up 7 7/8" bit. Pick up drill collars and drill pipe, start cleaning hole to top of remaining 4 1/2" casing at 3,185'. *CUT.*
- **Day 9** - Continue to clean hole with 7 7/8" bit to top of remaining 4 1/2" casing at 3,185'. Circulate hole. T.O.H with 7 7/8" bit. T.I.H with open ended 3 1/2" drill pipe. *CUT.*
- **Day 10** - Cement hole from 3,191' to within 50' of bottom of 8 5/8" casing at 1,031' with 1,000 gallons of mud flush and 500 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" pressure pipe cutter. Cut 8 5/8" casing every 100' from 891' to 381' (6 cuts total). T.O.H with 8 5/8" cutter. T.I.H with 8 5/8" section mill, Section mill 30' window in 8 5/8" casing through coal seam.
- **Day 12** - Continue to section mill 8 5/8" casing through 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 1,031'. Circulate hole at 1,031'. T.O.H with 7 7/8" bit. Run caliper log to verify window and cuts in 8 5/8" casing. Lay down drill collars and fishing tools. Prepare to cement hole to surface.

Received

MAR 24 2014

Office of Oil and Gas
of Environmental Protection

04/25/2014

EXHIBIT NO. 2

CLEANOUT/PLUGGING PLAN

- **Day 15** – Cement hole from 1,031' to surface using 180 sacks of Class A cement with 4% gel and 120 sacks of Thixotropic cement with green dye. Clean out mud tank. Rig down equipment and prepare to move rig to next site.

Received

MAR 24 2014

Office of Oil and Gas
WV Dept. of Environmental Protection

04/25/2014

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 ^{CEMENT} 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".

Received

MAR 24 2014

U.S. Environmental Protection Agency

04/25/2014

IV-35
(Rev 8-81)

RECEIVED
AUG 8 - 1985



DIVISION OF OIL & GAS State of West Virginia
DEPARTMENT OF ENERGY Department of Mines
and Gas Division

Date July 26, 1985
Operator's
Well No. J-1220
Farm Shackelford
API No. 47 - 091 - 0507

DIVISION OF OIL & GAS WELL OPERATOR'S REPORT
DEPARTMENT OF ENERGY 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: 1590 Watershed Swamp Run
District: Knottsville County Taylor Quadrangle Thornton

COMPANY J&J Enterprises, Inc.

ADDRESS P.O. Box 48, Buckhannon, WV 26201

DESIGNATED AGENT Richard Reddecliff

ADDRESS P.O. Box 48, Buckhannon, WV 26201

SURFACE OWNER Howard G. Shackelford

ADDRESS Rt. # 1, Grafton, WV 26354

MINERAL RIGHTS OWNER Same as surface

ADDRESS

OIL AND GAS INSPECTOR FOR THIS WORK Donald Ellis

ADDRESS 2604 Crab Apple Lane
Fairmont, WV 26554

PERMIT ISSUED 6/5/85

DRILLING COMMENCED 6/24/85

DRILLING COMPLETED 6/29/85

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 Com.			
13-10"	31	0	0 sks.
9 5/8			
8 5/8	1000	1000	260 sks.
7			
5 1/2			
4 1/2	5229	5229	510 sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Haverty Depth feet

Depth of completed well 5909 feet Rotary x / Cable Tools

Water strata depth: Fresh 75 feet; Salt 0 feet

Coal seam depths: None Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation 3 rd. ELk Pay zone depth 5125-29 feet

Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d

Combined Final open flow 207 Mcf/d Final open flow Bbl/d

Time of open flow between initial and final tests 4 hours

Static rock pressure 1150 psig (surface measurement) after 96 hours shut in

(If applicable due to multiple completion--)

3420-24
3218-28

Second producing formation Speechley & Balltown 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)

04/25/2014
TAY 507

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

3rd Elk: Perforations: 5125-29 (16 holes)
 Fracturing: 335 sks. 20/40 sand: 500 gal. acid: 431 Bbls. fluid.
 Speechley: Perforations: 3218-28 (16 holes)
 Fracturing: 420 sks. 20/40 sand: 500 gal. acid: 485 Bbls. fluid.
 Balltown: Perforations: 3420-24 (16 holes)
 Fracturing: 320 sks. 20/40 sand: 500 gal. acid: 382 Bbls. fluid.

BOTTOM HOLE PRESSURE $P_f = P_{we} \times GLS$

$$t=60 + (0.0075 \times 5229) \times 459.7 = 559 \quad X = \frac{1}{53.35} \times 559 = 29823 \quad = 0.000034 \quad P_f = 1150 \times 2.72$$

$$(0.000034) (0.593) (4275) (0.9) = 1150 \times 2.72^{0.08} = 1150 \times 1.08$$

Pf=1242 psi

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	3	
Sandy & Black shale			3	18	
Sandy shale & sand			18	80	
Sand, shale & sandy shale			80	260	1/2" stream @ 75'
Sand, shale & red rock			260	405	
Sand & shale			405	690	Gas ck @ 1655 No show
Black shale			690	775	
Sand, shale & sandy shale			775	1015	Gas ck @ 1815 NO show
White sand			1015	1060	
Red rock & shale			1060	1220	Gas ck @ 2570 No show
Sandy shale & sand			1220	1280	
Sandy shale & sand			1280	1335	Gas ck @ 3525 No show
Sandy shale			1335	1450	
Big Lime			1450	1550	Gas ck @ 4352 No show
Injun			1550	1640	
Shale & sand			1640	1880	Gas ck @ 4510 NO show
Sand & sandy shale			1880	2035	
Shale & red rock			2035	2585	Gas ck @ 5464 No show
Sandy shale & sand			2585	3218	
Speechley			3218	3228	Gas ck @ 5807 2/10-1" w/water 14.90 cu.ft.
Sandy shale			3228	3420	
Balltown			3420	3424	
Sandy shale			3424	5125	
3rd ELk			5125	5129	
Sandy shale			5129	5909	
					T.D.

(Attach separate sheets as necessary)

J&J Enterprises, Inc.

Well Operator

By:

[Signature] 04/25/2014

Date:

7/26/85

Robert Dahlin-Geologist

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 sand, encountered in the drilling of a well."

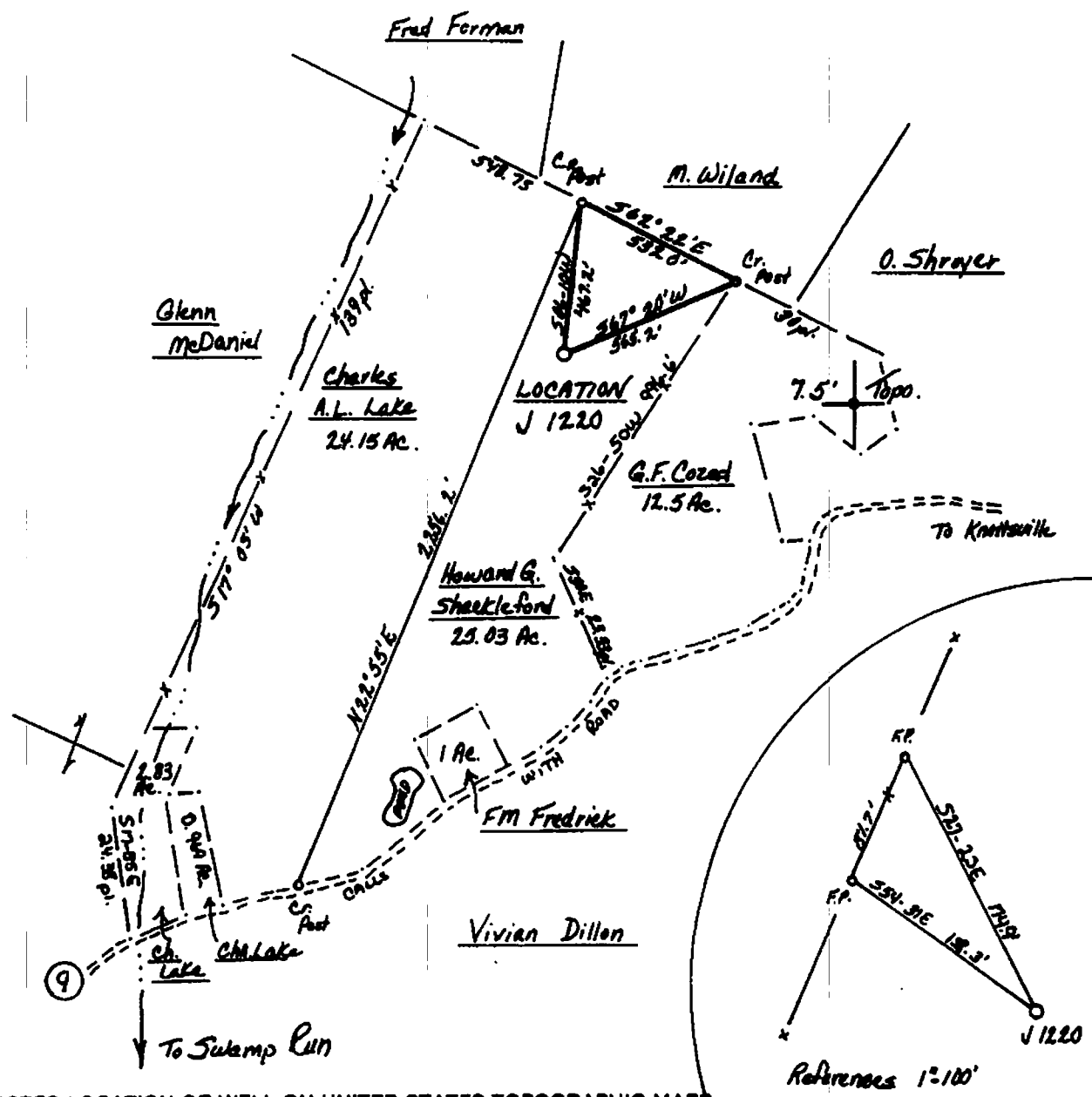
9100507A

3,800'

LATITUDE 39°20'00"

LONGITUDE 79°57'30"
7,625'

NORTH



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. 346.01
 DRAWING NO. 89-91
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1 in 200
 PROVEN SOURCE OF ELEVATION USGS B.M. Knottsville, 1483, USGS Thornton Quad.

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT 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 DEPARTMENT OF MINES.
 (SIGNED) _____
 R.P.E. _____ L.L.S. 555

PLACE SEAL HERE

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
OIL AND GAS DIVISION



DATE May 20, 1965
 OPERATOR'S WELL NO. J 1220
 API WELL NO. _____

WELL TYPE: OIL ___ GAS LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION STORAGE ___ DEEP ___ SHALLOW

LOCATION: ELEVATION 1590' WATER SHED Sulamp Run
 DISTRICT Knottsville COUNTY Taylor

QUADRANGLE Thornton
 SURFACE OWNER Howard Shackelford ACREAGE 25.03
 OIL & GAS ROYALTY OWNER _____ LEASE ACREAGE 50

LEASE NO. 1951
 PROPOSED WORK: DRILL CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION Haverly ESTIMATED DEPTH 5800'
 WELL OPERATOR J & J Enterprises, Inc. DESIGNATED AGENT Richard Raddecliff
 ADDRESS P.O. Box 48 ADDRESS P.O. Box 48
Buckhannon, W. Va. 26201 Buckhannon, W. Va. 26201

TAY
 COUNTY NAME
 0507
 PERMIT

04/25/2014

FORM IV-6 (6-78)
 H. T. HALL

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

3rd Elk: Perforations: 5125-29 (16 holes)
 Fracturing: 335 sks. 20/40 sand: 500 gal. acid: 431 Bbls. fluid.
 Speechley: Perforations: 3218-28 (16 holes)
 Fracturing: 420 sks. 20/40 sand: 500 gal. acid: 485 Bbls. fluid.
 Balltown: Perforations: 3420-24 (16 holes)
 Fracturing: 320 sks. 20/40 sand: 500 gal. acid: 382 Bbls. fluid:

BOTTOM HOLE PRESSURE $P_f = P_{we} \times GLS$

$$t = 60 + (0.0075 \times 5229) \times 459.7 = 559 \quad x = \frac{1}{53.35} \times 559 = \frac{1}{29823} = 0.000034 \quad P_f = 1150 \times 2.72$$

$$(0.000034)(0.593)(4275)(0.9) = 1150 \times 2.72^{0.08} = 1150 \times 1.08$$

$P_f = 1242$ psi

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
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Sandy shale & sand			18	80	
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Sand, shale & red rock			260	405	
Sand & shale			405	690	Gas ck @ 1655 No show
Black shale			690	775	
Sand, shale & sandy shale			775	1015	Gas ck @ 1815 NO show
White sand			1015	1060	
Red rock & shale			1060	1220	Gas ck @ 2570 No show
Sandy shale & sand			1220	1280	
Sandy shale & sand			1280	1335	Gas ck @ 3525 No show
Sandy shale			1335	1450	
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Shale & red rock			2035	2585	Gas ck @ 5464 No show
Sandy shale & sand			2585	3218	
Speechley			3218	3228	Gas ck @ 5807 2/10-1" w/water
Sandy shale			3228	3420	14.90 cu.ft.
Balltown			3420	3424	
Sandy shale			3424	5125	
3rd ELK			5125	5129	
Sandy shale			5129	5909	
				T.D.	

(Attach separate sheets as necessary)

Received

MAR 24 2014

J&J Enterprises, Inc.

Well Operator

By:

Date:

7/26/85

Robert Dahlin-Geologist

Office of Oil and Gas
 WV Dept. of Environmental Protection

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."

04/25/2014

9100507P

WW-4A
Revised 6-07

1) Date: March 12, 2014
2) Operator's Well Number
J-1220
3) API Well No.: 47 - 91 - 00507

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>Shirley J. Newlon</u> <i>W</i>	Name <u>CoalQuest Development, LLC</u> <i>W</i>
Address <u>RR 4, Box 198</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, West Virginia 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.

Received

MAR 24 2014

Office of Oil and Gas
WV Dept. of Environmental Protection

Well Operator	<u>ICG Tygart Valley, LLC</u>
By:	<u>Charles E. Duckworth</u>
Its:	<u>Designated Agent</u>
Address	<u>2708 Cranberry Square</u>
	<u>Morgantown, West Virginia 26508</u>
Telephone	<u>(304) 594-1616</u>

Subscribed and sworn before me this 14 day of March, 2014

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 depprivacyofficer@wv.gov.

04/25/2014

SURFACE OWNER WAIVER

API #

Operator's Well
Number

J-1220 (47-091-00495)

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

VOLUNTARY STATEMENT OF NO OBJECTION

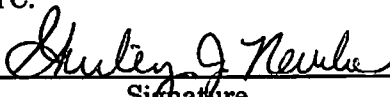
I hereby state that I have read the instructions to surface owners and that I have received ^{MAR 27 2014} copies of a Notice and Application For A Permit To Plug And Abandon on Forms WW-4A and WW-4B, and a survey plat.

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,

WV Dept. of Environmental Protection


 Signature _____ Date 3-13-14 Name _____
 By _____
 Its _____ Date _____
 Signature _____ Date 04/25/2014

POWER OF ATTORNEY

**COALQUEST DEVELOPMENT LLC
TO
GREG NAIR**

Dated: January 1, 2014

Expires: December 31, 2014

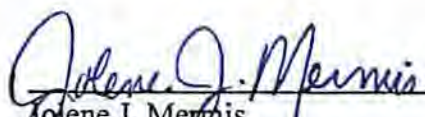
KNOW ALL MEN BY THESE PRESENTS: That CoalQuest Development LLC ("Company"), a limited liability company organized and existing under the laws of the State of Delaware, acting by and through James E. Florczak, its duly authorized Vice President and Treasurer, has and does hereby appoint Greg Nair its 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, 2014, 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.

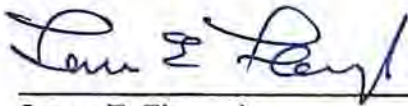
IN WITNESS WHEREOF, the Company has caused this Power of Attorney to be executed on its behalf, and its seal to be hereunto affixed and attested as of the day and year first above written, by the undersigned, James E. Florczak, duly authorized Vice President and Treasurer of the Company, and Jolene J. 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

M

API No. 47-91-00507 P
Farm Name Shackelford
Well No. J-1220

**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: 3/14/14

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

Received

MAR 24 2014

04/25/2014

9100507A

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 Thornton (638)

Elevation 1590 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

MAR 24 2014

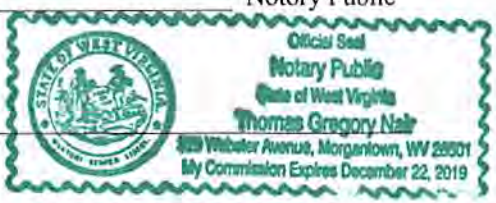
Office of Oil and Gas
WV Dept. of Environmental Protection

Subscribed and sworn before me this 14 day of March, 2014

[Signature]

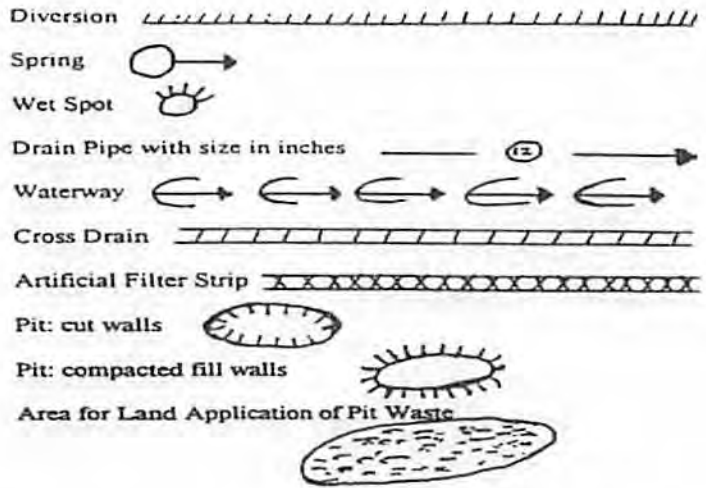
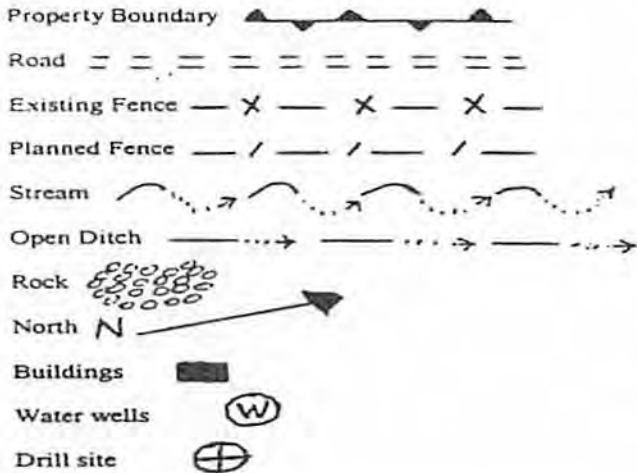
Notary Public

My commission expires December 22, 2019



04/25/2014

LEGEND



Proposed Revegetation Treatment: Acres Disturbed 1.00 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	Seed Type	Area II	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, RESEED + MULCH AS QUICKLY AS POSSIBLE

Received

Title: OIL & GAS INSPECTOR Date: 3-21-10

Field Reviewed? () Yes () No

MAR 24 2014



ICG TYGART VALLEY, LLC

2708 Cranberry Square, Morgantown, West Virginia 26508

March 12, 2014

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

Received

MAR 24 2014

Office of Oil and Gas
WV Dept. of Environmental Protection

04/25/2014

ICG TYGART VALLEY, LLC

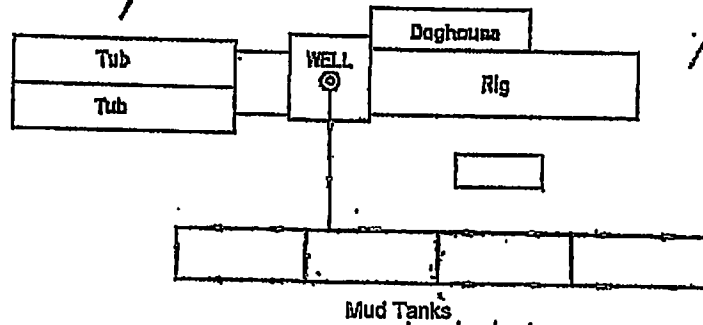
Typical Drawing
Of Well Plugging Site
Plan

Diversion Ditch (as Needed)

CUT

Cut Mulched if Slope
Less than 1 to 1

Sediment
Catch Basin



Sediment
Catch Basin

Compacted and Layed

FILL

Original Ground Keywayed

Hay Bales
or
Sediment Fence

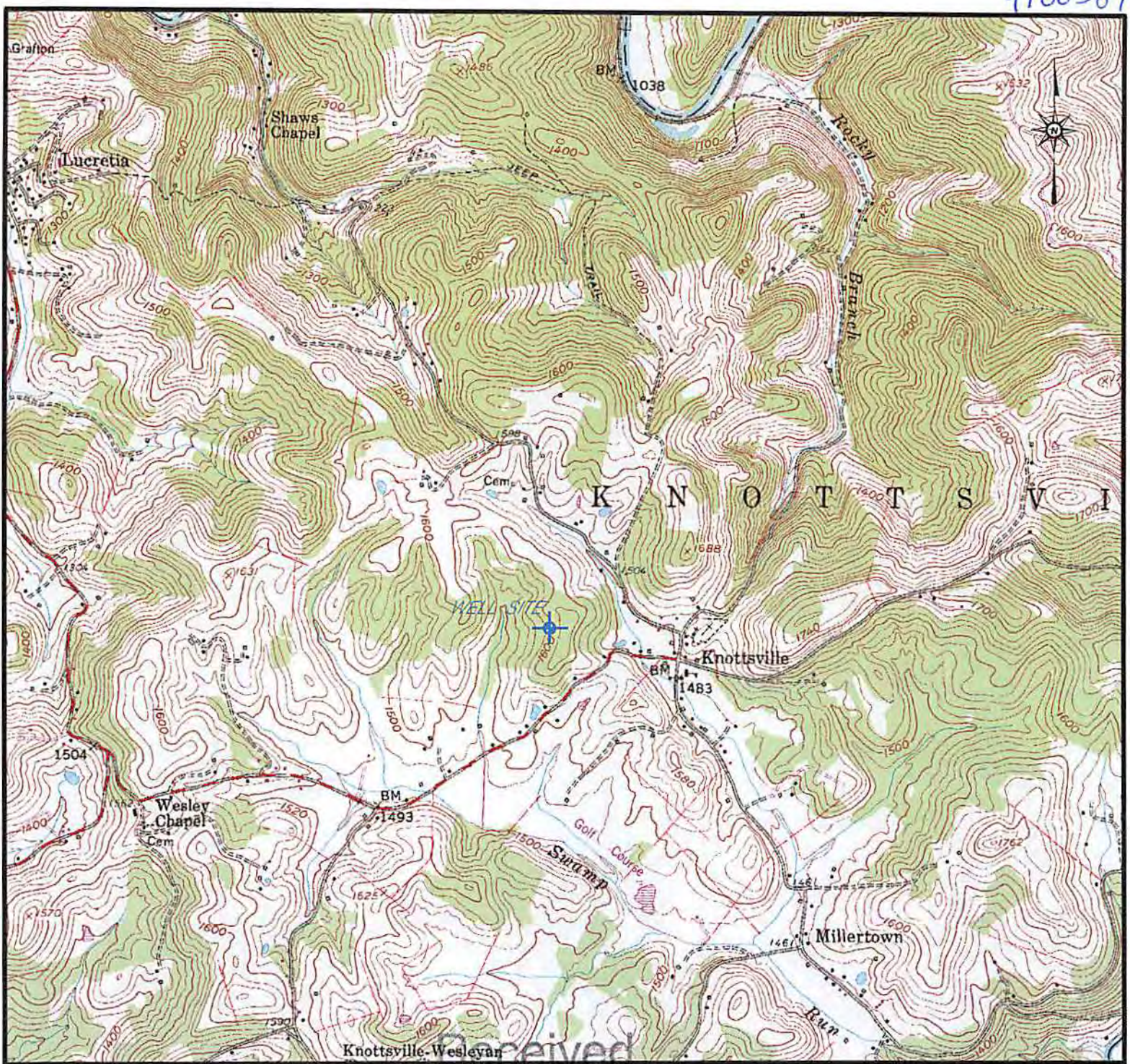
Received

MAR 24 2014

Office of Oil and Gas

9100507A

9100507F



LATITUDE: 39° 20' 00"
 LONGITUDE: 79° 57' 30"
 NEAREST WATERCOURSE: Swamp Run
 NEAREST TOWN: Knottsville

MAR 24 2014

Times dynamic 3-21-14

OPERATOR'S WELL NO. J-1220
 API WELL NO. _____
47 - 091 - C0507 P
 STATE COUNTY PERMIT

Office of Oil and Gas
 WV Dept. of Environmental Protection

WELL TYPE: OIL _____ GAS X LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS") PRODUCTION X STORAGE _____ DEEP _____ SHALLOW X _____
 LOCATION: ELEVATION 1590 WATERSHED Swamp Run
 DISTRICT Knottsville COUNTY Taylor
 QUADRANGLE Thornton 7 1/2"
 SURFACE OWNER: Howard Shackelford ACREAGE 25.03
 OIL & GAS ROYALTY OWNER: Howard Shackelford LEASE ACREAGE 50
 LEASE NO. 1951
 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 5800'
 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. 47-091-0507 J-1220	
		ICG TYGART VALLEY, LLC	
		DRAWN BY: <u>Tommy A. Hill</u>	SCALE: 1" = 2000'
		DIRECTORY: <u>DWG/TYG/VV #1 WV OIL & GAS PERMIT MAPS</u>	DATE ORIGINATED: JUNE 2013
		DRAWING NO.: <u>47-091-0507 J-1220.020</u>	PLOTTING <u>SDATES</u>



Appalachia - Northern Region
 2708 Cranberry Square, Morgantown, WV 26508
 Phone: 304-594-1616 Fax: 304-594-1606

04/25/2014

WW-7
8-30-06



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

API: 47-0910507 WELL NO.: J-1220

FARM NAME: Howard Shackelford

RESPONSIBLE PARTY NAME: ICG Tygart Valley, LLC

COUNTY: Taylor DISTRICT: Knottsville

QUADRANGLE: Thornton

SURFACE OWNER: Shirley J. Newlon

ROYALTY OWNER: Howard Shackelford

UTM GPS NORTHING: 4351987.259

UTM GPS EASTING: 588633.134 GPS ELEVATION: 1598.91

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 _____

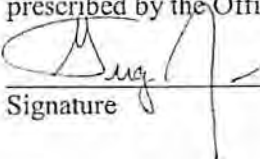
Real-Time Differential

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.



Signature

Attorney-in-fact

Title

March 12, 2014

Date

RECEIVED
Office of Oil and Gas
APR 22 2014
WV Department of
Environmental Protection



POWER OF ATTORNEY

**COALQUEST DEVELOPMENT LLC
TO
GREG NAIR**

Dated: January 1, 2014

Expires: December 31, 2014

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.

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Received

MAR 24 2014

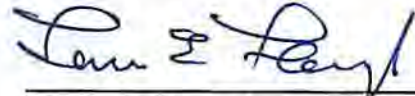
Attest:

COALQUEST DEVELOPMENT LLC

Office of Oil and Gas
WV Dept. of Environmental Protection



Jolene J. Mermis
Assistant Secretary of the Company



James E. Florczak
Vice President and Treasurer