



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, 2015

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-10901985, issued to ENERVEST OPERATING L. L. C., 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: LC-82C-147

Farm Name: POCAHONTAS LAND CORP.

API Well Number: 47-10901985

Permit Type: Plugging

Date Issued: 04/23/2015

Promoting a healthy environment.

04/24/2015

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.
4. This well is under a consent order and must be plugged under the terms of that agreement.

10901985CP

WW-4B
Rev. 2/01

1) Date _____, 20____
2) Operator's
Well No. LC-82C-147
3) API Well No. 47-109 - 01985

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 XCBM/ Liquid injection ____/ Waste disposal ____/
(If "Gas, Production ____ or Underground storage ____) Deep ____/ Shallow X

5) Location: Elevation 2957' Watershed Toney Fork
District Oceana County Wyoming Quadrangle Matheny (7.5) Pineville (15)

6) Well Operator EnerVest Operating, L.L.C. 7) Designated Agent Barry K. Lay
Address 300 Capitol Street, Suite 200 Address Same
Charleston, WV 25301

8) Oil and Gas Inspector to be notified
Mr. Danny Mullins
Danny.S. Mullins@wv.gov
304-932-6844

9) Plugging Contractor
Name R. L. Wharton Enterprises LTD
Address 261 Shiloh Lane
Buckhannon, WV 26201

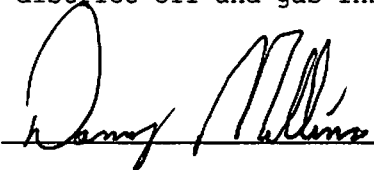
10) Work Order: The work order for the manner of plugging this well is as follows:
Mobilize equipment to site. Rig-up rig.
See Attached Procedure.

Received
Office of Oil & Gas
~~NOV 21 2014~~
RECEIVED
Office of Oil and Gas
FEB 27 2015

Note: Well records included.

WV Department of
Environmental Protection

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

Work order approved by inspector  Date 2-24-15

04/24/2015

LC-82C-147
API# 47-109-01985C
Wyoming County, WV
Elevation: 1,305' GL

LC-82C-147 Well Data

Casing: 7" 20# csg set at 2,557' KB, cemented to surface
★ CIBP set at 2,535 w/ 10' cement on top ? DOES NOT SHOW ON COMPLETION REPORTS.
Tubing: 2-3/8" 4.7# tbg set at 2,439' KB
Perforations: 2,366' - 2,368' KB

LC-82C-147 Procedure:

1. Prep LC-82C-147 location.
2. MIRU Service Rig and cement crew.
3. Break circulation and set 200' cement plug F/ 2,439' T/ 2,239'.
4. ~~TOOH to 2,300' and circulate hole with 6% gel.~~
5. ~~TOOH to 100' and set 100' cement plug F/ 100' T/ GL~~
6. Erect a monument with API number attached.
7. Reclaim location

4. CIRCULATE 6% GEL TO 1252'
5. TOOK FROM 1252' TO SURFACE WITH 1252' OF CLASS A CEMENT.

JNM
4/23/15

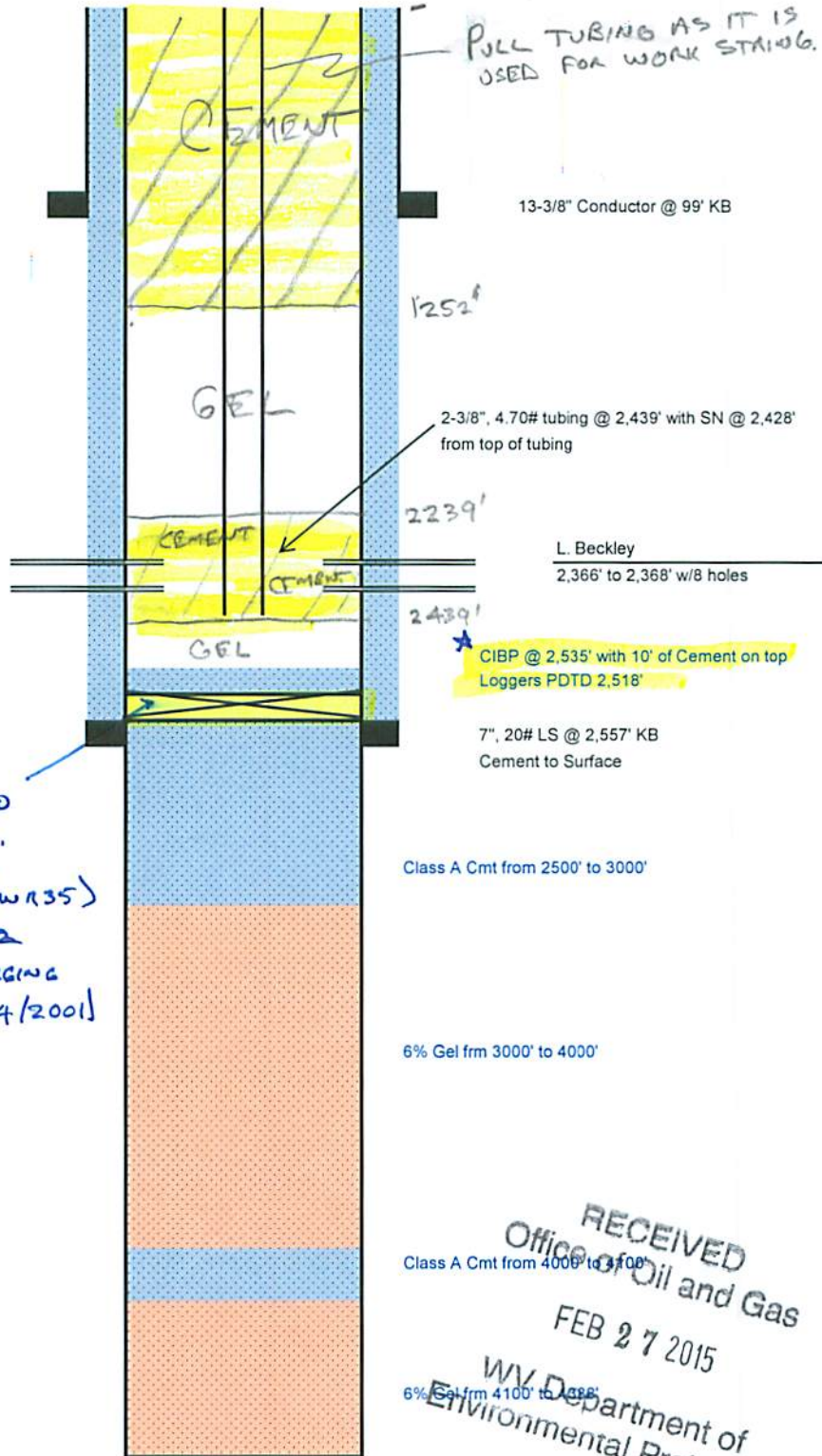
DM
~~Set plug From 1450 to 1040
 Set plug From 900 to 800
 Set plug From 690 to 590
 Set plug From 440 to SURFACE
 To cover coal seams and
 Fresh water
 going by the Drill record
 of the closest well
 API # 47-109-02030~~

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FEB 27 2015
WV Department of
Environmental Protection

Original: 05/09/13

LC-82C-147
47-109-01985C
Wyoming County, WV
Current Completion

Elevations: 1305' GL
1315' RKB



Frack with 4,300 lbs 20/40 sand & 274 bbls gelled water
Screened out at start of flush

★ DOES NOT APPRAR TO BE A CIBP IN WELL. IS NOT CONFIRMED IN COMPLETION REPORT (WR35) SUBMITTED 3/21/2002 OR IN WR38 (PLUGGING AFFIDAVIT) FILED 05/24/2001

JWM

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WV Department of
Environmental Protection

TAC

TD @ 4,388'
PBTD @ 2,494' After Frack

1/9

109-01985P

PLUGBACK PROCEDURE LC-147

This well dusted to TD, thus the hole is anticipated to be dry. The following plugback procedure as been discussed and approved by the State Inspector, Ofie Helmick:

Move in and fill-up 210 barrel water tank.

Move in and rig-up Jackson Well Service. Check TD/fluid level. If hole fill-up or fluid level is below 4100' the well may be plugged back by pumping the gel and cement down the 7" casing as follows:

Pump 1 barrel of 6% gel for each 25' of hole depth from 4100' down to the top of fluid level, (if no fluid or fill-up, this will be 12 barrels, (this allows 20% excess to wet the casing and for formation loss).

Pump 4.5 barrels, (22 sks) cement, (10% excess factored in)

Pump 45 barrels 6% gel, (10% excess factored in)

Pump 22 barrels, (105 sks) cement, (10% excess factored in)

Pump 5 barrels water to clean casing

This procedure will leave the well in the following physical condition:

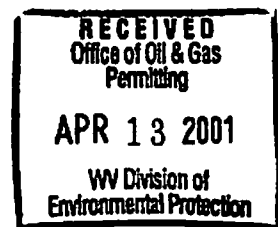
4388', (TD) back to 4100' - 6% gel

4100' to 4000' - Class "A" cement w/3% CaCl₂ + ¼ lb flake/sk

4000' to 3000' - 6% gel

3000' to 2500', (56' inside 7") - Class "A" cement w/3% CaCl₂ + ¼ lb flake/sk

In the event the fluid level is found to be above 4100', an alternate procedure involving tubing to spot cement and gel will be scheduled.



219

10901985C P

WR-35

DATE: 4-10-01
API #: 47-109-01985

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas

Reviewed APJ

Well Operator's Report of Well Work

Farm name: Pocahontas Land Corporation Operator Well No.: LC-147

LOCATION: Elevation: 2957 Quadrangle: Matheny WV 7.5

District: Oceana County: Wvoming

Latitude: 5220 Feet South of 37 Deg. 45 Min. 00 Sec.

Longitude 5300 Feet West of 81 Deg. 32 Min. 30 Sec.

Company:

Penn Virginia Oil & Gas Corporation

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: P.O. Box 387	13 3/8"	99'	99'	0
Duffield, VA 24244	7"	2557'	2557'	540

Agent: Harry Jewell

Inspector: Ofie Helmick

Date Permit Issued: 1-22-01

Date Well Work Commenced: 2-13-01

Date Well Work Completed: 3-28-01

Verbal Plugging: Yes

Date Permission granted on: 3-5-01

Rotary X Cable Rig

Total Depth (feet): 4388'

Fresh Water Depth (ft.): Damp @ 190'

Salt Water Depth (ft.):

Is coal being mined in area (N/Y)? N

Coal Depths (ft.): 56-60, 218-220, 529-532, 1049-1052, 2380-2384

OPEN FLOW DATA

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

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.

Signed:

By: [Signature]
Date: 4/10/01

04/24/2015

3/9

109 01985C P

FORM WR-35R
(REVERSE)

PERMIT #: 47-109-01985
WELL #: LC-147

DETAILS OF PERFORATIONS, FRACTURING, OR PHYSICAL CHANGE, ETC.

Well was plugged and abandoned as part of continuous drilling operations. Verbal approval was obtained from Ofie Helmick, WV DEP Oil and Gas Inspector on 3/5/01. Plugging operations were delayed, with Ofie's concurrence, due to adverse weather conditions (cementers unable to get to location).

Plugging operations were completed 3/28/01, in accordance with the following procedures that were approved by Ofie on 3/5/01.

Checked TD (4388') with WS rig. Found no fluid in hole. Loaded hole from TD to 4100' to 4100' with 6% gel. Set 23 sx cement plug from 4100' to 4000'. Loaded hole with 6% gel from 4000' to 3000' with 6% gel. Set 112 sx cement plug from 3000' to 2500'. Flushed cement with 35 bbls FW. Installed 7' x 2" swage w/2" valve in 7" casing.

We plan to re-permit well as a CBM well, with completions above the 7" casing seat @ 2557'.

<u>FORMATIONS</u>	<u>TOP</u>	<u>BOTTOM</u>	<u>REMARKS</u>
Sand, shale & coal	0	2560	
Sand & shale	2560	2900	
Sand	2900	2947	
Sand & shale	2947	3054	
Ravencliff Sand	3054	3078	
Avis Limestone	3078	3115	
Sand, Shale & Red Rock	3115	3225	
Shale & Red Rock	3225	3766	
Little Lime	3766	3846	
Lime & shale	3846	3890	
Big Lime	3890	4262	
Shale	4262	4388	No Shows Reported

APR 16 2001

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4/9

109 01985 CP

109-01985 R

CBM

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
COALBED METHANE PERMIT APPLICATION

1) Well Operator: PENN VIRGINIA OIL & GAS CORP Well Name Loup Creek

3) Operator's Well Number LC-82C-147 4) Elevation 2950

5) Well Type: (a) Oil / or Gas /
(b) If Gas: Production / Underground Storage / CBM X /
Deep / Shallow /

6) Proposed Target Formation(s): Beckley Coal

7) Proposed Total Depth: 2535 feet

8) Approximate Fresh Water Strata Depths: N/A

9) Approximate Salt Water Depths: N/A

West Virginia
Office of Oil & Gas
Permitting
APR 26 2001
WV Division of
Environmental Protection

10) Approximate Coal Seam Depths: 56-60, 218-220, 529-532, 1049-1052, to be treated:
Beckley Coal @ 2365 to 2369

11) Does Land Contain Coal Seams Tributary to Active Mines? Yes / No X /

12) (a) Proposed Well Work: Convert P&A well LC-147 (47-109-01985) to a CBM
Well LC-82C-147. As per attached procedure

(b) If Stimulation Proposed, Describe Means to be Used to Stimulate Well:
See attached Recompletion Procedure

13) (a) Does the proposed operation plan to convert an existing well (as defined in W. Va. Code
§ 22-6-1) or a vertical ventilation hole to a coalbed methane well? Yes X / No /

(b) If yes, please attach to this Application a list of all formations from which production is
anticipated and a description of any plans to plug any portion of the well. Will treat
Beckley Coal only @ 2366-2368

14) (a) Will the proposed coalbed methane well be completed in some but not all coal seams for
production (except for a gob well or vent hole proposed to be converted to a well)?
Yes X / No /

(b) If yes, please attach to this Application a plan and design for the well which will protect all
workable coal seams which will be penetrated by the well. 7" casing already cemented
to surface

15) (a) Does the proposed operation include horizontal drilling of a well commenced on the
surface? Yes / No X /

(b) If yes, please attach to this Application a description of such operations, including both the
vertical and horizontal alignment and extent of the well from the surface to total depth.

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS		FOOTAGE INTERVALS		CEMENT	
	Size	Grade	Weight per ft.	For Drilling		Left in Well
Conductor						
Fresh Water						
Coal						
Intermediate						
Production						
Tubing						
Liners						

PACKERS:

UNITED STATES OF AMERICA
 OFFICE OF OIL AND GAS REGULATION
 PERMITS
 APR 26 2001
 DEPARTMENT OF ENERGY
 DIVISION OF ENVIRONMENTAL PROTECTION

For Office of Oil and Gas Use Only

Fee(s) paid: \$450.
 Well Work Permit Reclamation Fund WPCP
 Plat WW-9 WW-5B Bond _____ Agent
 CK.# 8327 (Type)

6/9

109 01985C P

109-01985C

LC 82C-147 Recompletion Procedures (Convert P&A Well LC-147 to CBM Well)
April 11, 2001

Well Data:

TD: 4388'. PBTD: 2500'. Dry hole when drilled as a conventional well.
Plugged under Permit No. 47-109-01985

Casing:

13 3/8" @ 99'.
7", 20 ppf, LS @ 2557'. Cemented to surface.

Procedures:

1. Confirm PBTD and check fluid level in 7" casing.
- ★ 2. Set 7" CIBP @ 2535' +/- . Place 10' of cement on top of CIBP with dump bailer.
3. Run GR/CCL correlation log. Correlate with Allegheny WLS coal log run on March 5, 2001.
4. Perforate the Beckley Coal from 2366' to 2368' with 8 holes @ 4 SPF.
5. Run 7" treating packer (Arrow Model 1-X, or equivalent) on 3 1/2", 9.5 ppf, J55, 8rd, EUE (or equivalent) tubing (rental work string from Miller Supply) to 2350' +/-.
6. RU Schlumberger. Load 7" casing with produced water from a Loup Creek CBM well.
7. Spot 6 bbls 7.5% HCL acid to Beckley Coal perforations.
8. Set packer @ 2350' +/-.
9. Treat Beckley Coal with water and 20/40 sand gelled water frac as per Schlumberger pump schedule.
10. POOH/LD 3 1/2" tubing and packer.
11. Check TD with WS tools. Clean out, if necessary.
12. Run 2 3/8" production tubing, downhole pump and rods.
13. Set pump jack and install production equipment.
14. Place well on production.



04/24/2015

WR-38
DATE: 04/12/01.

7/9

API# 47-109-01985

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

AFFIDAVIT OF PLUGGING AND FILLING WELL

AFFIDAVIT SHOULD BE IN TRIPLICATE, one copy mailed to the Division, one copy to be retained by the Well Operator and the third copy (and extra copies if required) should be mailed to each coal operator at their respective addresses.



Farm name: POCAHONTAS LAND CORP Operator Well No.: LC-147

LOCATION: Elevation: 2957' Quadrangle: MATHENY 7 1/2'
District: OCEANA County: WYOMING
Latitude: 5220 Feet South of 37 Deg. 45 Min. 00 Sec.
Longitude: 5300 Feet West of 81 Deg. 32 Min. 30 Sec.

Well Type: OIL _____ GAS X

Company: PENN VIRGINIA OIL & GAS Coal Operator or Owner: Eastern Associated Coal Corp.
P.O. Box 387 800 Laidley Tower
DUFFIELD, VA 24244 Charleston, WV 24324

Agent: HARRY JEWELL Coal Operator or Owner: _____

Permit Issued Date: 01/22/2001

AFFIDAVIT

★ NO MENTION OF CIBP @ 2535 AS IN RECOMPLETION PROCEDURE OF 4/11/2001. gmm

STATE OF WEST VIRGINIA,
County of _____ ss:

JAMES R. BURNS and HARRY JEWELL being first duly sworn according to law depose and say that they are experienced in the work of plugging and filling oil and gas wells and were employed by the above named well operator, and participated in the work of plugging and filling the above well, and MR. OFIE HELMICK Oil and Gas Inspector representing the Director, say that said work was commenced on the 28 day of MARCH, 19 2001, and that the well was plugged and filled in the following manner:

TYPE	FROM	TO	PIPE REMOVED	LEFT
6 1/2 GEL	4100'	4388' TD		
CLASS A CMT	4000'	4100'		
6 1/2 GEL	3000'	4000'		
CLASS A CMT	2900'	3000'		2556' 7" CASING

[Signature] 5/30/01

Description of monument: 7" x 2" SWAGE and that the work of plugging and filling said well was completed on the 28 day of MARCH, 19 2001

And further deponents saith not. James Burns

Harry Jewell

Sworn and subscribe before me this 28th day of March, 19 2001
My commission expires: 7-31-03

Kita Hutson
Notary Public

Oil and Gas Inspector: [Signature]



8/9

WR-35

DATE: 03/19/2002
AP#: 4710901985C

State of West Virginia
Division of Environmental Production
Section of Oil and Gas

Reviewed h D

Well Operator's Report of Well Work

Farm Name Pocahontas Land Corporation

Operator Well No.: LC-82C-147

LOCATION Elevation: 2957

Quadrangle: Pilot Knob 7 1/2'

District: Oceana County: Wyoming
Latitude: 5200 Feet South of 37 Deg. 45 Min. 00 Sec.
Longitude: 5220 Feet West of 81 Deg. 32 Min. 30 Sec.

Company:

Penn Virginia Oil & Gas Corporation

Casing and Tubing Used in drilling Left in well Cement fill up Cu. Ft.

Address: 2550 East Stone Drive, Suite 110

Kingsport, TN 37660

Agent: Harry Jewell

Inspector: Ofie Helmick

Date Permit Issued: 06/18/2001 Recompletion inside existing 7" casing

Date Well Work Commenced:

Date Well Work Completed:

Verbal Plugging:

Date Permission granted on:

Rotary Cable Rig

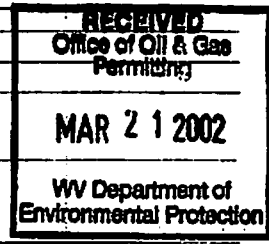
Total Depth (feet):

Fresh Water Depth (ft):

Salt Water Depth (ft):

Is coal being mined in area (N/Y)?

Coal Depths (ft):



OPEN FLOW DATA

Producing formation Beckley Coal Pay zone depth (ft) _____

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d

Final open flow Not Taken MCF/d Final open flow _____ Bbl/d

Time of open flow between initial and final tests: _____ Hours

Static rock pressure Not Taken psig (surface pressure) after _____ Hours

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 CHANE, TEC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Signed:

By: William M. Peyer
Date: 3/19/02

9/9

1090985CP

FORM WR-35R
(REVERSE)

PERMIT #: 4710901985C
WELL #: LC-82C-147

DETAILS OF PERFORATIONS, FRACTURING, OR PHYSICAL CHANGE, ETC.

Drilled out cement inside 4 1/2" casing from 2213' to 2575'. Stage 1 - Beckley Coal - Perforated from 2366' to 2368' with 8 holes. Treated below packer via 4 1/2" work string. Breakdown with 250 gallons 7.5% HCL acid and water. Treated with 274 bbls water and 4300 lbs of 20/40 sand. ISIP: 3744 psi. ATP: 3650 psi. ATR: 4 BPM. Job screened out during flush.

MAR 21 2002

<u>FORMATIONS</u>	<u>TOP</u>	<u>BOTTOM</u>	<u>REMARKS</u>
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04/24/2015

10901985CP

WW-4A
Revised 6-07

1) Date: _____
2) Operator's Well Number
LC-82C-147
3) API Well No.: 47 - 109 - 01985

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>Pocahontas Land Corp.</u>	Name _____
Address <u>PO Box 1517</u>	Address _____
<u>Bluefield, WV 24701-1517</u>	
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>Pocahontas Land Corporation</u>
	Address <u>PO Box 1517</u>
	<u>Bluefield, WV 24701-1517</u>
(c) Name _____	Name _____
Address _____	Address _____
6) Inspector <u>Mr. Danny Mullins</u>	(c) Coal Lessee with Declaration
Address <u>Danny.S. Mullins@wv.gov</u>	Name <u>Eastern Associated Coal Corp.</u>
Telephone <u>304-932-6844</u>	Address <u>800 Laidley Tower #1233</u>
	<u>Charleston, WV 24324-2145</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 reverse 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. 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
Office of Oil and Gas
FEB 27 2015
WV Department of Environmental Protection

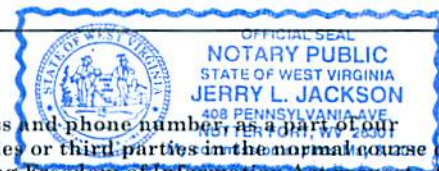
Received
Office of Oil & Gas
NOV 21 2014

Well Operator EnerVest Operating, L.L.C.
 By: Barry K. Lay
 Its: Senior Vice President and General Manager, Appalachia West Assets
 Address 300 Capitol Street, Suite 200
Charleston, WV 25301
 Telephone 304-343-5505

Subscribed and sworn before me this 11th day of August, 2014
Jerry L. Jackson Notary Public
My Commission Expires May 3, 2017

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.



04/24/2015

WESTON WV POSTAL SERVICE
 WESTON, West Virginia
 264529998
 5514560053 -0099
 (304)269-1475
 02/26/2015 02:24:46 PM

Product Description	Sale Qty	Receipt Unit Price	Final Price
BLUEFIELD WV 24701-1517 Zone-1 First-Class Mail Large Env 6.80 oz. Expected Delivery: Mon 03/02/15			\$2.24
*** Return Rcpt (Electronic) Use label # 70091410000097367093 for inquiry on Return Receipt (Electronic).			\$1.35
00 Certified USPS Certified Mail #: 70091410000097367093			\$3.30

Issue Postage: \$6.89

CHARLESTON WV 25301-2145 Zone-1 First-Class Mail Large Env 6.00 oz. Expected Delivery: Sat 02/28/15			\$2.03
*** Return Rcpt (Electronic) Use label # 70091410000097367109 for inquiry on Return Receipt (Electronic).			\$1.35
00 Certified USPS Certified Mail #: 70091410000097367109			\$3.30

Issue Postage: \$6.68

Total: \$13.57

Paid by:
 VISA \$13.57
 Account #: XXXXXXXXXXXX8403
 Approval #: 03295C
 Transaction #: 744
 23 902830041

For tracking or inquiries go to
 USPS.com or call 1-800-222-1811.

*** IMPORTANT: For Return Receipt
 (Electronic) wait one day go to

7009 1410 0000 9736 7109

U.S. Postal Service™
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Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 48.03	

Sent To: *Eastern Associated Coal Corp.*
 Street, Apt. No.;
 or PO Box No. *800 Laidley Tower #1233*
 City, State, ZIP+4 *Charleston WV 25324-2145*

PS Form 3800, August 2006 See Reverse for Instructions

7009 1410 0000 9736 7093

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Certified Fee	\$3.30	08
Return Receipt Fee (Endorsement Required)	\$1.35	Postmark Here 02/26/2015
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 46.89	

Sent To: *Pocahontas Land Corporation*
 Street, Apt. No.;
 or PO Box No. *P.O. Box 1517*
 City, State, ZIP+4 *Bluefield, WV 24701-1517*

PS Form 3800, August 2006 See Reverse for Instructions

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 Office of Oil and Gas
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 WV Department of
 Environmental Protection

10901985CP

WW-9
Rev. 5/08

Page _____ of _____
API Number 47 - 109 - 01985
Operator's Well No. LC-82C-147

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 EnerVest Operating, L.L.C. OP Code 30-9999

Watershed Toney Fork Quadrangle Matheny (7.5) Pineville (15)

Elevation 2957' County Wyoming District Oceana

Description of anticipated Pit Waste: No Pit To Be Built

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

ANY WELL EFFLUENT MUST BE
CONTAINED IN TANKS AND DISPOSED
OF PROPERLY.

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 _____)

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Proposed Work For Which Pit Will Be Used:

- Drilling
- Workover
- Other (Explain No Pit To Be Built)
- 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 Barry K Lay RECEIVED
Office of Oil and Gas

Company Official (Typed Name) Barry K. Lay

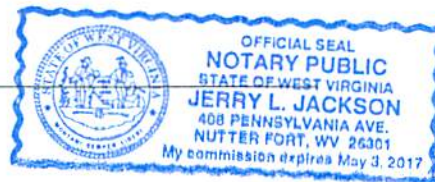
Company Official Title Senior Vice President and General Manager, Appalachia West Assets FEB 27 2015

WV Department of
Environmental Protection

Subscribed and sworn before me this 11th day of August, 2014

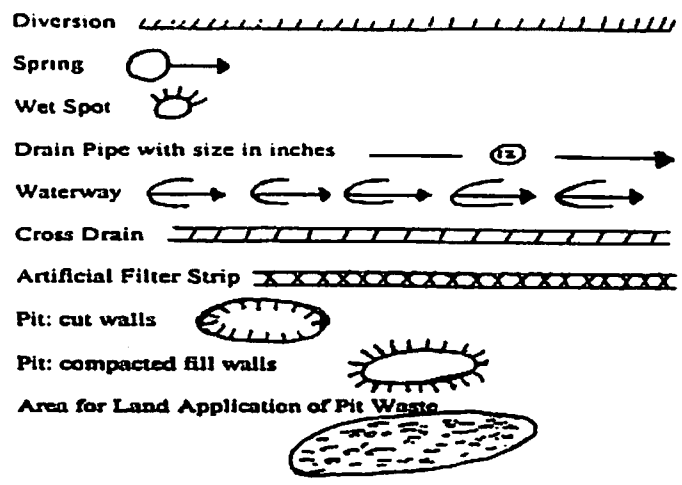
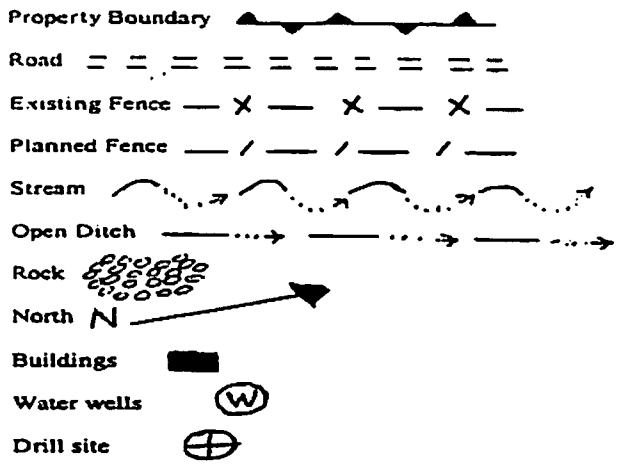
Jerry L. Jackson Notary Public

My commission expires May 3, 2017



04/24/2015

LEGEND



Proposed Revegetation Treatment: Acres Disturbed 2.00 Prevegetation pH 6.5
 Lime according to pH test Tons/acre or to correct to pH 7.0
 Fertilizer (10-20-20 or equivalent) 500 lbs/acre (500 lbs minimum)
 Mulch Hay or Straw 2 Tons/acre

Seed Mixtures

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
Orchardgrass	25	Orchardgrass	25
Birdsfoot Trefoil	15	Birdsfoot Trefoil	15
Ladino Clover	10	Ladino Clover	10

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

Photocopied section of involved 7.5' topographic sheet.

See Attached GPS Well Location Form: GPS WW-7

Plan Approved by: Danny Miller

Comments: _____

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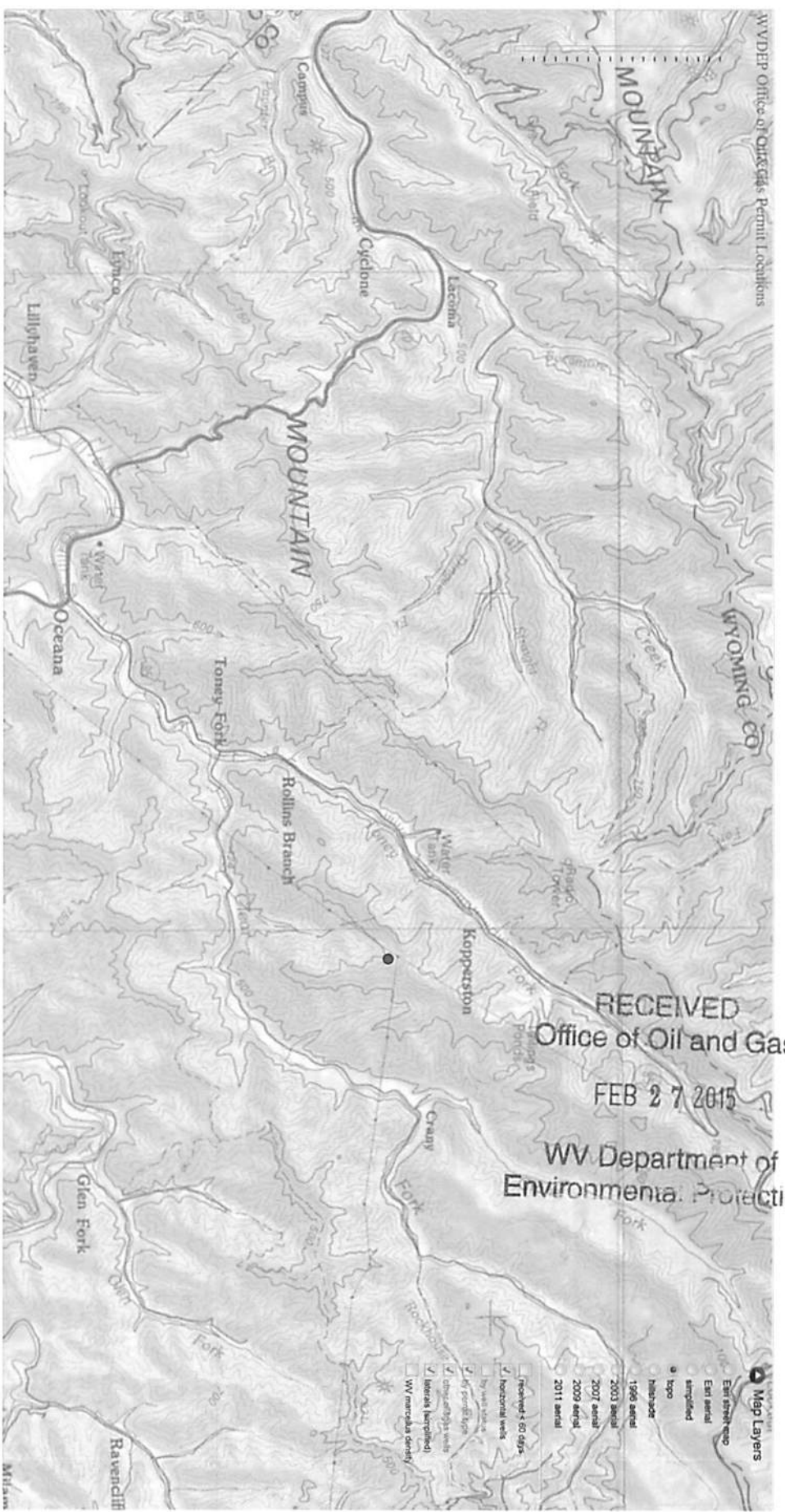
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Title: OGS Inspector

Date: _____

Field Reviewed? Yes No

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API	Permit Type	Received	Issued	Complete	Operator	Formation	Well Status	Well Type	Well Use	Farm Name	Well No.	Lon	Lat
109-01985	Coalbed Methane	2001-04-26	2001-06-18	2001-07-28	PENN VIRGINIA OIL AND GAS CORPORA	Not Available	Abandoned Well	Coal Bed Methane Well	Not Available	POCAHONTAS LAND CORP	LC-82C-147	-81.561574	37.735743
109-01985	Partial Plug	2001-04-13	2001-04-19	2001-03-28	PENN VIRGINIA OIL AND GAS CORPORA	Not Available	Abandoned Well	Gas Well	Production	POCAHONTAS LAND CORP	LC-82C-147	-81.561574	37.735743

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WW-7
8-30-06



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

API: 4710901985 WELL NO.: LC-82C-147

FARM NAME: Poca Land Corp.

RESPONSIBLE PARTY NAME: Barry K. Lay

COUNTY: Wyoming DISTRICT: Oceana

QUADRANGLE: Matheny (7.5) Pineville (15)

SURFACE OWNER: Pocahontas Land Corporation

ROYALTY OWNER: Penn Virginia Oil and Gas

UTM GPS NORTHING: 4176645.1

UTM GPS EASTING: 450517.5 GPS ELEVATION: 2957

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.

Barry K Lay
Signature

Sr. VP - GM
Title

8/11/14
Date

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Environmental Protection

109 01985CP

Penn Virginia Oil & Gas Corporation
DRILLING PROGNOSIS
LC-35C-27
 Wyoming Co., WV
 Elevation: 2988'

API 47-109-02030
 Closest well to the 82L

APR DHC: \$85300 CWC: \$164875

API No. 47-109-

Permit TD: 2700

Coal

Formation	Projected Depth	Water, Coal, Pays, etc.
Sand, Shale and Coal	0-475' 34-37' 504-506 365-370	Water @ 50' Coal @ 110', 270', 300', 320', 355' and 420' Set 7" casing @ 475'
Sand, Shale and Coal 575-520 825-830 1075-1080 1375-1372	475-2205'	Possible water @ 1890' Coal @ 680', 890', 1120', 1300', 1430' and 1445'
Lower Raleigh Coal	2205-2210'	2200-2203
Sand and Shale	2210-2330'	
Beckley Coal	2330-2333'	?
Sand and Shale	2333-2420'	
Lower Beckley Coal	2420-2425'	2415-2420
Sand and Shale	2425-2480'	
Fire Creek Coal	2480-2483'	Deepest coal that will be completed 8 5/8" casing @ 2558', and no good cement on 4 1/2" above 2650' in the LC-27.
Sand, Shale and Coal	2483'-TD	Poca 6 @ 2530', Poca 5 @ 2600', Gas check @ TD
TOTAL DEPTH	2635'	

- Log well at TD with Coal Log from TD to 7" casing. Run hi-res from TD to 2130'. Pull GR to surface. Fax 5" OH logs to appropriate location.

Casing	Size	Depth
Conductor	9 5/8", 26 ppi, R2	30'
Coal	7", 17 ppi, R2	475'
Intermediate		3635'
Production	4 1/2", 9.5 ppi, M65, R2	

Special Instructions: All casing from Miller. Order 5' & 10' pups w/4 1/2". **NOTE:** Change to R3 if larger rig is used to drill well.

GAS CHECKS: See above notes. Also, take checks at other depths if gas is encountered.

Miscellaneous Remarks and Instructions:

- Have complete permit on rig/notify O&G Inspector (Offie) before spudding.
- Record all shows of water/estimated flow rates (1" stream, etc).
- Record depths/thickness of all coals.
- Wear proper safety equipment at all times. Smoke only in designated, safe areas.
- Location is to be left free of garbage and debris.

Phone Numbers:

Charleston Office: Mike Mooney: Duffield Office: Duffield Log Fax: Bill Ryan: Jim Wilson: Dick Waddell:	(304) 949-5630 office (304) 649-4832 mobile (304) 431-4511 (304) 431-2702 (423) 378-5001 home (423) 288-2477 home (423) 349-0429 home (423) 333-9462 mobile	Tom White: (304) 746-0166 (304) 546-9162 mobile Ravencliff Office: Harry Jewell: Jim Burner	(304) 294-8767 (304) 732-1000 home/fax (304) 687-1382 mobile (304) 227-7593 home (304) 482-9886 mobile (304) 227-7593 home
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 7/20/15
 Environmental Protection

04/24/2015



ENERVEST

EnerVest Operating, L.L.C.

Eastern Division

1064 Old Route 33, Weston, WV 26452-7722
Phone (304) 517-1102 Fax (304) 517-1107

VIA CERTIFIED MAIL

February 26, 2015

Pocahontas Land Corporation
PO Box 1517
Bluefield, WV 24701-1517

Re: Plugging Permit LC-82C-147
API# 47-109-01985C
Oceana District, Wyoming County, WV

Dear Surface and Coal Owner:

Pursuant to Chapter 22 of the West Virginia Code, enclosed please find copies of the following documents for the proposed plugging of the subject well:

- Form WW-7 Well Location Form: GPS
- Form WW-9 Construction and Reclamation Plan and Site Registration Application
- Form WW-4A Notice of Application to Plug and Abandon a Well
- Form WW-4B Application for a Permit to Plug and Abandon
- Surface Owner Waiver (2 copies)
- Coal Owner Waiver (2 copies)

This application is being filed by EnerVest with the Administrator of the Office of Oil and Gas of the West Virginia Department of Environmental Protection. If you have no objections to the proposed process for the plugging of this well, please sign the Voluntary Statement of No Objection on the waivers and return one copy of each to our office in the enclosed envelope.

Comments as to the location construction or the proposed well work may, pursuant to West Virginia Code, be filed by you with the said Administrator within five (5) days after the Application is filed by EnerVest. The address of the Administrator for the purpose of filing comments and obtaining additional information is:

Permit Administrator
West Virginia Division of Environmental Protection
Office of Oil and Gas
601 57th Street, SE
Charleston, WV 25304

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WV Department of
Environmental Protection
04/24/2015

Persons who may file such comments are: (i) the owners of record of the surface of the tract on which the well is or is to be located, and (ii) the owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if such surface tract is to be utilized for road or other land disturbance described in the Erosion and Sediment Control Plan referred to above; and (iii) except as and when not required by the laws of West Virginia and the rules of the West Virginia Department of Mines, any coal operator operating coal seams beneath the oil and gas leasehold upon which said well is or is to be located as well as the owner(s) and lessee(s), if any of such coal seams.

Sincerely,
EnerVest Operating, L.L.C.



Jerry L. Jackson
Senior District Landman

Enclosures

cc: File

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ENERVEST

EnerVest Operating, L.L.C.**Eastern Division**

1064 Old Route 33, Weston, WV 26452-7722

Phone (304) 517-1102 Fax (304) 517-1107

VIA CERTIFIED MAIL

February 26, 2015

Eastern Associated Coal Corp.
800 Laidley Tower #1233
Charleston, WV 24324-2145

Re: Plugging Permit LC-82C-147
API# 47-109-01985C
Oceana District, Wyoming County, WV

Dear Coal Lessee:

Pursuant to Chapter 22 of the West Virginia Code, enclosed please find copies of the following documents for the proposed plugging of the subject well:

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- Form WW-9 Construction and Reclamation Plan and Site Registration Application
- Form WW-4A Notice of Application to Plug and Abandon a Well
- Form WW-4B Application for a Permit to Plug and Abandon
- Coal Owner/Lessee Waiver (2 copies)

This application is being filed by EnerVest with the Administrator of the Office of Oil and Gas of the West Virginia Department of Environmental Protection. If you have no objections to the proposed process for the plugging of this well, please sign the Voluntary Statement of No Objection on the Coal Owner/Lessee Waiver and return one copy to our office in the enclosed envelope.

Comments as to the location construction or the proposed well work may, pursuant to West Virginia Code, be filed by you with the said Administrator within five (5) days after the Application is filed by EnerVest. The address of the Administrator for the purpose of filing comments and obtaining additional information is:

Permit Administrator
West Virginia Division of Environmental Protection
Office of Oil and Gas
601 57th Street, SE
Charleston, WV 25304

04/24/2015

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Sincerely,
EnerVest Operating, L.L.C.



Jerry L. Jackson
Senior District Landman

Enclosures

cc: File