



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

July 14, 2014

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-4300963, issued to CHESAPEAKE APPALACHIA, 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: 806630 (6630)
Farm Name: GOODMAN, ELVA - ADKINS, SA
API Well Number: 47-4300963
Permit Type: Plugging
Date Issued: 07/14/2014

Promoting a healthy environment.

PERMIT CONDITIONS

West Virginia Code § 22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
3. Well work activities shall not constitute a hazard to the safety of persons.
4. This well is under a consent order and must be plugged within two years of the date of issuance of this permit.

4300963A

FORM WW-4 (B)
Observe
File Copy
(Rev. 2/01)

1) Date: 4/23/2014
2) Operator's Well No. 806630 P&A
3) API Well No. 47-043-00963

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 X Liquid injection _____ Waste disposal _____
 (Is Gas, Production X or Underground storage _____) Deep _____ Shallow X
- 5) Location: Elevation 905' Watershed Big Ugly Creek
 District Harts Creek County Lincoln Quadrangle Big Creek, WV 7.5'
- 6) Well Operator Chesapeake Appalachia, L.L.C. 7) Designated Agent Eric B. Gillespie
 Address P.O. Box 18496 Address P.O. Box 6070
Oklahoma City, OK 73154-0496 Charleston, WV 25362
- 8) Oil and Gas Inspector to be notified 9) Plugging Contractor
 Name Ralph Triplett Name Chesapeake Appalachia, L.L.C.
 Address 5539 McClellan Highway Address P.O. Box 18496
Branchland, WV 25506 Oklahoma City, OK 73154-0496

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

See Attached Sheet

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

Work Order approved by Inspector Ralph D. Triplett Date 5/27/14

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Office of Oil and Gas
JUN 03 2014
WV Department of
Environmental Protection

OK
P. 11/17

47-043-00963 P

806630 P&A PROCEDURE

- 1) Prepare road and location, MIRU service rig
- 2) RIH with tools and check for top of cavings (approximately 2025')
- 3) Run W.S. to 2000', load hole with gel
- 4) Spot 150' cement plug 2000'-1850', pull W.S. to 1715'
- 5) Spot 115' cement plug 1715'-1600', pull W.S. to 1525'
- 6) Spot 100' cement plug 1525'-1425', pull W.S.
- 7) RIH with tools to check top of plug (If top of plug is below 1450' then re-set plug)
- 8) Cut 7" at free-point (approximately 825') and pull
- 9) Run W.S. to 825', load hole with gel
- 10) Spot 100' cement plug 825'-725', pull W.S.
- 11) Attempt to pull 8 5/8" casing
 - A) If successful
 - a) Run W.S. to 500', load hole with gel
 - b) Spot 100' cement plug 500'-400'
 - c) Proceed to step 12
 - B) If unsuccessful
 - a) Run W.S. to 500'
 - b) Spot 100' cement plug 500'-400', pull W.S.
 - c) Cut 8 5/8" at free-point (approximately 150') and pull
 - d) Proceed to step 12
- 12) Pull or run W.S. to 150'
- 13) Spot 150' cement plug 150' – surface
- 14) Pull W.S. and top off with cement
- 15) Set monument and reclaim as prescribed by law

OK
TRDT

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JUN 03 2014
WV Department of
Environmental Protection

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Little Lime			1410	1440			
Pencil Cave			1440	1443			
Big Lime			1443	1632	Show Gas	1535'	in Big Lime Big Line 3/10 W 1" 18 M
					Gas	1590'	
Injun Sand			1632	1715	Gas	1708'	Injun 6/10 W 1" 26 M
Broken Sand			1715	1815			
Big Shell			1815	1880			
Slate & Shells			1880	2186			
Berea Sand			2186	2198			
Lime Shell			2198	2222			
Slate & Shells			2222	3245			
Brown Shale			3245	3595	Gas	3437'	Shale 8/10 W 1" 30 M
White slate			3595	3610			
Total depth				3610 DIM			

Test before shot 8/10 W 1" 30 M
 Shot 3-27-51 with 2400# DuPont Gelatin
 from 3237-3610
 Test 20 hours after shot 4/10 W 2" 84 M

FINAL OPEN FLOW - 84 M Shale
 6 day R.P. 478#

Shut in 3-28-51 in 7" casing.

RECEIVED
 Office of Oil and Gas
 MAY 22 2014

Date May 10, 2014 W.V. Department of Environmental Protection
 APPROVED UNITED FUELS COMPANY, Owner
 By [Signature]
 (Title)
 Chief Engineer

4300963P

WW4-A
Revised
2/01

1) Date: 4/23/2014
2) Operator's Well No. 806630 P&A
3) API Well No. 47-043-00693

STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT
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:
(a) Name Elva Goodman
Address 1st American Way
Westlake, Texas 76262

(b) Name Samp & Lucille Adkins
Address Box 278
Harts, WV 25524

(c) Name _____
Address _____

6) Inspector Ralph Triplett
Address 5539 McClellan Highway
Branchland, WV 25506

Telephone 304-389-0350

5) Coal Operator
(a) Name None
Address _____

Coal Owner(s) with Declaration
(b) Name Lynn Dugan
Address 4146 Skyline Drive
Las Cruces, NM 88007

Name _____
Address _____

Coal Lessee with Declaration
(c) Name None
Address _____

Name _____
Address _____

TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

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

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed the 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 the 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: Chesapeake Appalachia, L.L.C.
By: [Signature]
Its: Manager - Operations, Appalachia South
Address: P.O. Box 18496
Oklahoma City, OK 73154-0496
Telephone: 405-935-4073

RECEIVED
Office of Oil and Gas
MAY 23 2014

Subscribed and sworn before me this 23rd day of April the year of 2014
Pheylis A. Copley Notary Public
My Commission Expires September 16, 2018
Form WW-9

WV Department of
Environmental Protection

4300963P

Will 806630

API

47-043-00963

CK 5132870
10000

7012 3460 0000 4499 2753

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ROANOKE, TX 76262

OFFICIAL USE

Postage	\$ 11.40	0522
Certified Fee	\$ 3.30	01
Return Receipt Fee (Endorsement Required)	\$ 2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$ 0.00	
Total Postage & Fees	\$ 17.40	05/21/2014

Sent To: **806630 P&A**
 Elva Goodman
 1st American Way
 Westlake, Texas 76262

PS Form 3800

7012 3460 0000 4499 2746

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HARTS, WV 25524

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Postage	\$ 11.40	0522
Certified Fee	\$ 3.30	01
Return Receipt Fee (Endorsement Required)	\$ 2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$ 0.00	
Total Postage & Fees	\$ 17.40	05/21/2014

Sent To: **806630 P&A**
 Samp & Lucille Adkins
 Box 278
 Harts, WV 25524

PS Form 3800

7012 3460 0000 4499 2739

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LAS CRUCES, NM 88007

OFFICIAL USE

Postage	\$ 11.40	0522
Certified Fee	\$ 3.30	01
Return Receipt Fee (Endorsement Required)	\$ 2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$ 0.00	
Total Postage & Fees	\$ 17.40	05/21/2014

Sent To: **806630 P&A**
 Lynn Dugan
 4146 Skyline Drive
 Las Cruces, NM 88007

PS Form 3800

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Office of Oil and Gas
MAY 22 2014
WV Department of
Environmental Protection

4300963P

Rev. 02/01

API Number 47-043-00693
Operator's Well No. 806630 P&A

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 Chesapeake Appalachia, L.L.C. OP Code 494477557

Watershed Big Ugly Creek Quadrangle Big Creek, WV 7.5'

Elevation 905' County Lincoln District Harts Creek

Description of anticipated Pit Waste: Plugging Returns/Cement

Will a synthetic liner be used in the pit? Yes 20 MIL

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 _____)

Proposed Work For Which Pit Will Be Used:

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

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on December 31, 1999, 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 *David Gocke*

Company Official (Typed Name) David Gocke

Company Official Title Manager - Operations, Appalachia South

RECEIVED

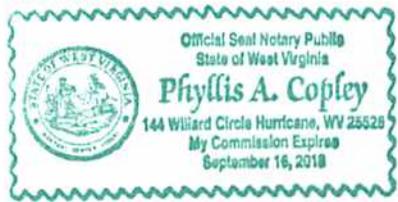
Subscribed and sworn before me this 23rd day of April, 2014 Office of Oil and Gas

Phyllis A. Copley

MAY 22 2014
Notary Public.

My Commission Expires September 16, 2018

WV Department of Environmental Protection

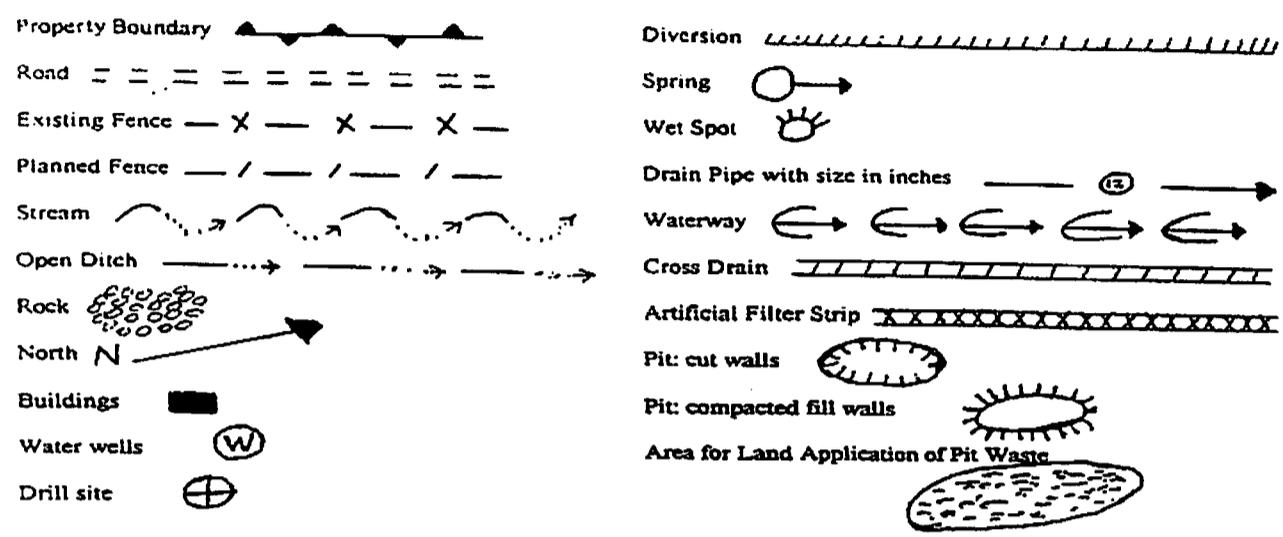


4300963P

Attachment #1

API #: 47-043-00693
Operator's Well No. 806630 P&A

LEGEND



Proposed Revegetation Treatment: Acres Disturbed 1.0 Prevegetation pH 6.1

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20 or equivalent) 1/3 TON lbs/acre (500 lbs minimum)

Mulch Hay 2 Tons/acre

Seed Mixtures

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
KY-31	40	ORCHARD GRASS	15
ALSIKE CLOVER	5	ALSIKE CLOVER	5
ANNUAL RYE	15		

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Ronald D. Trippe

Title: District Inspector

Date: May 27, 2014

Field Reviewed? () Yes (X) No

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CHESAPEAKE APPALACHIA, L.L.C.

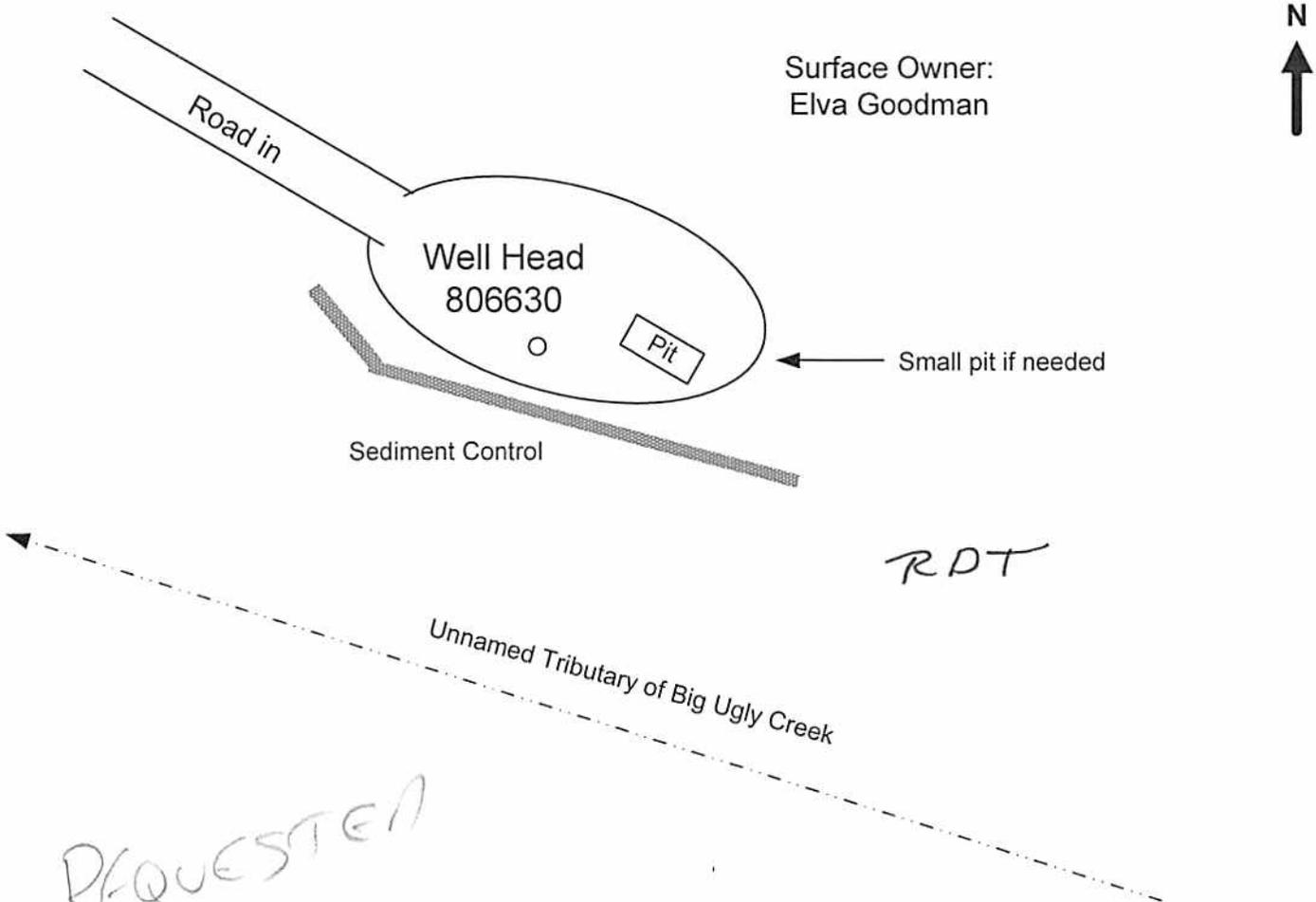
4300963P

Diagram of Well 806630 P&A

API 47-04300963

Field Office - Branchland

County - Lincoln



Surface Owner:
Elva Goodman

Small pit if needed

Sediment Control

RDT

Unnamed Tributary of Big Ugly Creek

REQUESTED
DETAIL

KA 5-29-14

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Site Plan

Prepared by: Kris Aldridge
Date: 5/29/2014

No Scale

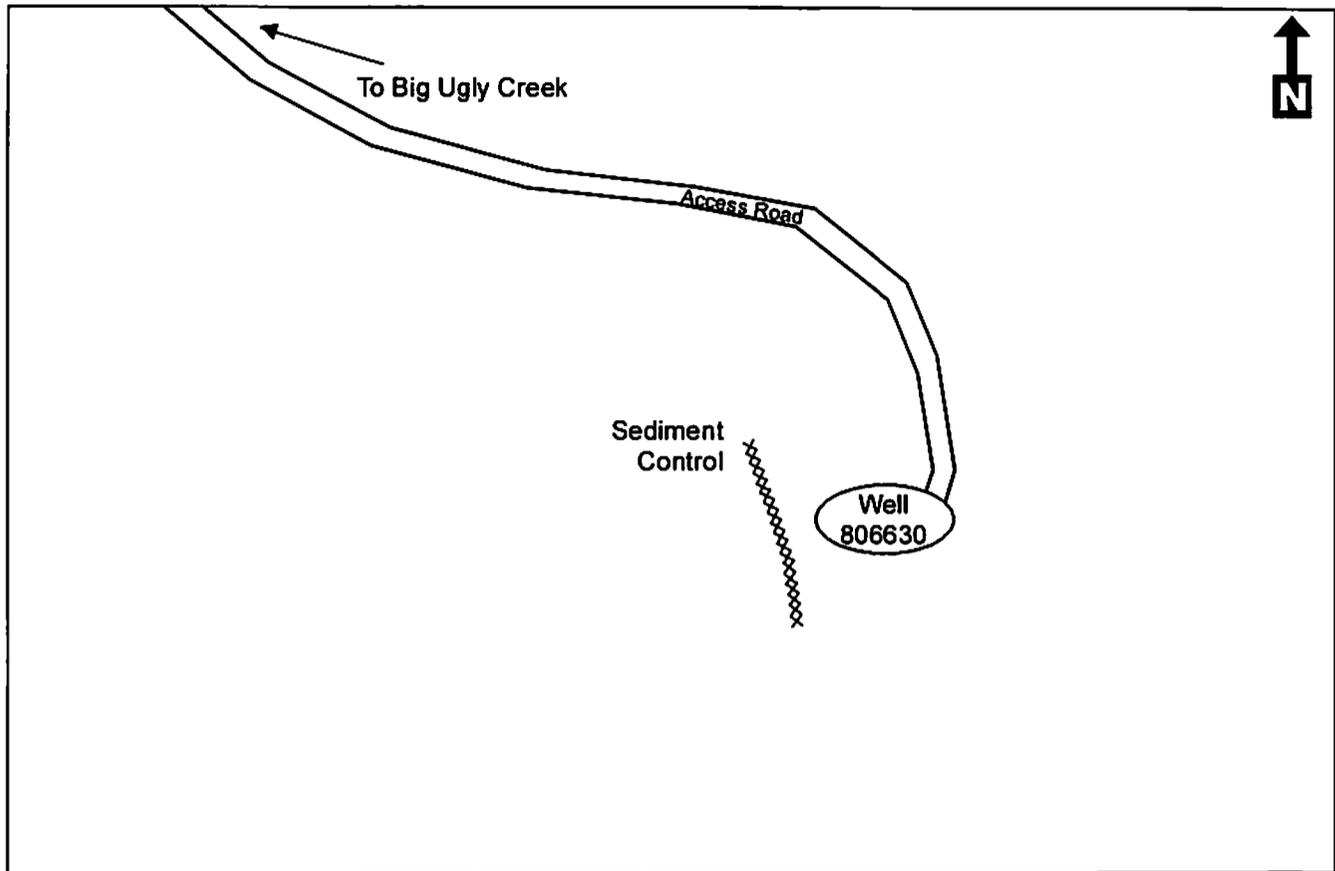
CHESAPEAKE APPALACHIA, L.L.C.

Diagram of Well 806630

API 47-043-00963

Field Office - Branchland

County - Lincoln

**GENERAL NOTES**

This Drawing is a schematic representation of the well site and access road. Proposed structures such as well site, drilling pit, roadways, culverts, sediment barriers, etc. are shown in approximate pre-planning configurations.

All culvert pipes will be a minimum of 15 inches in diameter. All culvert pipes installed will be accompanied by an entrance sump with dimensions no less than 3 feet (width) x 3 feet (length) x 4 feet (deep). Culverts will be installed at an angle to ensure proper flow. The outfall of culverts will be protected from erosion and sedimentation using large rocks or other sediment controls deemed necessary in the prevention of erosion and sedimentation. Storm water from the culverts to the culverts will be directed to stable natural vegetative areas. Where culverts are not practical, the operator will have other sediment control in place to minimize erosion and sedimentation.

Cross drains, broad based dips, water bars, and diversion ditches will be employed during the construction phase. These erosion and sediment control structures will be used to control erosion and sedimentation during the construction phase, where applicable and areas that will allow. These structures will be considered permanent and used as such.

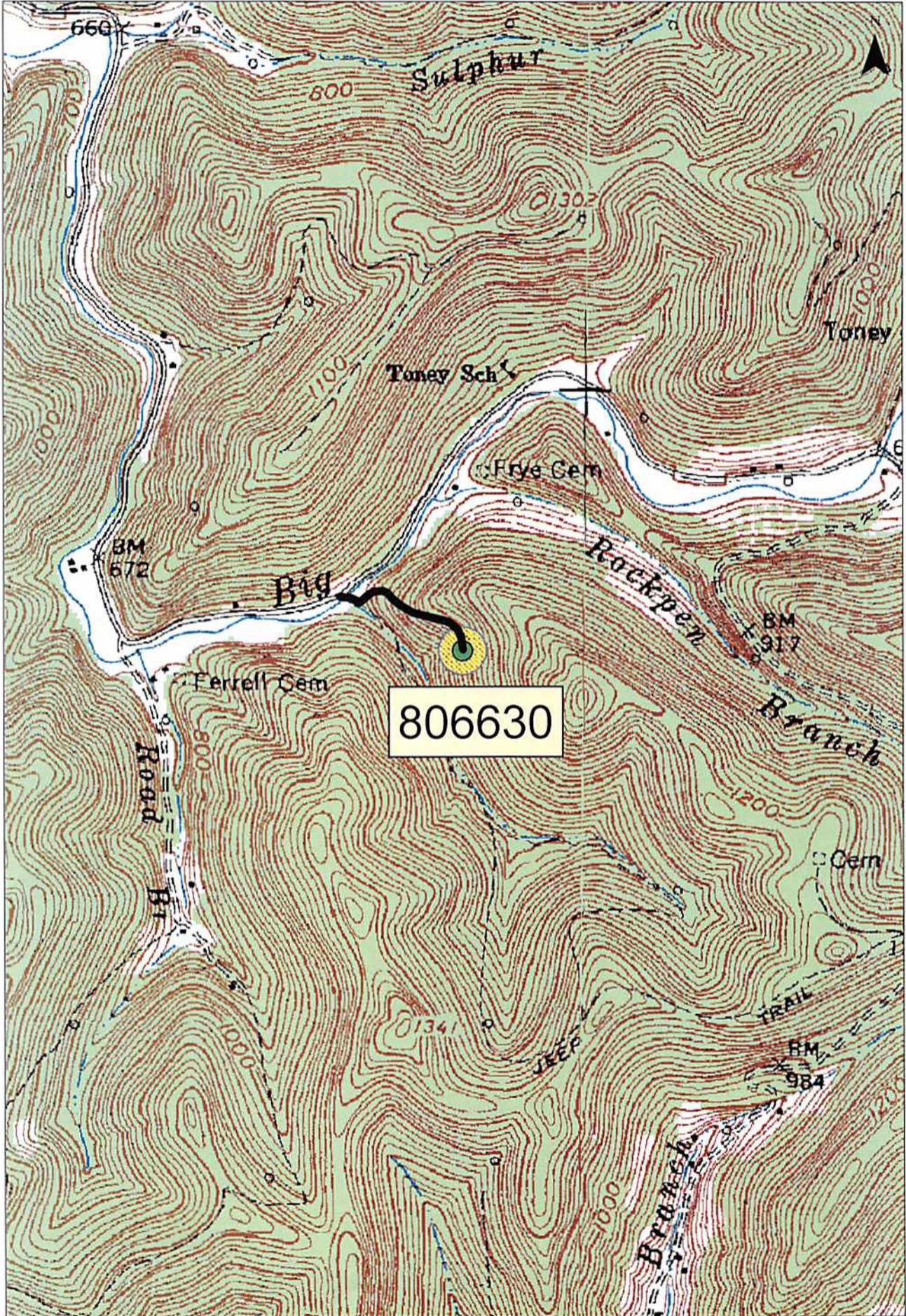
Permanent seeding: See Attachment #1

Site Plan

Prepared by: Lloyd Reynolds
Date: 05/20/2014

CHESAPEAKE APPALACHIA, L.L.C.

Topographical Map of Access
and Well Location 806630
API 47-043-00963
Field Office - Branchland
County - Lincoln



1:12,000

0 500 1,000 2,000 Feet
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Office of Oil and Gas

MAY 22 2014

Chesapeake Energy Corporation - Eastern Division
P.O. Box 579 - 8165 Court Avenue - Hamlin, WV 25523
304.824.5141 - fax 304.824.2247

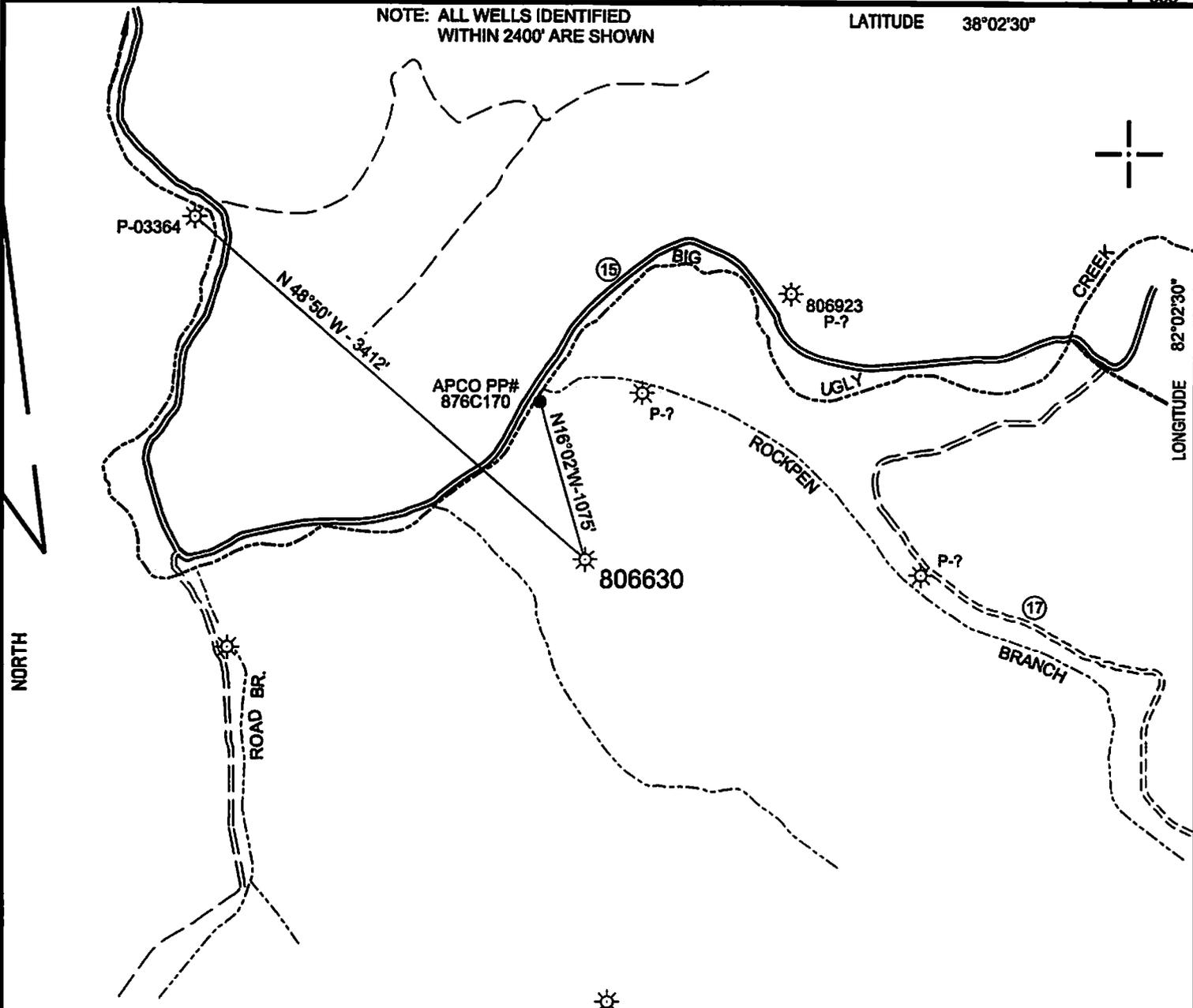
WV Department of
Environmental Protection

NOTE: ALL WELLS IDENTIFIED
WITHIN 2400' ARE SHOWN

LATITUDE 38°02'30"

888'

1896'
03°20'38"
LONGITUDE



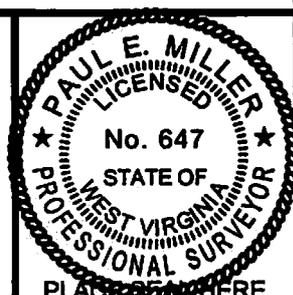
SURFACE HOLE
STATE PLANE WV NORTH/SOUTH ZONE NAD 1927 N - 379,025.03 : E - 1,699,119.60
LATITUDE: (N) 38.0362623 LONGITUDE: (W) 82.0447150
UTM, NAD83 17 - 84W TO 78W, METERS N - 4,210,364.203 : E - 408,333.800

NOTE: NO BUILDING STRUCTURES
IDENTIFIED WITHIN 200'

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

FILE NO.	806630P&A.DGN
DRAWING NO.	6830 P&A
SCALE	1" = 1000'
MINIMUM DEGREE OF ACCURACY	1 : 200
PROVEN SOURCE OF ELEVATION	MAPPING GRADE GPS

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 REGU-
LATIONS ISSUED AND PRESCRIBED BY THE DEPART-
MENT OF ENVIRONMENTAL PROTECTION.
(SIGNED) *Paul E. Miller*
R.P.E. _____ L.L.S. 647



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



DATE MARCH 26, 20 14
OPERATOR'S WELL NO. 806630
API WELL NO.

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

LOCATION: ELEVATION 805' WATER SHED BIG UGLY CREEK
DISTRICT HARTS CREEK COUNTY LINCOLN
QUADRANGLE BIG CREEK, WV 7.5'

SURFACE OWNER ELVA GOODMAN - SAMP & LUCILLE ADKINS ACREAGE 125
OIL & GAS ROYALTY OWNER IRVIN McMAHON DUGAN LEASE ACREAGE 125
LEASE NO. 1-044718-000

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 X CLEAN OUT AND REPLUG ___
TARGET FORMATION _____ ESTIMATED DEPTH _____
WELL OPERATOR CHESAPEAKE APPALACHIA L.L.C. DESIGNATED AGENT ERIC B. GILLISPIE
ADDRESS PO BOX 18496 OKLAHOMA CITY, OK 73154-0496 ADDRESS SAME

FORM WW-6

COUNTY NAME

PERMIT