



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

June 24, 2015

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-4302049, 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: 2409
Farm Name: LINCOLN LAND ASSOC.
API Well Number: 47-4302049
Permit Type: Plugging
Date Issued: 06/24/2015

Promoting a healthy environment.

06/26/2015

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.

4302049P

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

*Inspector's
signed copy*

1) Date: 4/15/2015
2) Operator's Well No. 802409 P&A
3) API Well No. 47-043-02049

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

*CL# 5254206
\$ 100.00*

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 677' Watershed Big Laurel Creek of Mud River
District Union County Lincoln Quadrangle Hager, WV 7.5'

6) Well Operator Chesapeake Appalachia, L.L.C. 7) Designated Agent Jessica Greathouse
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 04/27/15

06/26/2015

Received
Office of Oil & Gas
APR 29 2015

802409 P&A PROCEDURE

NOTE: 1336' of 5 ½" and packer were stripped over 2" tubing in 1996.

- 1) Prepare road and location, MIRU service rig
- 2) RIH with tools to check TD approximately at 2035'
- 3) Attempt to pull 5 ½" and packer
 - A) If successful pulling 5 ½", then attempt to pull 2" and packer
 - B) If successful pulling 2" and packer
 - a) Run W.S. to 2000', spot gel
 - b) Spot 100' cement plug 2000'-1900', pull W.S. to 1450'
 - c) Spot 175' cement plug 1450'-1275', pull W.S.
 - d) Proceed to step 4
 - C) If unsuccessful in pulling 2" and packer and/or 5 ½" would not pull
 - a) Shoot or rip holes in 2" approximately at 1525' and 1475'
 - b) Cut 2" at free-point (approximately 1400') and pull
 - c) If still present, cut 5 ½" at free-point (approximately 1300') and pull
 - d) Run W.S. as deep as possible (approximately 1415')
 - e) Spot 200' cement plug 1415'-1215', pull W.S.
 - f) Proceed to step 4
- 4) Run in hole with tools to check top of plug. If TOC is below 1300' then reset plug.
- 5) Cut 6 5/8" at free-point (approximately 675') and pull
- 6) Run W.S. to 675', spot gel
- 7) Spot 150' cement plug 675'-525', pull W.S. to 410'
- 8) Spot 100' cement plug 410'-310', pull W.S. to 130'
- 9) Spot 130' cement plug 130'-surface
- 10) Pull W.S. and top off with cement
- 11) Erect monument and reclaim as prescribed by law

OK
RPT
07/15/15

06/26/2015

Received
Office of Oil & Gas
APR 29 2015

COLUMBIA GAS & ELECTRIC COMPANY
UNITED FUEL-GAS COMPANY
 Incorporated

Well 802409
 API 47-043-02049

Serial Well No. **2409** Lease No. **474** Map Square **36-49**

<p align="center">RECORD OF WELL No. 2409 on the Lincoln Co. Land Assn. (J. J. Smith, Surf.) Farm of 20,000 Acres</p> <p>In Union District Lincoln County Branchland Field, State of W. Va. Drilled as well No. F6102</p> <p>Waters of Big Laurel. Rig Commenced April 1925 192 Rig Completed April 1925 192 Drilling Commenced April 27, 1925 192 Drilling Completed July 11, 1925 192 Drilling to cost per foot</p> <p>Contractor is: Drilled by Transylvania Petroleum Co., Address: Contractor, Roy & McComas, Huntington, W. Va.</p> <p>Driller's Names O. J. Smith Frank Starkey</p>	<p align="center">CASING AND TUBING</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Size</th> <th>Used in Drilling</th> <th>Left in Well</th> </tr> <tr> <td>16</td> <td>None</td> <td></td> </tr> <tr> <td>13</td> <td>None</td> <td></td> </tr> <tr> <td>10</td> <td>32# 21'10"</td> <td>21'10"</td> </tr> <tr> <td>8 1/4</td> <td>24# 245' 2"</td> <td>None</td> </tr> <tr> <td>6 3/4</td> <td>17# 1323' 8"</td> <td>1323' 8"</td> </tr> <tr> <td>5 3-16</td> <td>None</td> <td></td> </tr> <tr> <td>4 7/8</td> <td>None</td> <td></td> </tr> <tr> <td>4</td> <td>None</td> <td></td> </tr> <tr> <td>3</td> <td>None</td> <td></td> </tr> <tr> <td>2</td> <td>2073' 3"</td> <td>2073' 3"</td> </tr> </table> <p align="center">SHUT IN Date July 11, 1925</p> <p>in 2" Tubing or Casing</p> <p>Size of Packer 6-5/8"x2"x16"</p> <p>Kind of Packer OWS anchor.</p> <p>1st Perf. Set 0-3' from bottom</p> <p>2nd Perf. Set 25'6"-33'8" from bottom.</p>	Size	Used in Drilling	Left in Well	16	None		13	None		10	32# 21'10"	21'10"	8 1/4	24# 245' 2"	None	6 3/4	17# 1323' 8"	1323' 8"	5 3-16	None		4 7/8	None		4	None		3	None		2	2073' 3"	2073' 3"	<p align="center">TEST BEFORE SHOT</p> <p>12 of Water in Water 2 in 10ths of Merc. in in 10ths of Merc. in in Volume 162,000 Cu. ft.</p> <p align="center">TEST AFTER SHOT</p> <p>18 of Water in 2 in 10ths of Merc. in in 10ths of Merc. in in Volume 203,000 Cu. ft.</p> <p>Rock pressure 340</p> <p>Date Shot July 7, 1925 (Berea) Size of Torpedo 30 qts.</p> <p>Oil Flowed 0 bbls. 1st 24 h. Oil Pumped 0 bbls. 1st 24 h.</p> <p>Well abandoned and Plugged 19</p>
Size	Used in Drilling	Left in Well																																	
16	None																																		
13	None																																		
10	32# 21'10"	21'10"																																	
8 1/4	24# 245' 2"	None																																	
6 3/4	17# 1323' 8"	1323' 8"																																	
5 3-16	None																																		
4 7/8	None																																		
4	None																																		
3	None																																		
2	2073' 3"	2073' 3"																																	

DRILLER'S RECORD

Formation	Top	Bottom	Thickness	Remarks
Surface	0	23	23	6-5/8" casing set at 1319' steel
Sand	23	80	57	line measurement.
Coal	80	82	2	Fresh water at 375'
Slate & Sand	82	420	338	Gas in Big Injun 1473' - 1481'
Sand	420	445	25	Gas in Berea 1992' - 1996'
Slate	445	500	55	6-5/8" casing shoe run on bottom
Sand	500	520	20	of 6-5/8" casing.
Gas Sand	520	640	120	6-5/8"x2"x16" Oilwell anchor packer
Salt Sand	640	1032	392	set 620' 3" from bottom. (1420' 9"
Slate	1032	1180	148	from top) in Big Lime. Gas from
Red Rock	1180	1205	25	Big Injun and Berea taken together
Maxton Sand	1205	1215	10	thru 2" tubing.
Slate & Shell	1215	1250	35	Gas from Big Injun, 20/10 Water 2"
Slate	1250	1259	9	213,120 cu. ft. when drilled. Big
Little Lime	1259	1289	30	Injun test before drilling Berea,
Pencil Cave	1289	1294	5	5/10 Water 2" 105,792 cu. ft.
Big Lime	1294	1457	163	Was not shot in Big Injun sand.
Red Rock	1457	1467	10	
Big Injun	1467	1487	20	Well connected and gas turned into
Berea	1991	2006	15	line Sept. 22, 1925.
Slate & Shell	2006	2041	35	
Total depth		2041		

06/26/2015

Received
 Office of Oil & Gas
 APR 29 2015

4302049P

WW4-A
Revised
2/01

1) Date: 4/15/2015
2) Operator's Well No. 802409 P&A
3) API Well No. 47-043-02049

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 John T. & Deborah Smith
Address 5702 Upper Mud River Road
Branchland, WV 25506

(b) Name David & Terry L. Slone
Address 5766 Upper Mud River Road
Branchland, WV 25506

(c) Name _____
Address _____

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

Telephone 304-389-0350

5) Coal Operator
(a) Name None

Coal Owner(s) with Declaration
(b) Name Pocahontas Land Corporation
Address 800 Princeton Avenue
P.O. Box 1517
Bluefield, WV 24701

Name Chesapeake Appalachia, L.L.C.
Address Attention: Fred Jones
P.O. Box 6070
Charleston, WV 25362-0070

Name _____
Address _____

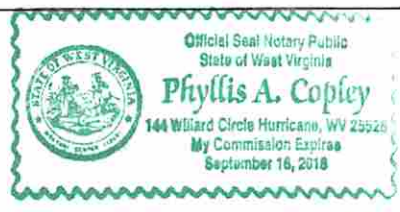
Coal Lessee with Declaration
(c) Name None
Address _____

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: R.E. Schmidt
Its: Completion Superintendent
Address: P.O. Box 18496
Oklahoma City, OK 73154-0496
Telephone: 405-935-4073

Subscribed and sworn before me this 15th day of April the year of 2015
Phyllis A. Copley Notary Public
My Commission Expires September 16, 2018

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APR 20 2015

Office of Oil and Gas
WV Dept. of Environmental Protection

06/26/2015

Well 802409
 API 47-043-02049P

7014 2120 0003 6636 6306

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CHARLESTON WV 25362

OFFICIAL USE

Postage	\$	\$1.40	0523
Certified Fee		\$3.30	03
Return Receipt Fee (Endorsement Required)		\$2.70	
Restricted Delivery Fee (Endorsement Required)		\$0.00	
Total Postage & Fees	\$	\$7.40	04/15/2015



Sent To
802409 P&A
 Chesapeake Appalachia, L.L.C.
 Attention: Fred Jones
 P.O. Box 6070
 Charleston, WV 25362-0070

PS Form 3800, U

7014 2120 0003 6636 6337

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BRANCHLAND WV 25506

OFFICIAL USE

Postage	\$	\$1.40	0523
Certified Fee		\$3.30	03
Return Receipt Fee (Endorsement Required)		\$2.70	
Restricted Delivery Fee (Endorsement Required)		\$0.00	
Total Postage & Fees	\$	\$7.40	04/15/2015



Sent To
802409 P&A
 John T. & Deborah Smith
 5702 Upper Mud River Road
 Branchland, WV 25506

PS Form

Instructions

7014 2120 0003 6636 6313

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BLUEFIELD WV 24701

OFFICIAL USE

Postage	\$	\$1.40	0523
Certified Fee		\$3.30	01
Return Receipt Fee (Endorsement Required)		\$2.70	
Restricted Delivery Fee (Endorsement Required)		\$0.00	
Total Postage & Fees	\$	\$7.40	04/15/2015



Sent To
802409 P&A
 Pocahontas Land Corporation
 800 Princeton Avenue
 P.O. Box 1517
 Bluefield, WV 24701

PS F

Instructions

7014 2120 0003 6636 6320

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BRANCHLAND WV 25506

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Postage	\$	\$1.40	0523
Certified Fee		\$3.30	03
Return Receipt Fee (Endorsement Required)		\$2.70	
Restricted Delivery Fee (Endorsement Required)		\$0.00	
Total Postage & Fees	\$	\$7.40	04/15/2015



Sent To
802409 P&A
 David & Terry L. Slone
 5766 Upper Mud River Road
 Branchland, WV 25506

PS Form 380

see reverse for instructions

Received

APR 20 2015

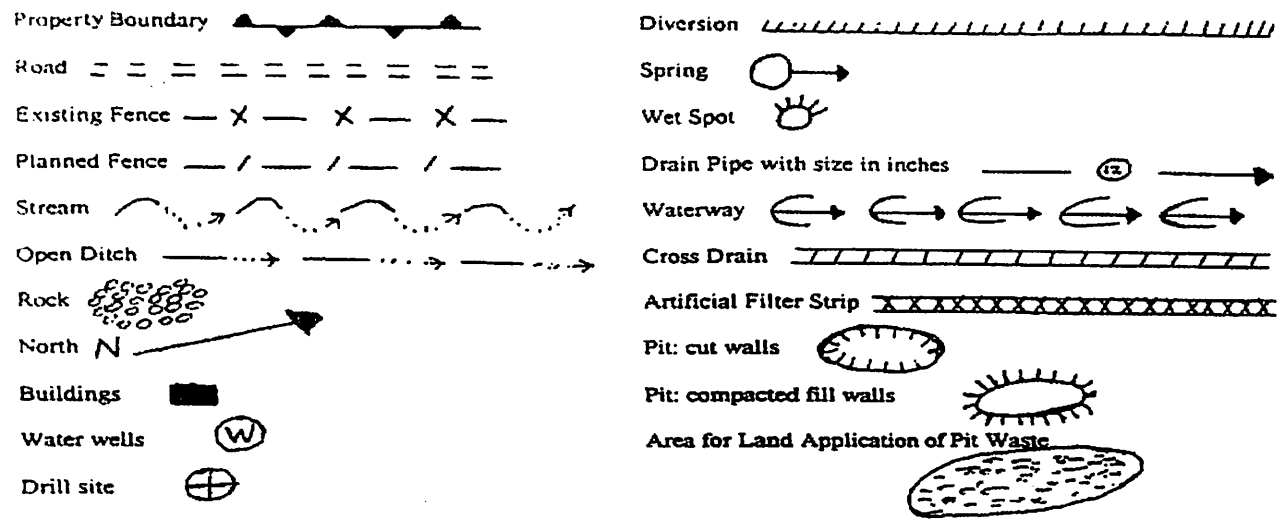
Office of Oil and Gas
 WV Dept. of Environmental Protection

06/26/2015

Attachment #1

API #: 47-043-02049
 Operator's Well No. 802409 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
CHESAPEAKE CONTRACTOR'S MIX	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: Robert D. Tripoli

Title: District Inspector

Date: April 27, 2015

Field Reviewed? () Yes () No

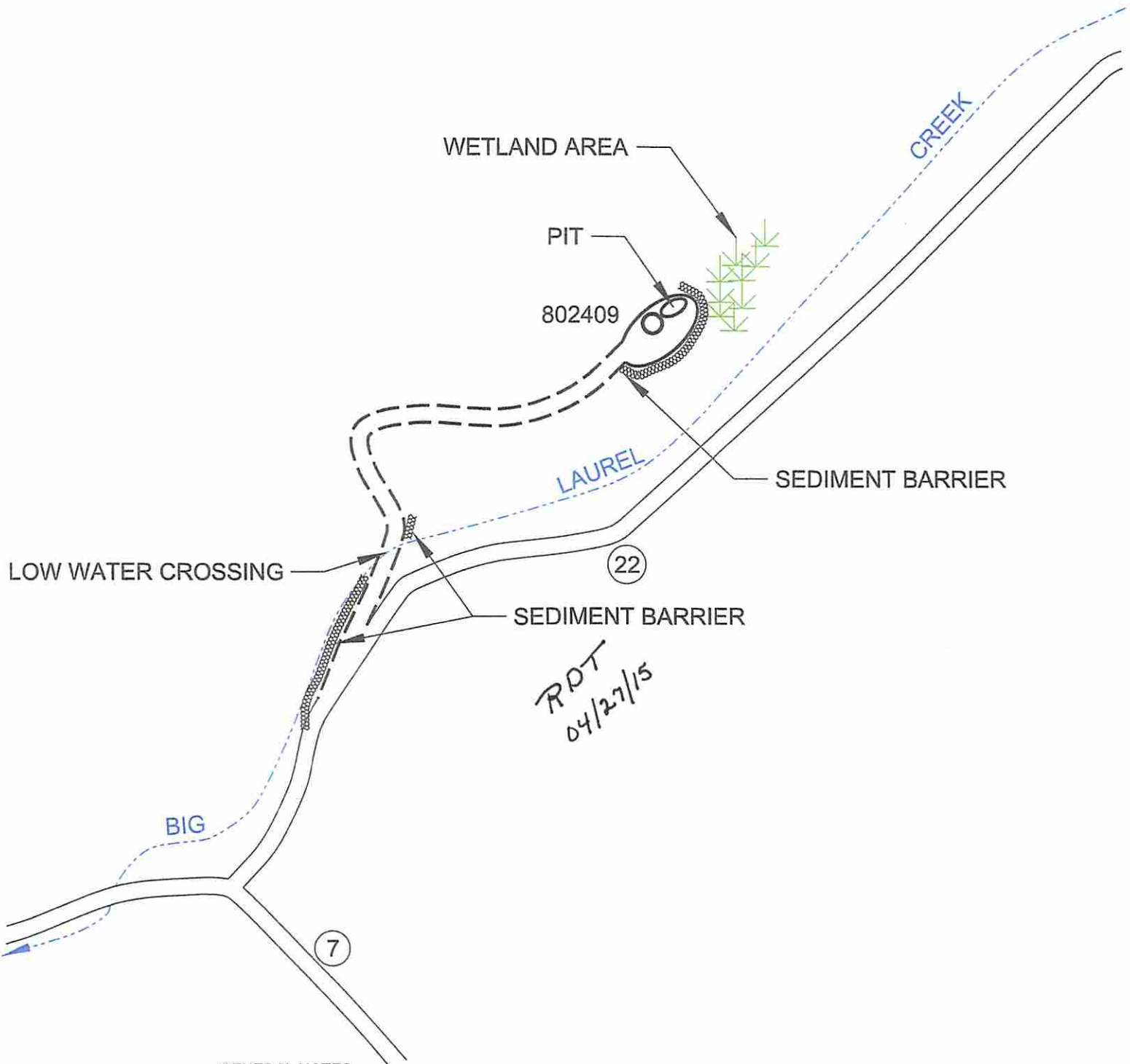
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 Office of Oil & Gas
 APR 29 2015

4302049P

CHESAPEAKE APPALACHIA, L.L.C.

RECLAMATION DIAGRAM
WELL LOCATION 802409

API 47-043-02049



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 out fall 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 ditches to the culverts will be directed to stable natural vegetative areas. Where culverts are not practical, operator will have other sediment control in place to minimize erosion 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 in areas that will allow. These structures will be considered permanent and used as such.

Permanent seeding: See Attachment #1.

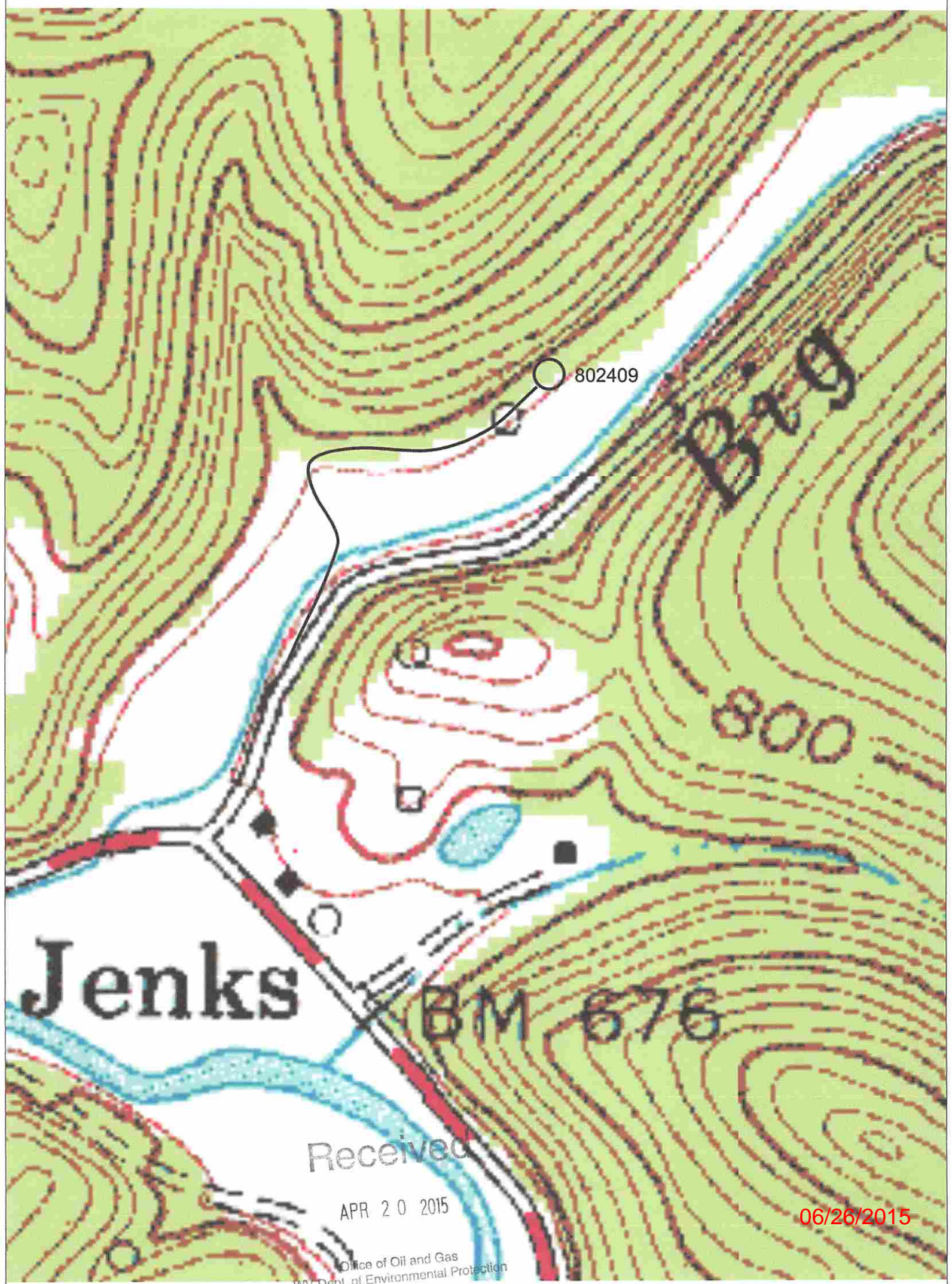
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Office of Oil & Gas

APR 29 2015

4302049P

CHESAPEAKE APPALACHIA, L.L.C.
TOPOGRAPHICAL MAP OF ACCESS AND
WELL LOCATION 802409
API 47-043-02049



Received

APR 20 2015

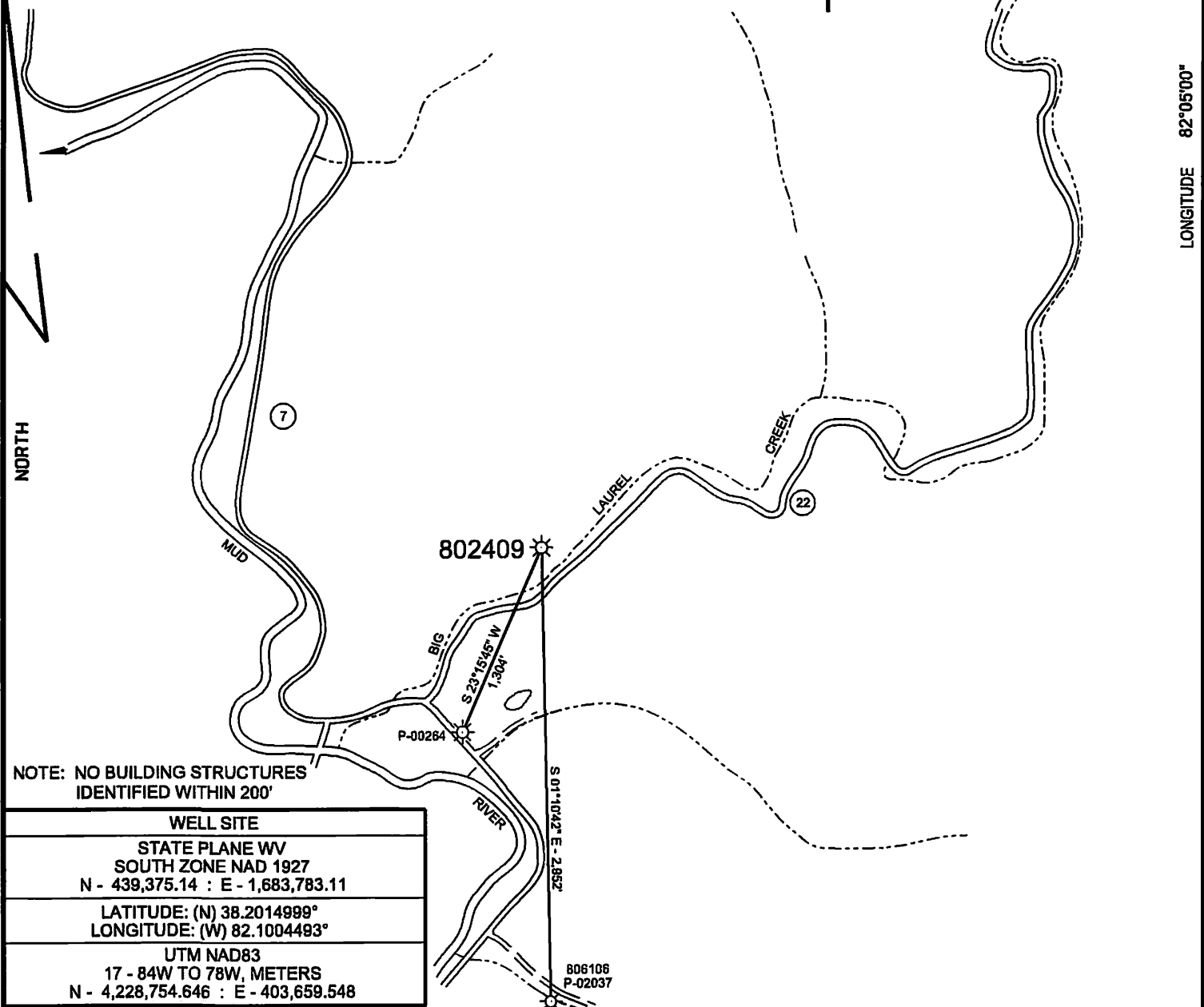
06/26/2015

Office of Oil and Gas
WV Dept. of Environmental Protection

NOTE: ALL WELLS IDENTIFIED WITHIN 2400' ARE SHOWN

LATITUDE 38°12'30"

LONGITUDE 82°05'00"



NOTE: NO BUILDING STRUCTURES IDENTIFIED WITHIN 200'

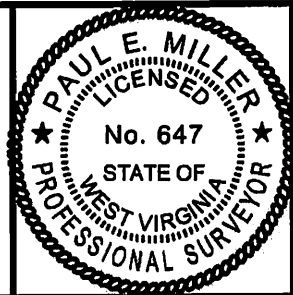
WELL SITE
STATE PLANE WV SOUTH ZONE NAD 1927 N - 439,375.14 : E - 1,683,783.11
LATITUDE: (N) 38.2014999° LONGITUDE: (W) 82.1004493°
UTM NAD83 17 - 84W TO 78W, METERS N - 4,228,754.646 : E - 403,659.548

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

FILE NO.	802409 P&A.DGN
DRAWING NO.	802409 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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT 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 3, 20 15
OPERATOR'S WELL NO. 802409
API WELL NO.

47 043 02049 P
STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS,") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
LOCATION: ELEVATION 677' WATER SHED BIG LAUREL CREEK OF MUD RIVER
DISTRICT _____ UNION _____ COUNTY LINCOLN
QUADRANGLE HAGER, WV 7.5'

SURFACE OWNER JOHN T. & DEBORAH SMITH, SURV. ACREAGE -
OIL & GAS ROYALTY OWNER CHESAPEAKE APPALACHIA, L.L.C. LEASE ACREAGE _____
LEASE NO. _____ FEE OIL & GAS _____

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 JESSICA GREATHOUSE
ADDRESS P.O. BOX 18496, OKLAHOMA CITY, OK 73154-0496 ADDRESS CHESAPEAKE APPALACHIA, L.L.C. PO BOX 6070, CHARLESTON, WV 25362

FORM WW-6

COUNTY NAME PERMIT

06/26/2015

I
now

Operator: CHESAPEAKE APPALACHIA, L.L.C.
API: 4302049
WELL No: 2409
Reviewed by: gwm Date: 6/18/15
15 Day End of Comment: 04/27/2015

* Well is on an Agreed Order *

CHECKLIST FOR FILING A PERMIT

Plugging

CK# 5254206
\$100⁰⁰

- WW-4B
- Inspector signature on WW-4B
- Completion / Well Records of Previous Work
- WW-4A (Notarized)
- Certified Mail Receipts, Waivers, or Affidavits of Personal Service
- Surface Owner Waiver
- Coal Owner / Lessee /Operator Waiver
- WW-9 (Page 1) (Notarized)
- Inspector Signature on WW-9 (Optional)
- Topographic Map of location of well
- WW-7

OR

- Mylar Plat (Surface owner on plat matches WW-4A)
- Bond
- Company is Registered with the SOS
- Worker's Compensation / Unemployment Insurance account is OK
- \$100.00 check (\$0.00 if no pit)