

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

October 08, 2014

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-5900318, 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 penalities 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

Operator's Well No: 6986

Farm Name: CENTRAL TRUST CO. #27

James Martin

API Well Number: 47-5900318

Permit Type: Plugging Date Issued: 10/08/2014

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

WW-4B Rev. 2/01

| 1)Date | 9/18/2014 |
|------------|----------------------|
| 2)Operato | r's |
| Well No | 806986 |
| 3) API Wel | l No. 47- 59 - 00318 |

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

| | | all to the fibrillon |
|-------------|--|--|
| 4) | Well Type: Oil/ Gas _X _/ Liqui (If "Gas, Production or Un | d injection/ Waste disposal/ derground storage) Deep/ Shallow_X_ |
| 5) L | ocation: Elevation 1349' Watershe District Kermit | d Left Fork of dan Branch of Marrowbone Creek County Mingo Quadrangle Wilsondale, WV 7.5 |
| 6) | Well Operator <u>Chesapeake Appalachia, L.</u> Address <u>P.O. Box 18496</u> Oklahoma City, OK 73154-0 | L.C. 7) Designated Agent Eric B. Gilespie Address P. O. Box 6070 Charleston, WV 25362 |
| 8) | Oil and Gas Inspector to be notified Name Jeremy James Address P. O. Box 147 Ona, WV 25545 | 9)Plugging Contractor NameAddress |
| 10) | Work Order: The work order for the man | ner of plugging this well is as follows: |
| | (SEE ATTACHED PLU | GGING PROCEDURE) |
| | | RECEIVED Office of Oil anc Gas SEP 2.5 2014 |
| | | ANA Dopartment of |
| | | Environmental Protection |
| | fication must be given to the district of can commence. | oil and gas inspector 24 hours before permitted |
| Work | order approved by inspector | Date 9-22-14 |
| | | |

806986 P&A PROCEDURE

- 1) Prepare road and location, MIRU Service Rig
- 2) RIH with tools to check TD, expect bridge at approximately 2200'
- 3) Run W.S. to top of bridge, load hole with gel (Pull W.S. to 2525' if able to get deeper)
- 4) Spot 150' cement plug 2525'-2375' or on top of bridge, pull W.S. to 1860'
- 5) Spot 200' cement plug 1860'-1660', pull W.S.
- 6) RIH with tools to check top of plug (If TOC is below 1690' then reset plug)
- 7) Cut 7" at free-point (approximately 1130') and pull
- 8) Run W.S. to 1130', load hole with gel
- 9) Spot 150' plug 1130'-980', pull W.S. to 600'
- 10) Spot 100' cement plug 600'-500', pull W.S.
- 11) Attempt to pull 10 3/4" casing of 81/4
 - A) If successful
 - a) Run W.S. to 385', load hole with gel
 - b) Pull W.S. to 200'
 - c) Proceed to step 12
 - B) If unsuccessful
 - a) Run W.S. to 420'
 - b) Spot 100' cement plug 420'-320', pull W.S.
 - c) Cut 10 3/4" at free-point (approximately 200') and pulECEIVED
 - d) Run W.S. to 200'

Office of Oil and Gas

e) Proceed to step 12

SEP 2 5 2014

- 12) Spot 200' cement plug 200' surface
- 13) Pull W.S. and top off with cement
- 14) Erect monument and reclaim as prescribed by law

WWW Department of Environmental Protection Permit No.

Address

Well No 6986

District Kerwit

Drilling commenced

Drilling completed

Open Flow 23

Rock Pressure.

Fresh water.

Volume

Oil

Mineral rights are owned by



DEPARTMENT OF MINES OIL AND GAS DIVISION / 8

Gas

Kaugatuck

Farm The Central Trust Co. #27

Location (waters) Dam Branch

The surface of tract is owned in fee by_

Date Shot 12-1-52 From 2497

UNITED FUEL GAS COMPANY

P.O. Box 1273, Charleston 25, W. Va.

County_

Address

Address

Ibs.

feet

10-7-52

11-27-52

6800# Hercules Gelatin

/10ths Water in_

/10ths Merc. in. 51,000

145#

WELL RECORD

Acres 6852.4

Elev. 1349.22

3516

Inch

hrs.

feet

Cu. Ft.

bbls., 1st 24 hrs.

Mingo

48

Oil or Gas Well_ Casing and Tubing Used in Drilling Left in Well Packers Size Kind of Packer. Size of_ 10 382 814 1717' E36 711 Depth set. The Central Trust Co. #27 53/16_ Perf. top_ Perf. bottom Perf. top. Liners Used Perf. bottom Inch

| COAL WAS ENCOU | INTERED AT_ | 164 | FEET | 24 | INCHES |
|----------------|-------------|-----|------|----|--------|
| FEET | INCHES | | FEET | | INCHES |
| FFFT | INCHES | | FEET | | INCHES |

SIZE

CASING CEMENTED

No. Ft.

Date

| Formation | Color | Hard or Soft | Тор | Bottom | Oil, Gas or Water | Depth Found | Remarks |
|-------------|-------------|-----------------|-------|--------|----------------------|------------------|--|
| Surface | | | 0 | 6 | Reduced hol | e to 8-1/4" | at 1537' |
| Sand | | | 6 | 96 | | | |
| Slate | 1 8 | | 96 | 164 | Small show | of gas 14601 | |
| Coal | | | 164 | 166 | | | Contract |
| Slate & She | als | | 166 | 189 | Berea gas 2 | 504' 2/10 W | 1" 15 M |
| Sand | 11-16-0 | | 189 | 219 | 7.3.62.4 | | 1.54 |
| roken Sand | | | 219 | 280 | 1 -5 - 1 - 1 | | |
| Slate & She | | | 280 | 374 | Test before | shot 2/10 W | 1" 15 M |
| and | | | 374 | 403 | | | Hercules Gel. |
| Broken Sand | 1 | | 403 | 474 | from 2497 | -35161 | |
| Slate & She | | | 474 | 588 | Test 1 hour | after shot | 46/10 W 2" 286M |
| Sand | 100 | | 588 | 636 | Test 18 hou | rs after sho | t 23/10 W 1" 51 |
| Slate & She | Bls | | 636 | 670 | | | |
| Sand | The same of | 1 | 670 | 697 | 3000000 | | Control of the Contro |
| Slate | | 1 | 697 | 705 | FINAL OPEN | FLOW -51 M - | Berea & Br. Shal |
| Broken Sam | | | 705 | 785 | 48 Hr. R.P. | 145# | |
| Slate & She | | 1 | 785 | 1109 | - | | |
| Salt Sand | | | 1109 | 1130 | | | |
| Slate | | | 1130 | 1140 | 1000 | | |
| Salt Sand | | | 1140 | 1188 | Shut in 12- | 2-52 in 7" (| asing |
| Slate | | | 1188 | 1190 | 1 1 1 1 1 | | |
| Salt Sand | 1 | | 1190 | 1205 | | | |
| Slate | | | 1205 | 1235 | | | |
| Salt Sand | | 1 | 1235 | 1465 | | | |
| Slate & Sh | ells | 1 | 1465 | 1532 | | | |
| Red Rock | | | 1532 | 1537 | | | |
| Black Lime | | | 1537 | 1542 | | | |
| Slate & Sh | ells | | 1542 | 1554 | | | |
| Red Rock | | | 1554 | 1578 | 1 | 0212288836 | |
| Slete & Sh | 115 | | 1578 | 1674 | 120 | A 32 | 1 |
| Little Lim | | | 1674 | 1698 | 120 | | EX |
| Pencil Cav | • | | 1698 | 1700 | 1918 | JAN 1953 | 77.5 |
| Big Lime | | | 1700 | 1856 | (5) | WEST VIRGINIA | il Lai |
| Injun Sand | | | 1856 | 1912 | 15 DIA | ARIMENT DE MINES | Ca. |
| Slate & Sh | ells | | 1912 | 2472 | 15 300 | THE ME HOUSE | 2/ |
| Coffee Sha | 1e | | 2472 | 2493 | Sta | MEIMENT OF MINES | 1 |
| Berea Grit | | | 2493 | 2570 | 100 | Suint | 1 |
| Brown Shal | | | 2570 | 2612 | | 060 | |
| Gray Shale | 4 | | 261.2 | 3230 | | | 10/10/2 |

| Formation | Color | Hard or Soft | Top 7/2 | Bettem | Oil, Gas or Water | Depth Found | Rémarks |
|--|------------|-----------------|---------------------|-----------------------|---|----------------|----------|
| | | | | | | | |
| * *** | • | | | | | | |
| Bresm βhale White, Shate Total depth | | | 3230 3497 *** | 35161 3516 3497 | | | |
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| Date January 21, 19 53 |
|--|
| APPROVED UNITED FUEL GAS COMPANY OWNER |
| By R. Henel 40/10/2014 |
| Manager Civil Engineering Department |

WW-4A Revised 6-07

| 1) | Date: | 9/18/2014 | | | | |
|----|------------|-------------|--------|----|-------|--|
| 2) | Operator's | Well Number | 806986 | | | |
| 3) | API Well N | o.: 47 - | 059 | 20 | 00318 | |

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

| (a) Name | First Century Bank, Inc. | Name | Consol of KY Inc. |
|-----------|--------------------------|--------------|--|
| Address | P. O. Box 1559 | Address | P. O. Box 76 |
| | Bluefield, WV 24701 | | Naugatuck, WV 25685 |
| (b) Name | 4 | (b) Coal Ov | vner(s) with Declaration |
| Address | | Name | Costerman Estate c/oFirst Century Bank, Inc. |
| | | Address | P. O. Box 1559 |
| | | | Bluefield, WV 24701 |
| (c) Name | | Name | |
| Address | | Address | |
| Inspector | Jeremy James | (c) Coal Les | ssee with Declaration |
| Address | P. O. Box 147 | Name | ICG Eastern, LLC |
| | Ona, WV 25545 | Address | PO Box 1019 RT 82 |
| Telephone | (304) 951-2596 | | West Cowen, WV 26206 |

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

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

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.

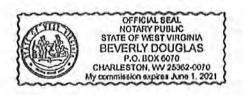
Well Operator By: David Goeke Manager - Operations, Appalachia South - Northern Its: Division Address P. O. Box 18496 Oklahoma City, OK 73154-0496 Telephone (606) 298-3400 www.bugaiment.of

Subscribed and sworn before me this

day of

My Commission Expires

Notary Public





Received

SEP 2 4 2014

Office of Oil and Gas
WV Dept. of Environmental Protection







WW-9 Rev. 02/01

| Page | of | 10000 |
|--------------------|--------|-------|
| API Number 47 - 59 | | 00318 |
| Operator's Well No | 806986 | |

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 Left Flork of Dan Branch of Marrowbone Creek Quadrangle Wilsondale, WV 7.5' |
| Elevation 1349' County Mingo District Kermit |
| Description of anticipated Pit Waste: Plugging returns |
| Will a synthetic liner be used in the pit? Yes 20414. |
| Proposed Disposal Method For Treated Pit Wastes: _X Land Application |
| Underground Injection (UIC Permit Number) |
| Reuse (at API Number) |
| Off Site Dispposal (Supply form WW-9 for disposal location) Other (Explain |
| Proposed Work For Which Pit Will Be Used: |
| Drilling Swabbing |
| Workover X Plugging Other (Explain |
| Venue (DApieni |
| 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 Company Official Signature |
| Company Official (Typed Name) David Gocke |
| Company Official Title Manager - Operations, Appalachian South BU, Northern Division |
| Subscribed and sworn before me this 1711 day of Soptember, 2014 RECEIVED Office of Oil and Gas Notory Public SEP 2 5 2014 |
| |
| WV Department of Environmental Protect |
| Environmental Flore |

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
BEVERLY DOUGLAS
P.O. BOX 6070
CHARLESTON: WY 25302-0070
My contrussion expires June 1, 2021

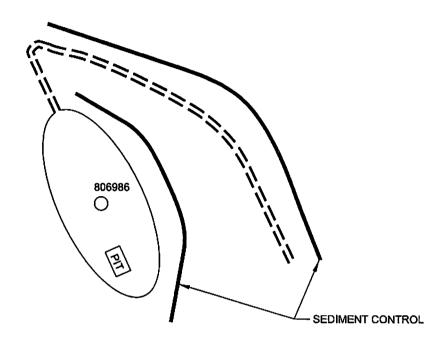
| Property Boundary | Diversion |
|------------------------------------|--|
| Road | Spring |
| Existing Fence | Wet Spot |
| Planned Fence | Drain Pipe with size in inches |
| Stream | Waterway |
| Open Ditch | Cross Drain |
| Rock | Artificial Filter Strip |
| North | Pit: cut walls |
| Buildings | Pit: compacted fill walls |
| Water wells | Area for Land Application of Pit Waste |
| Drill site | |
| Fertilizer (10-20-20 or equivalent | or to correct to pH |
| Title: in spector 006 | Office |

LEGEND

CHESAPEAKE APPALACHIA, L.L.C.

RECLAMATION DIAGRAM WELL LOCATION 806986

API 47-059-00318



FECEIVED
Office of Oil and Gas
SEP 7/5/2014

WV Department of Environmental Protection

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 show in approximate pre-planning configurations.

All culvert pipes will be a minimum of 15 inches in diameter, all culvert pipes installed will be accomanied 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 roacks of 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.

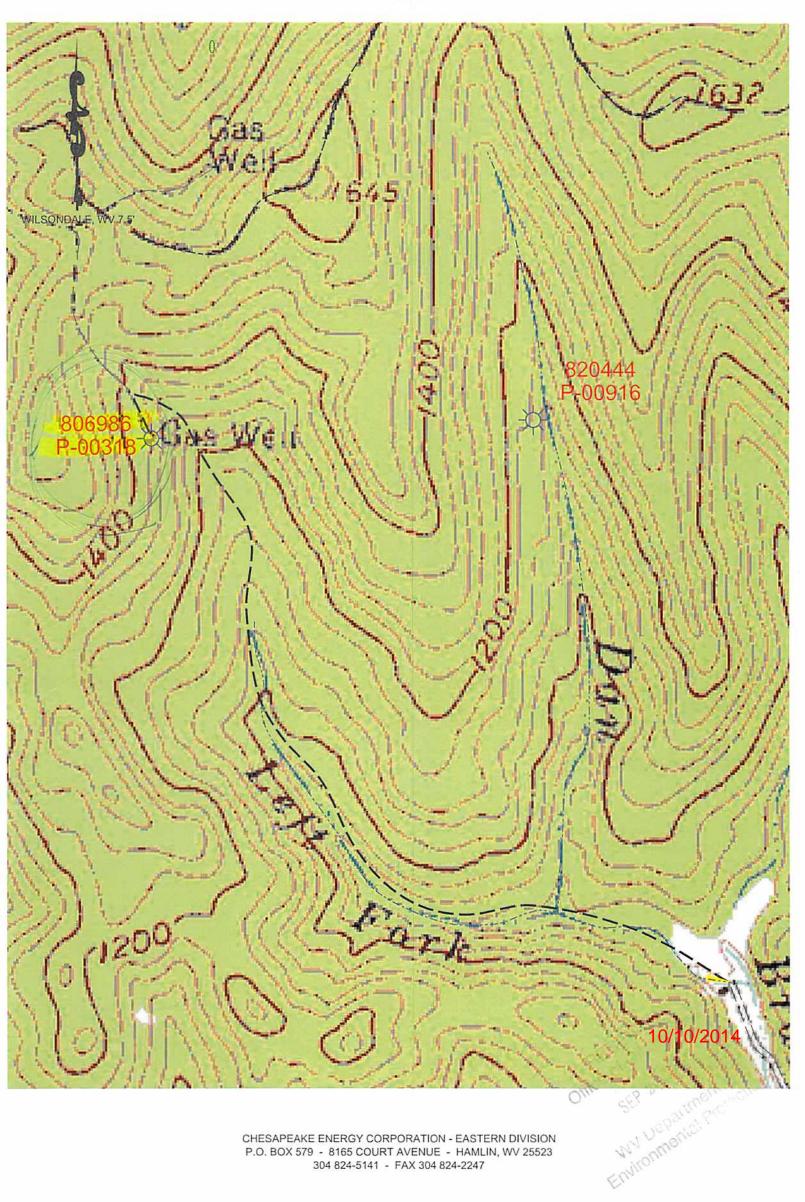
Cross drains, broad based dips, water bars, and diversion ditches, will be employed during the construction phase. These erosion and sediment control structures will be used to control erosion and sedimentation during the contruction phase, where applicable, and in areas that will allow. These 10/10/2014 structures will be considered permanent and used as such.

Permanent seeding: See Attachment #1.

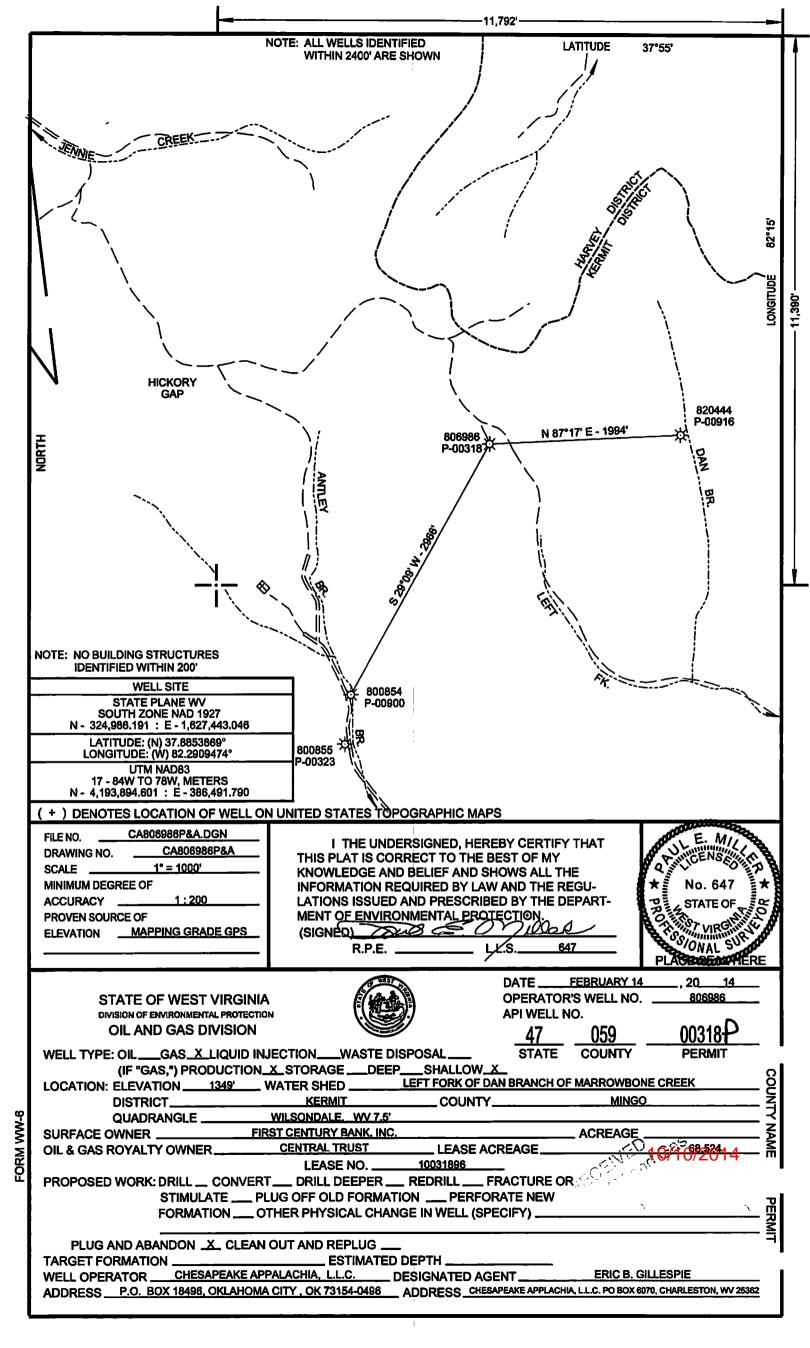
CHESAPEAKE APPALACHIA, L.L.C.

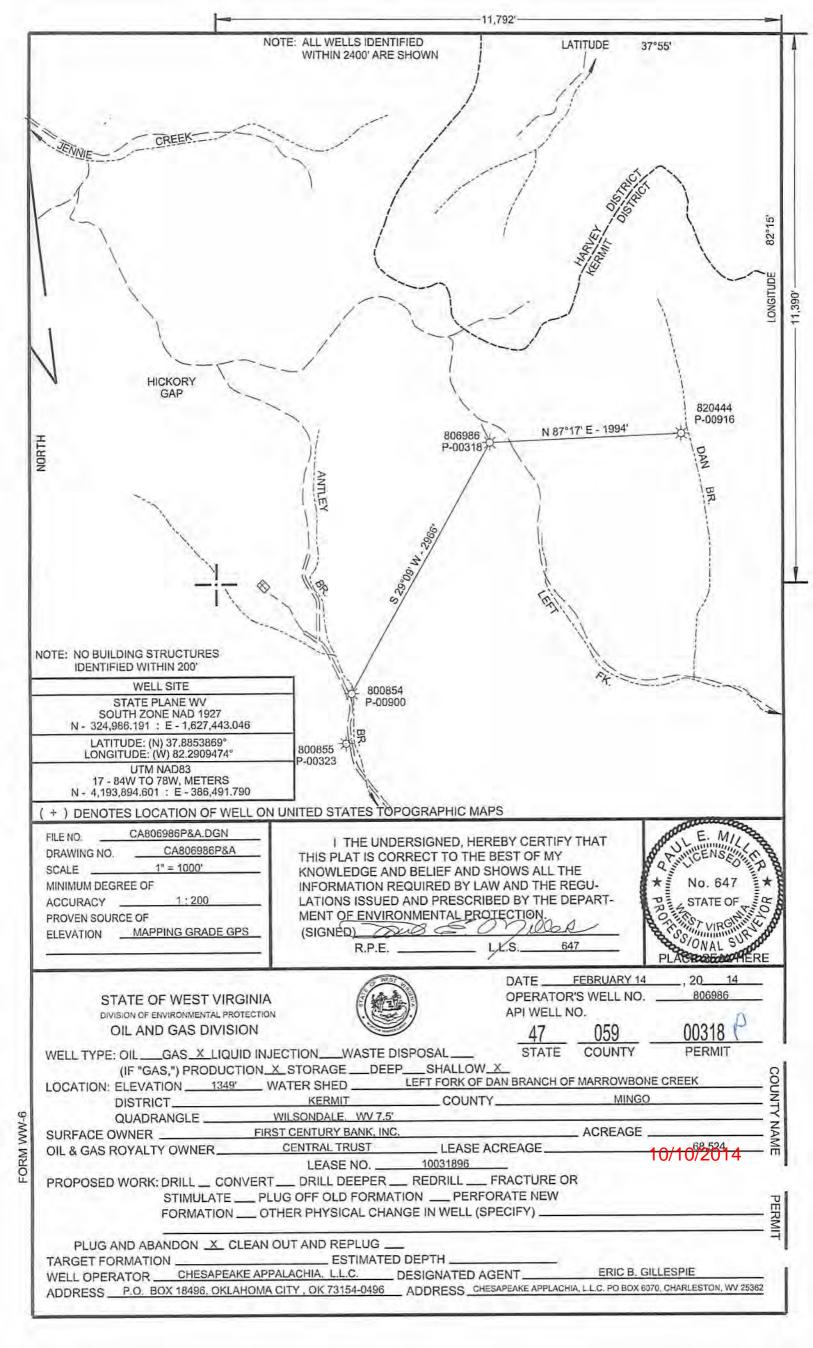
TOPOGRAPHICAL MAP OF ACCESS AND WELL LOCATION 806986

API 47-059-00318



CHESAPEAKE ENERGY CORPORATION - EASTERN DIVISION P.O. BOX 579 - 8165 COURT AVENUE - HAMLIN, WV 25523 304 824-5141 - FAX 304 824-2247





C. X51000



CERTIFIED MAIL

September 19, 2014

Mr. James Martin Division of Environmental Protection Office of Oil and Gas 601 57th Street SE Charleston, WV 25304

Dear Mr. Martin:

Chesapeake Appalachia, L.L.C. proposes to plug and abandon Well 806986, API No. 47-059-00318. Please find attached a check in the amount of \$100.00 for the permit fee and the permit application to plug and abandon.

If you have any questions, please call our Honey Branch office (606) 298-3400.

Best regards,

David Stumbo

Production Superintendent

Enclosure: Permit Application Package to Plug and Abandon

C: Jeremy James P. O. box 147 Ona, WV 25545 Office of Oil and Gas

SEP 2 2 2014

WV Department of Environmental Protection