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**west virginia** department of environmental protection

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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

March 18, 2015

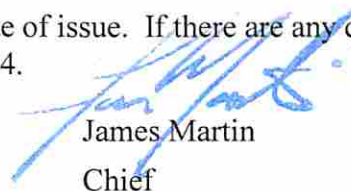
**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-4301906, 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: 2431  
Farm Name: LINCOLN LAND ASSOC  
**API Well Number: 47-4301906**  
**Permit Type: Plugging**  
Date Issued: 03/18/2015

## 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

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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.

4301906P

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

1) Date: 2/9/2015  
2) Operator's Well No. 802431 P&A  
3) API Well No. 47-043-01906

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

CK  
5241365  
700<sup>00</sup>

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 1098' Watershed Straight Fork of Mud River  
 District Carroll County Lincoln Quadrangle West Hamlin, 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 [Signature] Date 2-23-15

Received

FEB 25 2015

Office of Oil and Gas  
WV Dept. of Environmental Protection

03/20/2015

802431 P&A PROCEDURE

ELEV. 1098.00'

- 1) Prepare road and location, MIRU service rig
- 2) RIH with tools to check TD approximately at 2270' (If we are unable to get tools to 2265', then rip or shoot holes in 3" above top of fill)
- 3) TIH with W.S. to 2260', spot gel
- 4) Spot 100' cement plug 2260'-2160' or as deep as possible, pull W.S.
- 5) Cut 3" at free-point (approximately 1860') and pull
- 6) Run W.S. to 1860', spot gel
- 7) Spot 125' cement plug 1860'-1735', pull W.S.
- 8) RIH with tools to check top of plug (If TOC is below 1775', then re-set plug)
- 9) Rip or shoot holes in 6 5/8" approximately at 1680', 1640', 1500' and 1475' 1330' & 1355'
- 10) Run W.S. to 1700', spot gel
- 11) Spot 100' cement plug 1700'-1600', pull W.S. to 1500'
- 12) Spot 100' cement plug 1500'-1400', pull W.S.
- 13) Cut 6 5/8" at free-point (approximately 1070') and pull
- 14) Run W.S. to 1070', spot gel
- 15) Spot 150' cement plug 1070'-920', pull W.S.
- 16) RIH with tools to check TOC (If top of plug is below 970', then re-set plug)
- 17) Run W.S. to 480', spot gel
- 18) Spot 100' cement plug 480'-380', pull W.S. to 175'
- 19) Spot 175' cement plug 175'-surface
- 20) Pull W.S. and top off with cement
- 21) Set monument and reclaim as prescribed by law

COVER  
COAL 1334' - 1338'

Received

FEB 25 2015

03/20/2015

**UNITED FUEL GAS COMPANY**  
(INCORPORATED)

*Well 802431  
API 47-043-01906P*

SERIAL WELL NO. 2431

LEASE NO. \_\_\_\_\_

MAP SQUARE \_\_\_\_\_

54-55

RECORD OF WELL No. 2431 on the

Lincoln Land Assn. Farm of 20000 Acres  
in Carroll District  
Lincoln County  
Branchland Field, State of W. Va.

Rig Commenced Jan. 21, 1927. 192  
Rig Completed Jan. 26, 1927. 192  
Drilling Commenced Mar. 7, 1927. 192  
Drilling Completed Apr. 26, 1927. 192  
Drilling to cost \_\_\_\_\_ per foot

Contractor is:

Address:

Drillers' Names H. S. Smith  
Walter Roper  
R. L. Jaynes, Foreman.

CASING AND TUBING

SIZE	USED IN DRILLING	LEFT IN WELL
16		
13		
10		
8 1-4	<u>51'-9"</u>	<u>51'-9"</u>
6 5-8	<u>508'-4"</u>	<u>None</u>
5 3-16	<u>1809'-0"</u>	<u>1809'-0"</u>
4 7-8		
4		
3	<u>2324'</u>	<u>2324'</u>
2		

TEST BEFORE SHOT  
.....of Water in..... inch  
6/10 10ths  
.....of Merc. in..... inch  
10ths  
Volume..... Cu. ft.

TEST AFTER SHOT  
.....of Water in..... inch  
10/10 10ths  
.....of Merc. in..... inch  
10ths  
Volume..... Cu. ft.

Rock Pressure..... 4305

Date Shot..... Apr. 27, 1927.

Size of Torpedo..... 40 lb.

Oil Flowed..... bbls. 1st 24 hrs.

Oil Pumped..... bbls. 1st 24 hrs.

SHUT IN

Date..... May 3, 1927

..... in Tubing or Casing

Size of Packer..... 6-5/8"

Kind of Packer..... Anchor

1st Perf. Set..... 10' from bottom

2nd Perf. Set..... 53' from bottom

Well abandoned and

Plugged..... 19.....

DRILLER'S RECORD

FORMATION	TOP	BOTTOM	THICKNESS	REMARKS
Clay & Gravel		30	30	Producing Gas from Berea Sand from <u>2245'</u>
Sand	30	55	5	to <u>2255'</u> , shot with 40 quarts. Test before
Slate	65	85	20	shot 6/10 water thru 2"-115,966 Cu. Ft.
Sand	85	125	40	Test after shot-12/10 water thru 2"-
Slate & Sand	125	400	300	<u>122,640 Cu. Ft.</u>
Red Rock	400	500	40	<u>Water at 150'</u>
Slate & Sand	500	1010	490	
1st Salt Sand	1010	1135	125	Water, hole full at 1065'
Slate	1135	1170	35	48 hour rock pressure 430', thru 3" tubing.
2nd Salt Sand	1170	1304	214	Tubed with 3" tubing. 1-3"-21-5/8"x16" CWS
<u>Coal &amp; Gave</u>	<u>1304</u>	<u>1330</u>	4	tubing anchor packer used.
Slate & Shells	1330	1404	74	
Little Lime	1404	1434	30	
Pencil Gave	1434	1492	8	
Big Lime	1492	1674	182	<u>6-5/8" casing set at 1730', 1-3-5/8"x21'</u>
Big Injun Sand	1674	1694	20	Farmer H.F. packer used
Slate & Shells	1694	2245	551	
<u>Berea Sand</u>	<u>2245</u>	<u>2265</u>	10	<i>Tubing Packer Set at 2051'</i>
Slate	2265	2315	50	
Total Depth		2315	2315	

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Office of Oil & Gas

FEB 10 2015

03/20/2015

4301906 P

WW4-A  
Revised  
2/01

1) Date: 2/9/2015  
2) Operator's Well No. 802431 P&A  
3) API Well No. 47-043-01906

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 Reese M. & Brenda K. Meadows  
Address 3848 River Park Avenue  
Ona, WV 25545

(b) Name Greg Stowers  
Address 140 Island Way 293  
Clearwater, FL 33767

(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 J. A. Holley Estate  
Address P.O. Box 659  
Wichita Falls, TX 76307

Name \_\_\_\_\_  
Address \_\_\_\_\_

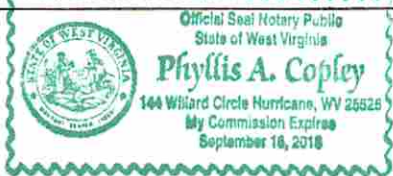
Coal Lessee with Declaration  
(c) Name None  
Address \_\_\_\_\_

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: [Signature]  
Its: Manager - Operations, Appalachia South  
Address: P.O. Box 18496  
Oklahoma City, OK 73154-0496  
Telephone: 405-935-4073

Subscribed and sworn before me this 9th day of February the year of 2015  
Phyllis A. Copley Notary Public

My Commission Expires September 16, 2018

Received  
Office of Oil & Gas

FEB 10 2015

03/20/2015

4301906P

Well 802431  
API 47-043-01906

7014 2120 0001 1976 0399

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**WICHITA FALLS TX 76307**

**OFFICIAL USE**

Postage	\$ 1.40	0523
Certified Fee	3.30	01
Return Receipt Fee (Endorsement Required)	2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	0.00	
<b>Total Postage &amp; Fees</b>	<b>7.40</b>	<b>02/09/2015</b>

Sent To: **802431 P&A (coal)**

Street & or PO Box: **J. A. Holley Estate** ✓

City, State: **P.O. Box 659**  
**Wichita Falls, TX 76307**

PS Form 3800, July 2014 See Reverse for Instructions

7014 2120 0001 1976 0405

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**CLEARWATER BEACH FL 33767**

**OFFICIAL USE**

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Certified Fee	3.30	01
Return Receipt Fee (Endorsement Required)	2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	0.00	
<b>Total Postage &amp; Fees</b>	<b>7.40</b>	<b>02/09/2015</b>

Sent To: **802431 P&A (access surface)**

Street & or PO Box: **Greg Stowers** ✓

City, State: **140 Island Way 293**  
**Clearwater, FL 33767**

PS Form 3800, July 2014 See Reverse for Instructions

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Office of Oil & Gas  
FEB 10 2015

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**ONA WV 25545**

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Certified Fee	3.30	01
Return Receipt Fee (Endorsement Required)	2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	0.00	
<b>Total Postage &amp; Fees</b>	<b>7.40</b>	<b>02/09/2015</b>

Sent To: **802431 P&A (surface)**

Street & or PO Box: **Reese M. & Brenda K. Meadows** ✓

City, State: **3848 River park Avenue**  
**Ona, WV 25545**

PS Form 3800, July 2014 See Reverse for Instructions

03/20/2015

Rev. 02/01

API Number 47-043-01906  
Operator's Well No. 802431 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 Straight Fork of Mud River Quadrangle West Hamlin, WV 7.5'  
Elevation 1098' County Lincoln District Carroll

Description of anticipated Pit Waste: Plugging Returns/Cement

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

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 *Dave Gocke*

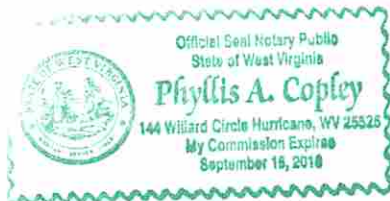
Company Official (Typed Name) Dave Gocke

Company Official Title Manager - Operations, Appalachia South

Subscribed and sworn before me this 9th day of February, 2015.

*Phyllis A. Copley* Notary Public.

My Commission Expires September 16, 2018

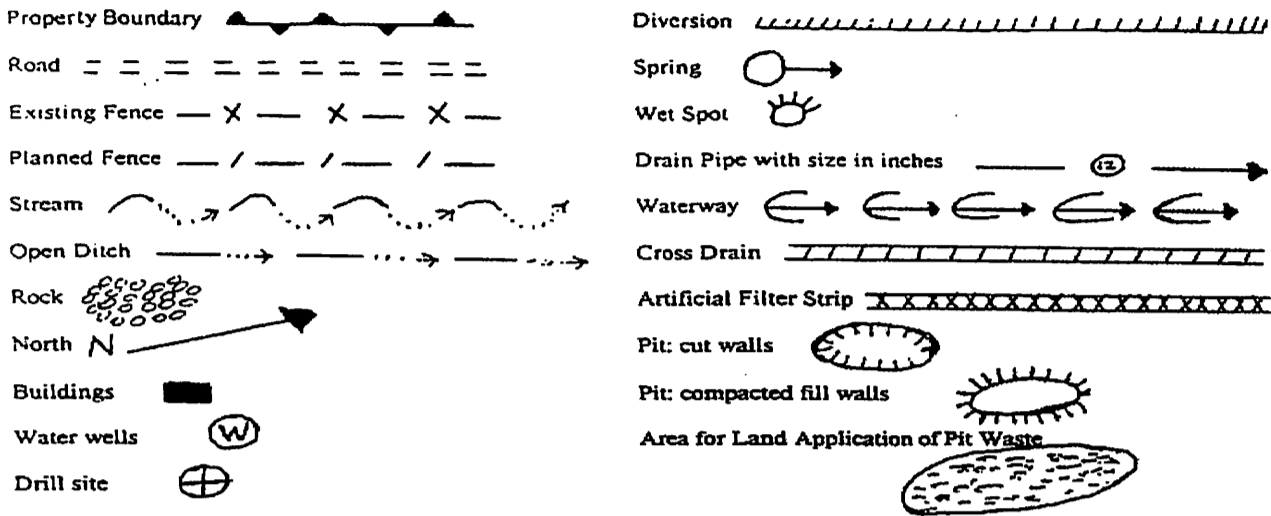




Attachment #1

API #: 47-043-01906  
 Operator's Well No. 802431 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: 

Title: inspector 006

Date: 2-23-15

Field Reviewed? (  ) Yes (  ) No

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FEB 25 2015

Office of Oil and Gas  
 WV Dept. of Environmental Protection

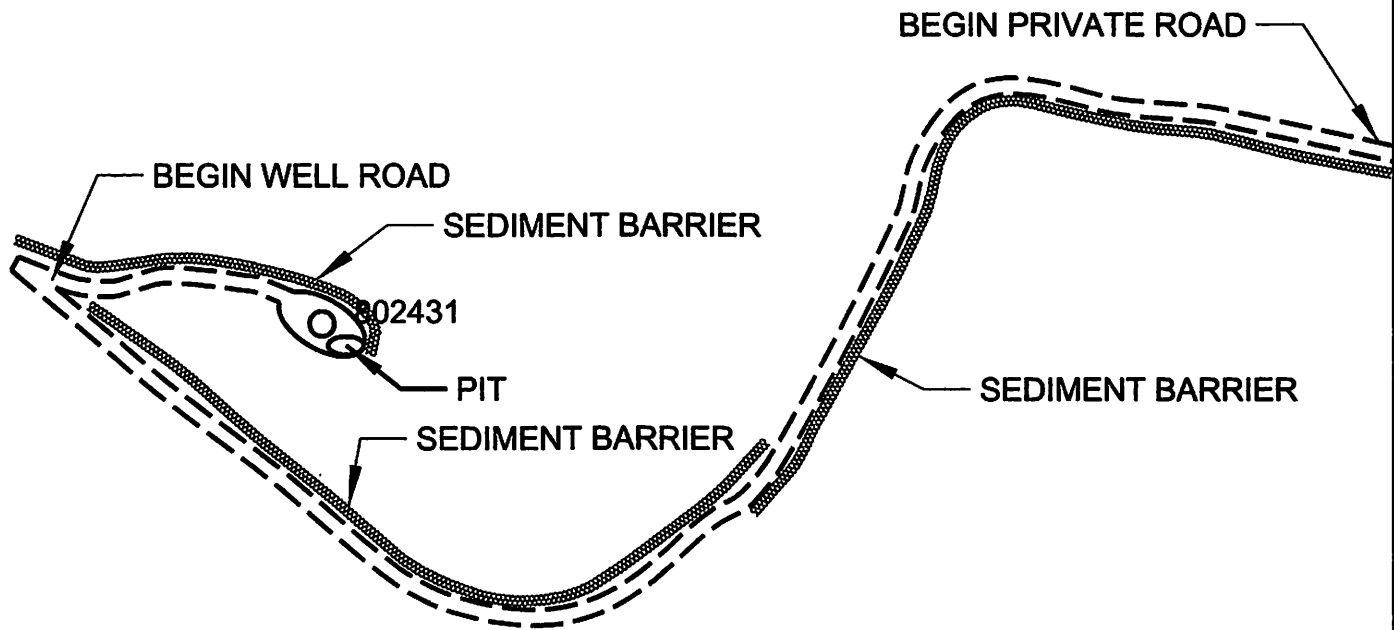
03/20/2015

4301906 P

# CHESAPEAKE APPALACHIA, L.L.C.

RECLAMATION DIAGRAM  
WELL LOCATION 802431

API 47-043-01906



### 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 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.

03/20/2015

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Office of Oil & Gas

FEB 10 2015

4301906P

CHESAPEAKE APPALACHIA, L.L.C.

TOPOGRAPHICAL MAP OF ACCESS AND  
WELL LOCATION 802431

API 47-043-01906



03/20/2015

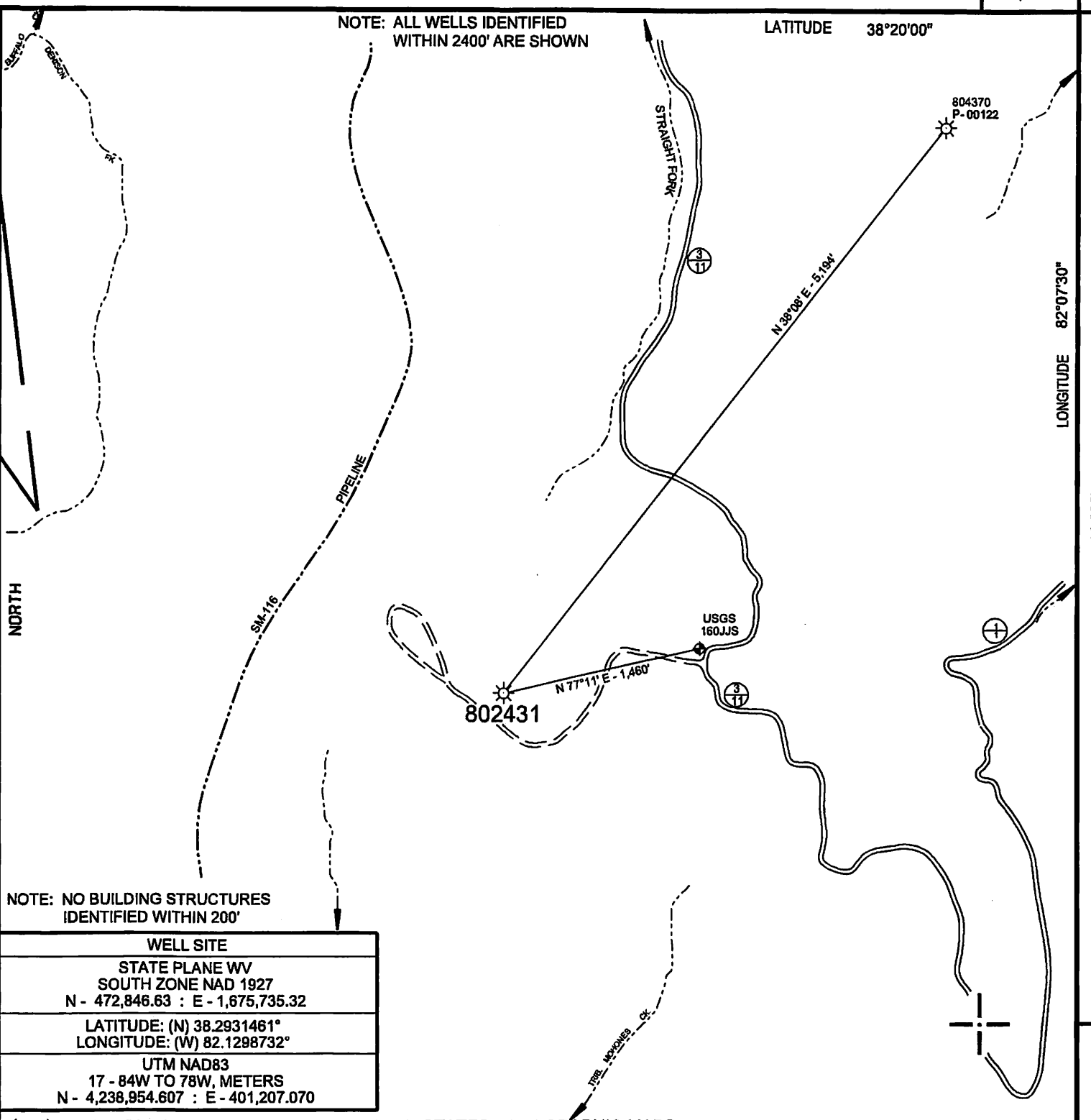
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CHESAPEAKE ENERGY CORPORATION - EASTERN DIVISION  
P.O. BOX 579 - 8165 COURT AVENUE - HAMLIN, WV 25523  
304 824-5141 - FAX 304 824-2247

1,409'

NOTE: ALL WELLS IDENTIFIED WITHIN 2400' ARE SHOWN

LATITUDE 38°20'00"



NOTE: NO BUILDING STRUCTURES IDENTIFIED WITHIN 200'

WELL SITE	
STATE PLANE WV SOUTH ZONE NAD 1927 N - 472,846.63 : E - 1,675,735.32	
LATITUDE: (N) 38.2931461° LONGITUDE: (W) 82.1298732°	
UTM NAD83 17 - 84W TO 78W, METERS N - 4,238,954.607 : E - 401,207.070	

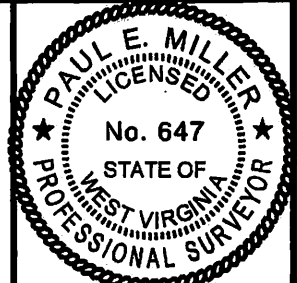
( + ) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO.	802431.DGN
DRAWING NO.	802431
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 JANUARY 21, 20 15  
OPERATOR'S WELL NO. 802431  
API WELL NO.

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

LOCATION: ELEVATION 1,098' WATER SHED STRAIGHT FORK OF MUD RIVER  
DISTRICT CARROLL COUNTY LINCOLN  
QUADRANGLE WEST HAMLIN, WV 7.5'

SURFACE OWNER REESE M. & BRENDA K. MEADOWS (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

COUNTY NAME PERMIT

03/20/2013