



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

November 25, 2014

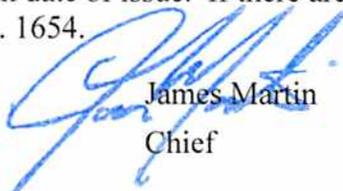
WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-8702274, 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: 566
Farm Name: CARPER, W. G.
API Well Number: 47-8702274
Permit Type: Plugging
Date Issued: 11/25/2014

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 under the terms of that agreement.

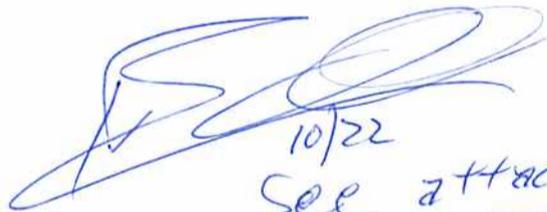
STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

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 1,006' Watershed Left Hand Run of Big Sandy Creek
District Geary County Roane Quadrangle Newton, 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 Ed Gainer Name Chesapeake Appalachia, L.L.C.
Address P.O. Box 821 Address P.O. Box 18496
 Spencer, WV 25276 Oklahoma City, OK 73154-0496

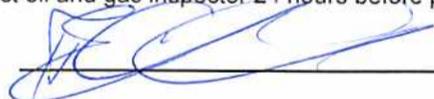
10) Work Order: The work order for the manner of plugging this well is as follows:

See Attached Sheet


10/22
See attachment

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

Work Order approved by Inspector



Date

10/22/14

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800566 P&A PROCEDURE

- 1) Prepare road and location
- 2) Run in hole with tools and check TD at approximately 1875'
- 3) Attempt to pull 3 1/2" and packer
 - A) If successful:
 - a) Run W.S. to 1850', load hole with gel
 - b) Spot 150' cement plug 1850'-1700', pull W.S.
 - c) Proceed to step #4
 - B) If unsuccessful:
 - a) Run W.S. to 1875'
 - b) Spot 100' cement plug 1875'-1775', pull W.S.
 - c) Cut 3 1/2" at free-point (approximately 1735') and pull
 - d) Run W.S. to 1765', load hole with gel, spot 100' cement plug 1765'- 1665'
 - e) Pull W.S. and proceed to step #4
- 4) Run in hole with tools to check top of cement. (If top of cement is below 1720', then re-set plug)
- 5) Cut 6 5/8" at free-point (approximately 1280') and pull
- 6) Run W.S. to casing cut at 1280', load hole with gel
- 7) Spot 100' cement plug 1280'-1180', pull W.S. to 950'
- 8) Spot 100' cement plug 950'-850', pull W.S. to 745'
- 9) Spot 70' cement plug 745'-675', pull W.S. to 620'
- 10) Spot 180' cement plug 620'-440', pull W.S. to 150' Good
- 11) Spot 150' cement plug 150'-surface, pull W.S.
- 12) Top off with cement, set monument and reclaim as prescribed by law



10/22/14

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UNITED FUEL GAS COMPANY
INCORPORATED

Roane 2274

SERIAL WELL NO. 566 LEA No. 1568 or 10300

MAP Sp. 82-15

RECORD of Well No. 1 on the
W. G. CARPER Farm of 41 1/2 Acres
in GEARY District
ROANE County
GLENDEN IN Field, State of W. VA.

CASING AND CONDUCTOR		
SIZE	USED IN DRILLING	LEFT IN WELL
Conductor	16"	16"
13"		
10"		
8 1/4"	715'	
8"		
7 1/2"		
6 3/4"	1748	1748
6 1/2"		
6 1/4"		
5 1/2"		
4 1/2"		
3"		1584

GAS WELL			
OPEN FLOW			
In		Inch casing	
At Centre	At 1-7 Diam.	At Centre	At 1-7 Diam.
Pounds	Ounces	Pounds	Ounces
			9/10 Mercury

Rig Commenced 1913-14
Rig Completed 1913-23
Drilling Commenced OCT. 1ST. 1913.
Drilling Completed NOV. 10TH. 1913.
Drilling to cost 1.30 per foot
Contractor is: MUNCE DRILLING CO.
Address: CHARLESTON W. VA.

CLOSED IN		
In 3" Tubing Casing		
1 Min.	260	Pounds
2 Min.	310	Pounds
3 Min.	325	Pounds
4 Min.	330	Pounds
5 Min.	335	Pounds
Rock Pressure	450	Pounds

Drillers' Names JASON Mc. CLEARY
G. B. DOWNING

OIL WELL
Size of Rods
Kind of Rods

Elevation 855 B.
1st DAY'S PRODUCTION
Gas calculated to be 5,572,930 cubic feet
Oil flowed barrels, pumped

Shot 19
Size of Torpedo
Size of Tubing 3 inch
Size of Packer 3 x 6 1/8 x 16
Kind of Packer L. R. V. I.
Set 123 ft. from BOTTOM
2
57

Well abandoned and plugged

DRILLERS RECORD

FORMATION	TOP	BOTTOM	THICKNESS	REMARKS	DATE
SOIL & RED ROCK	0	40	40	2ND. SALT SAND	1360 1540 180
SLATE	40	65	25	SALT WATER AT	1385
SLATE & LIME	65	215	150	SLATE	1540 1548 8
RED ROCK & LIME	215	300	85	MAXON SAND	1548 1665 117
SAND	300	325	25	SMALL SHOW GAS AT	1560
SLATE	325	395	70	SLATE	1665 1670 5
SAND	395	478	83	LITTLE LIME	1670 1710 40
COAL	478	481	3	PENCIL CAVE	1710 1717 7
SAND	481	535	54	BIG LIME	1717 1809 92
SLATE	535	550	15	LIME GAS AT	1793
SAND	550	585	35	BIG INJUN SAND	1809 1856 47
COAL	585	590	5	GAS	1817 1820
SAND	590	609	19	TOTAL DEPTH	1877
SLATE	603	647	44		
LITTLE DUNKARD SAND	647	710	63		
COAL	710	715	5		
SLATE	715	735	20		
BIG DUNKARD SAND	735	800	65		
SLATE	800	858	58		
GAS SAND	858	910	52		
COAL	910	916	6		
SAND	916	1050	134		
SLATE	1050	1095	45		
SAND	1095	1150	55		
SLATE	1150	1240	90		
SALT SAND	1240	1305	65	SMALL SHOW OF OIL AT 1280	

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Office of Oil & Gas
OCT 22 2014

8702274P

WW4-A
Revised
2/01

1) Date: 10/15/2014
2) Operator's Well No. 800566 P&A
3) API Well No. 47-087-02274

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 H. E. Pennington, Jr. Etal
Address 1209 Harrenhill Road North
West Palm Beach, FL 33417

(b) Name Tommy Bush
Address 3040 E. Point Street
East Point, GA 30344

(c) Name _____
Address _____

6) Inspector Ed Gainer
Address P.O. Box 821
Spencer, WV 25276

Telephone 304-389-7582

5) Coal Operator
(a) Name None
Address _____

Coal Owner(s) with Declaration
(b) Name William W. Carper Estate
Address P.O. Box 20473
Charleston, WV 25362

Name _____
Address _____

Coal Lessee with Declaration
(c) Name None
Address _____

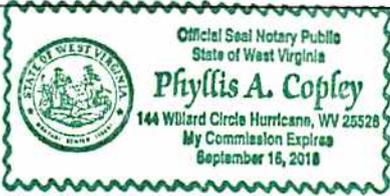
Name _____
Address _____

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: Completions Superintendent
Address: P.O. Box 18496
Oklahoma City, OK 73154-0496
Telephone: 405-935-4073

Subscribed and sworn before me this 15th day of October the year of 2014
Phyllis A. Copley Notary Public
My Commission Expires September 16, 2018

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WEST PALM BEACH, FL 33417
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	10/15/2014

Sent To: **800566 P&A (surface)**
 H. E. Pennington, Jr., Etal
 1209 Harrenhill Road North
 West Palm Beach, FL 33417

PS Form 3800

7012 3460 0000 4499 3224

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CHARLESTON, WV 25362
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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	10/15/2014

Sent To: **800566 P&A (Coal Owner)**
 William W. Carper Estate
 P.O. Box 20473
 Charleston, WV 25362

PS Form 3800

Received

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Office of Oil and Gas
WV Dept. of Environmental Protection

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ATLANTA, GA 30344
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	10/15/2014

Sent To: **800566 P&A (surface along access route)**
 Tommy Bush
 3040 E. Point Street
 East Point, GA 30344

PS Form 3800

8702274P

Form WW-9
Rev. 02/01

API Number 47-087-02274
Operator's Well No. 800566 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 Left Hand Run of Big Sandy Creek Quadrangle Newton, WV 7.5'
Elevation 1,006' County Lincoln District Geary

Description of anticipated Pit Waste: Plugging Returns/Cement

Will a synthetic liner be used in the pit? Yes 20 mil (min)

- 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 *Robert Schindler*

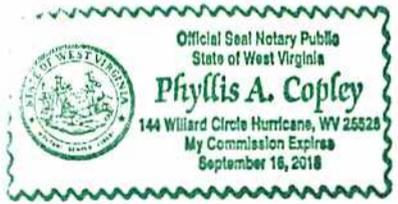
Company Official (Typed Name) Robert Schindler

Company Official Title Completions Superintendent

Subscribed and sworn before me this 15th day of October, 2014.

Phyllis A. Copley Notary Public.

My Commission Expires September 16, 2018

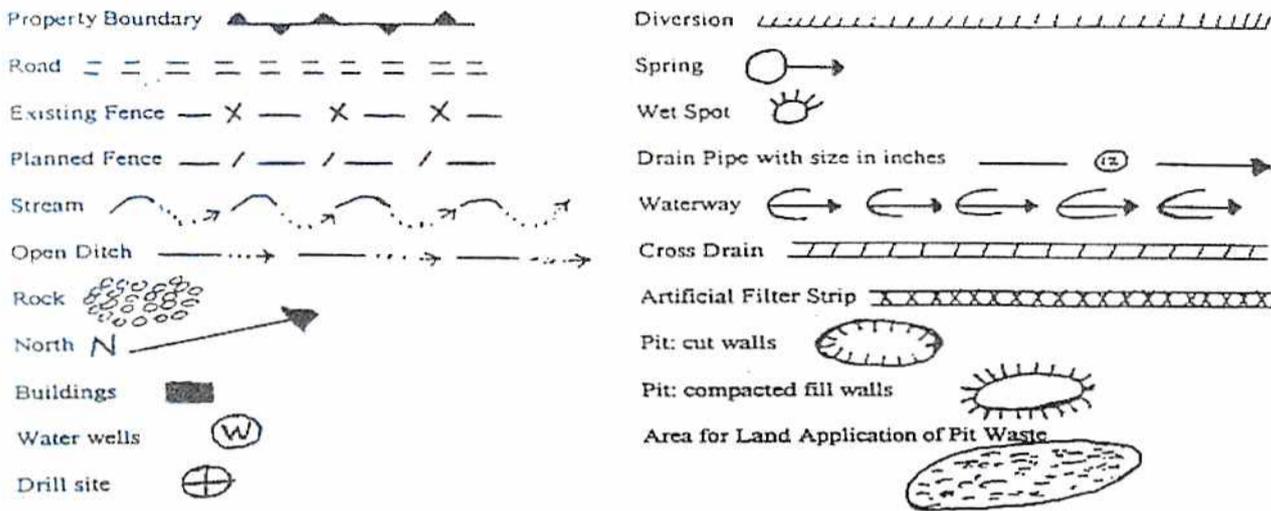


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Attachment #1

API #: 47-087-02274
 Operator's Well No. 800566 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: _____

Title: Inspector

Date: 10/22/14

Field Reviewed? () Yes (X) No

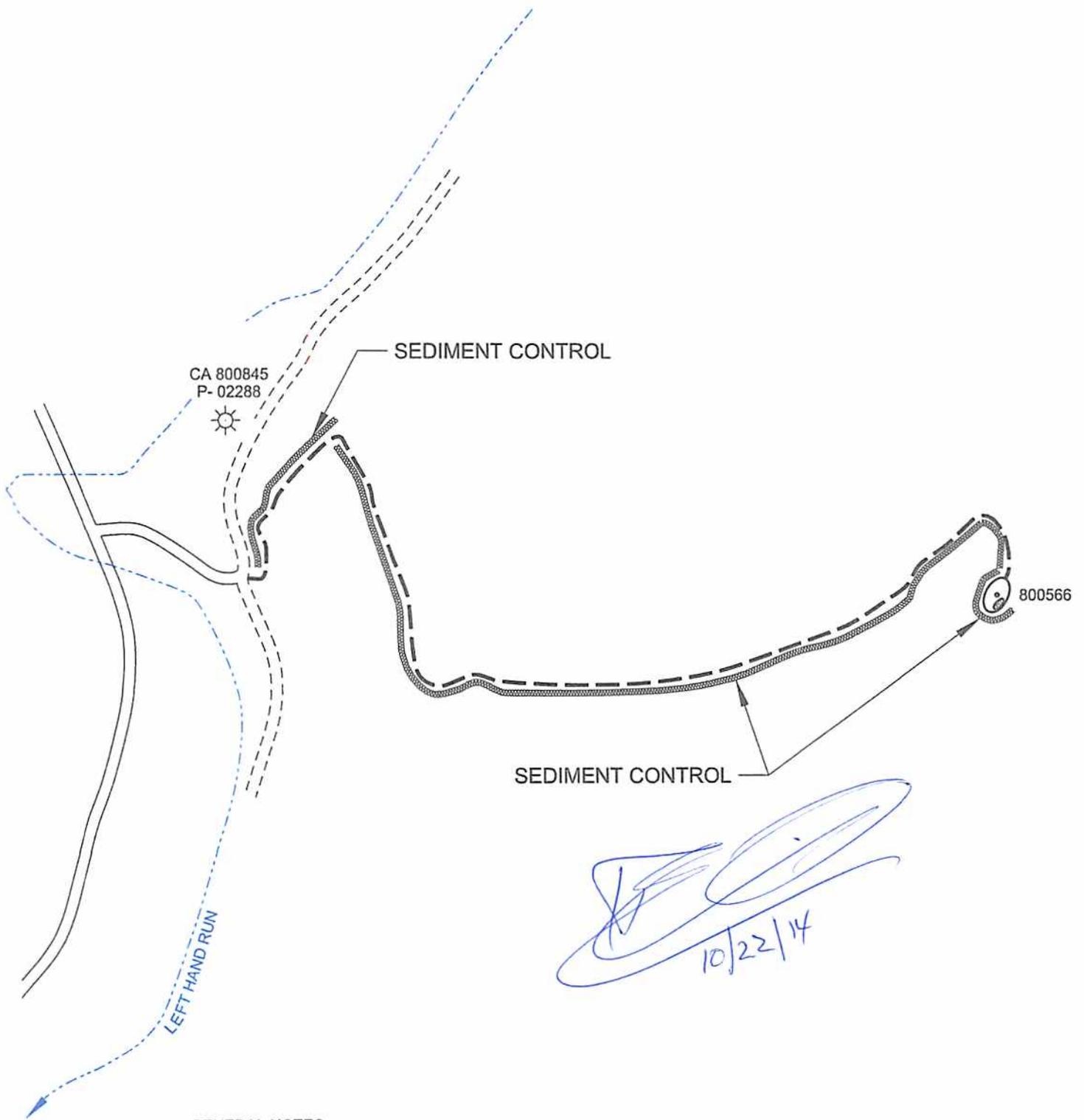
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CHESAPEAKE APPALACHIA, L.L.C.

RECLAMATION DIAGRAM
WELL LOCATION 800566

API 47-043-02274



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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CHESAPEAKE APPALACHIA, L.L.C.

TOPOGRAPHICAL MAP OF ACCESS AND
WELL LOCATION 800566

API 47-087-02274

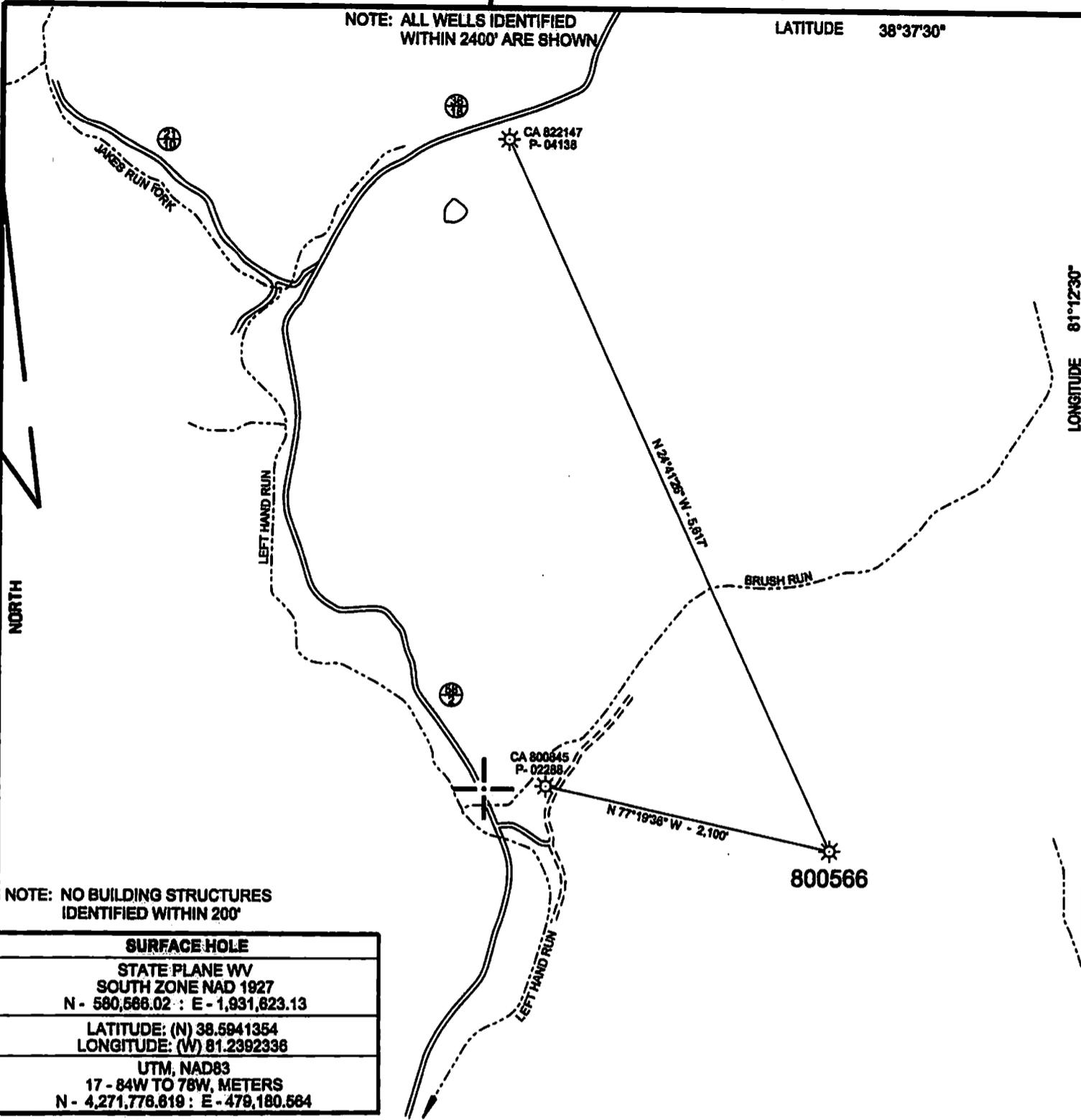


8,680'

NOTE: ALL WELLS IDENTIFIED WITHIN 2400' ARE SHOWN

LATITUDE 38°37'30"

LONGITUDE 81°12'30"



NOTE: NO BUILDING STRUCTURES IDENTIFIED WITHIN 200'

SURFACE HOLE

STATE PLANE WV
SOUTH ZONE NAD 1927
N - 580,566.02 : E - 1,931,823.13

LATITUDE: (N) 38.5941354
LONGITUDE: (W) 81.2392336

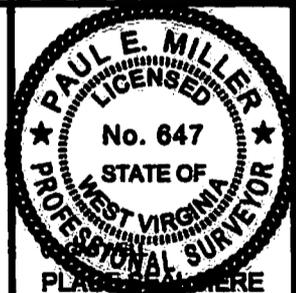
UTM, NAD83
17 - 84W TO 78W, METERS
N - 4,271,776.819 : E - 479,180.564

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

FILE NO. 800566 P&A.DGN
 DRAWING NO. 800566 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 OCTOBER 3, 20 14
OPERATOR'S WELL NO. 800566
API WELL NO. _____

47 087 02274P
STATE COUNTY PERMIT

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

LOCATION: ELEVATION 6086' WATER SHED _____ LEFT HAND RUN OF BIG SANDY CREEK
DISTRICT GEARY COUNTY ROANE
QUADRANGLE NEWTON, WV 7.5'

SURFACE OWNER H. E. PENNINGTON, JR. ET AL ACREAGE _____
OIL & GAS ROYALTY OWNER _____ LEASE ACREAGE _____

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 LLC DESIGNATED AGENT JESSICA GREATHOUSE
ADDRESS PO BOX 18498 OKLAHOMA CITY, OK 73164-0498 ADDRESS PO BOX 6070 CHARLESTON, WV 25362

COUNTY NAME

PERMIT