



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

March 13, 2015

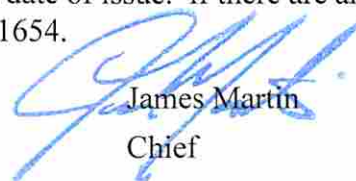
WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-4301853, 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: 5998
Farm Name: RICE, ALBERT
API Well Number: 47-4301853
Permit Type: Plugging
Date Issued: 03/13/2015

Promoting a healthy environment.

03/13/2015

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.

CK# 5235953
100.00
43 01853P

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

1) Date: 1/26/2015
2) Operator's Well No. 805998 P&A
3) API Well No. 47-043-01853 P

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 901' Watershed Hungry Creek
District Carroll County Lincoln Quadrangle 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
Name Ralph Triplett
Address 5539 McClellan Highway
Branchland, WV 25506

9) Plugging Contractor
Name Chesapeake Appalachia, L.L.C.
Address P.O. Box 18496
Oklahoma City, OK 73154-0496

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

See Attached Sheet

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Office of Oil and Gas
JAN 29 2015
WV Department of
Environmental Protection

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

Work Order approved by Inspector _____ Date _____

OK

03/13/2015

805998 P&A PROCEDURE

NOTE: 6 5/8" may have been pulled

- 1) Prepare road and location. MIRU service rig
- 2) Run in hole with tools to check TD at approximately 2300'
- 3) Attempt to pull 2" and packer
 - A) If successful
 - a) Run W.S. to 2260', spot gel
 - b) Spot 100' cement plug 2260'-2160', pull W.S.
 - c) Proceed to step 4
 - B) If unsuccessful
 - a) Cut 2" at free-point (approximately 2000') and pull
 - b) Run W.S. to 2000', spot gel
 - c) Spot 100' cement plug 2000'-1900', pull W.S.
 - d) Proceed to step 4
- 4) Rip or shoot holes in 6 5/8" at approximately 1800', 1570', and 1550'
- 5) Run W.S. to 1880', spot gel
- 6) Spot 150' cement plug 1880'-1730', pull W.S. to 1575'
- 7) Spot 100' cement plug 1575'-1475', pull W.S.
- 8) Cut 6 5/8" at free-point (approximately 1125') and pull
- 9) Run W.S. to 1125', spot gel

NOTE: If at least 1100' of 6 5/8" can not be pulled, then rip or shoot holes at appropriate depths and spot cement plugs at correct depths.

- 10) Spot 150' cement plug 1125'-⁸⁷⁵975', pull W.S. to 550' *Add 100ft. cement to get above level*
- 11) Spot 100' cement plug 550'-450', pull W.S. to 150'
- 12) Spot 150' cement plug 150'-surface
- 13) Pull W.S. and top off with cement
- 14) Erect monument and reclaim as prescribed by law

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FEB 04 2015

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HUNTINGTON DEVELOPMENT & GAS CO.

4301853P

Serial Well No. **5998** **170**
PARAGON PRINT. IM 5-25 53688

Lease No.

Map Square **38-59**

RECORD OF WELL No. **5998** on the

Albert Rice Farm of Acres
 in **Carroll** District
Lincoln County
 Field, State of **W. Va.**

CASTING AND TUBING

TEST BEFORE SHOT

SIZE	USED IN DRILLING	LEFT IN WELL
16		
13		
10		20
8 1/4		
6%		1830
5 3/16		
4%		
4		
3		304
2		2017

10ths of Water in inch
~~10ths~~ **3** of Merc. in **2** inch
 10ths Volume Cu. ft.

TEST AFTER SHOT

10ths of Water in inch
~~10ths~~ **12** of Merc. in **2** inch
 10ths Volume **615,240** Cu. ft.
 Rock Pressure **525**

Date Shot **7-29-17**
 Size of Torpedo **80 lbs**

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

Well abandoned and
 Plugged 19

Rig Commenced 192
 Rig Completed 192
 Drilling Commenced 192
 Drilling Completed **8-2-17** 192
 Drilling to cost per foot
 Contractor is: **Ed. Kellerman**
 Address:

SHUT IN

Date

..... in Tubing or Casing

Size of Packer

Kind of Packer

1st Perf. Set from

2nd Perf. Set from

Driller's Names

DRILLER'S RECORD

Formation	Top	Bottom	Thickness	Remarks
Surface	0	30		
Sand	30	40		
Slate	40	100		
Sand	100	115		
Slate	115	200		
Sand	200	220		
Slate	220	520		
Sand	520	540		
Slate	540	570		
Sand	570	595		
Slate	595	650		
Sand	650	700		
Slate	700	710		
Sand	710	775		
Slate	775	855		
Sand	855	870		
Slate	870	880		
Sand	880	915		
Slate	915	925		
Slate	925	955		
Slate	955	1025		
Sand	1025	1045		
Slate	1045	1095		
Gas sand	1095	1110		
Salt sand	1115	1420		
Slate	1420	1460		
Maxton sand	1460	1540		
Shale	1540	1545		
White sand	1545	1550		
Big lime	1550	1730		
Broken sand	1730	1780		
Big injun	1780	1840		
Slate & shells	1840	2269		
Borea grit	2269	2289		
TOTAL DEPTH		2321		

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 03/13/2015
 JAN 29 2015

WV Department of
 Environmental Protection

WW4-A
Revised
2/01

1) Date: 1/26/2015
2) Operator's Well No. 805998 P&A
3) API Well No. 47-043-01853

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 Barbara & Claude Blankenship
Address 1 Blankenship Lane
Summersville, WV 26651

(b) Name _____
Address _____

(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 Barbara & Claude Blankenship
Address 1 Blankenship Lane
Summersville, WV 26651

Name _____
Address _____

Coal Lessee with Declaration
(c) Name None
Address _____

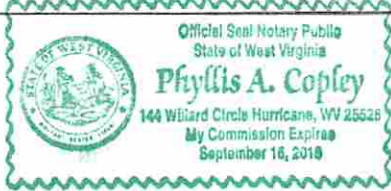
Name _____
Address _____

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

Subscribed and sworn before me this 27th day of January the year of 2015
Pphyllis A. Copley Notary Public
My Commission Expires September 16, 2018
Form WW-9

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WV Department of
Environmental Protection
03/13/2015

Will #: 805998
API # 47-043-01853 P

7010 3090 0002 9275 3479

U.S. Postal Service™		
CERTIFIED MAIL™ RECEIPT		
(Domestic Mail Only; No Insurance Coverage Provided)		
For delivery information visit our website at www.usps.com ®		
SUMMERSVILLE WV 26651		
OFFICIAL USE		
Postage	\$ 1.40	0523
Certified Fee	\$ 3.30	03
Return Receipt Fee (Endorsement Required)	\$ 2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$ 0.00	
Total Postage & Fees	\$ 7.40	01/27/2015
805998 P&A (Surface and Coal)		
Sent	Barbara and Claude Blankenship	
Street or PO	1 Blankenship Lane	
City	Summersville, WV 26651	
PS Form	Instructions	

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03/13/2015

4301853A

Rev. 02/01

API Number 47-043-01853
Operator's Well No. 805998 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 Hungry Creek Quadrangle Hamlin, WV 7.5'
Elevation 901' County Lincoln District Carroll

Description of anticipated Pit Waste: Plugging Returns/Cement

Will a synthetic liner be used in the pit? Yes

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*

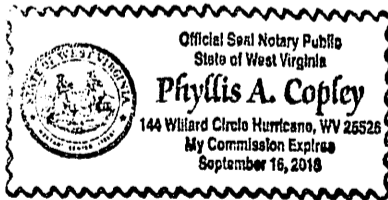
Company Official (Typed Name) Dave Gocke

Company Official Title Manager - Operations, Appalachia South

Subscribed and sworn before me this 27th day of January, 2015.

Phyllis A. Copley Notary Public.

My Commission Expires September 16, 2018



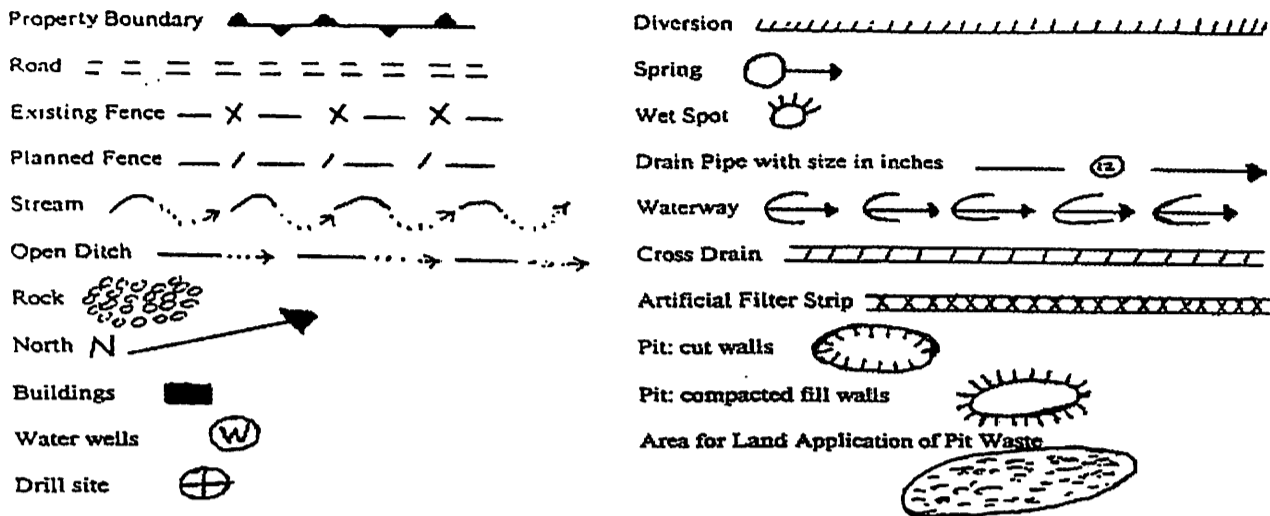
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Attachment #1

API #: 47-043-01853
 Operator's Well No. 805998 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 OOG

Date: 1-29-15

Field Reviewed? () Yes () No

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4301853P

CHESAPEAKE APPALACHIA, L.L.C.
TOPOGRAPHICAL MAP OF ACCESS AND
WELL LOCATION 805998
API 47-043-01853



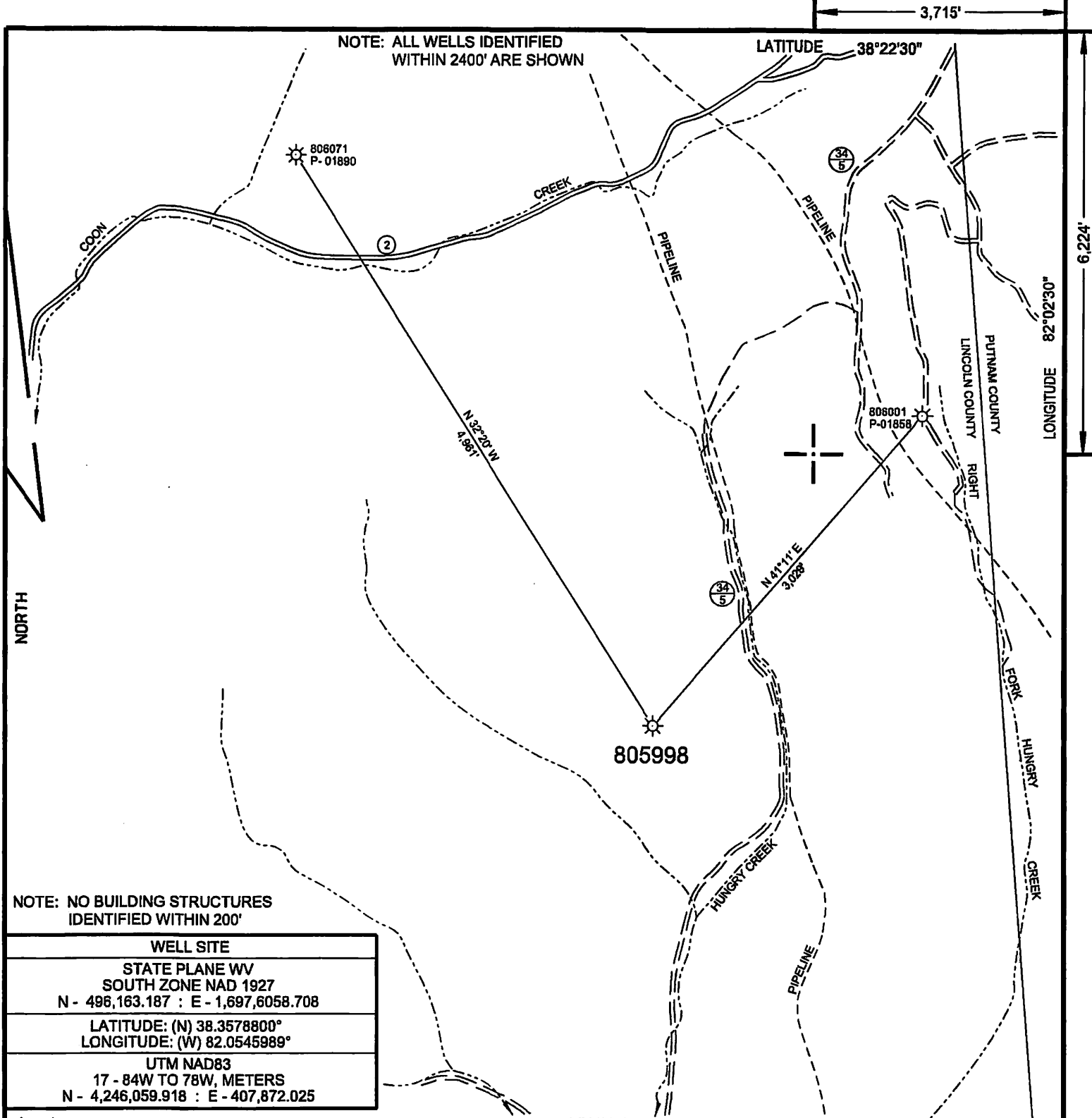
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WV Department of
Environmental Protection

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



WELL SITE	
STATE PLANE WV SOUTH ZONE NAD 1927 N - 496,163.187 : E - 1,697,6058.708	
LATITUDE: (N) 38.3578800° LONGITUDE: (W) 82.0545989°	
UTM NAD83 17 - 84W TO 78W, METERS N - 4,246,059.918 : E - 407,872.025	

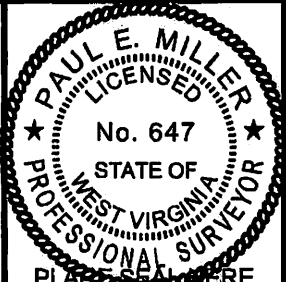
(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO.	805998P&A.DGN
DRAWING NO.	805998P&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 JANUARY 21, 20 15
OPERATOR'S WELL NO. 805998
API WELL NO. 47 043 01853 P
STATE COUNTY PERMIT

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

LOCATION: ELEVATION 901' WATER SHED HUNGRY CREEK
DISTRICT CARROLL COUNTY LINCOLN
QUADRANGLE HAMLIN, WV 7.5'

SURFACE OWNER BARBARA & CLAUDE BLANKENSHIP ACREAGE -
OIL & GAS ROYALTY OWNER FEE LAND LEASE ACREAGE -
LEASE NO. _____

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 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 _____

05/13/2015