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: 47-4301858, 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.

James Martin
Chief

Operator's Well No: 6001
Farm Name: SMITH, BETTY
API Well Number: 47-4301858
Permit Type: Plugging
Date Issued: 03/13/2015

Promoting a healthy environment.

4301858P

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.

4301858 P.

Inspector's Signature Sheets

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

1) Date: 1/27/2015
2) Operator's Well No. 806001 P&A
3) API Well No. 47-043-01858

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 892' Watershed Right Fork of Hungry Creek
District Carroll County Lincoln Quadrangle Hamlin, WV 7.5'

6) Well Operator Chesapeake Appalachia, L.L.C.
Address P.O. Box 18496
Oklahoma City, OK 73154-0496

7) Designated Agent Jessica Greathouse
Address P.O. Box 6070
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

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

Work Order approved by Inspector _____ Date 1-30-15

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Office of Oil & Gas
FEB 04 2015

4301858.P

47-043-01858

806001 P&A PROCEDURE

1) Prepare road and location, MIRU service rig
2) Run in hole with tools to check for top of cavings at approximately 1980'
3) Trip in hole with W.S. to 1980', spot gel
4) Spot 100' cement plug 1980'-1880', pull W.S.
5) Cut 5 3/16" at free-point (approximately 1800') and pull
6) Run W.S. to 1800', spot gel
7) Spot 100' cement plug 1800'-1700', pull W.S. to 1650'
8) Spot 125' cement plug 1650'-1525', pull W.S.
9) Run in hole with tools to check top of plug (If TOC is below 1550', then re-set plug)
10) Rip or shoot holes in 6 5/8" approximately at 1500', 1480', and 1440'
11) Run W.S. to 1500', spot gel
12) Spot 100' cement plug 1500'-1400', pull W.S.
13) Cut 6 5/8" at free-point (approximately 1125') and pull
14) Run W.S. to 1125', spot gel
15) Spot 150' cement plug 1125'-975', pull W.S.
16) Attempt to pull 8 ¼" · add cement plug 900 - 800 for Sea level
    A) If successful
        a) Run W.S. to 550', spot gel
        b) Spot 100' cement plug 550'-450'
        c) Proceed to step ~~12~~ 17
    B) If unsuccessful
        a) Run W.S. to 550'
        b) Spot 100' cement plug 550'-450', pull W.S.
        c) Cut 8 ¼" at free-point (approximately 110') and pull
        d) Proceed to step 17
17) Pull or run W.S. to 125' (if possible)
18) Spot 125' cement plug 125'-surface
19) Pull W.S. and top off with cement
20) Erect monument and reclaim as prescribed by law

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FEB 04 2015

Well 806001
API 47-043-01858

Form 129 5-21 21877

UNITED FUEL GAS COMPANY

INCORPORATED

Feb. 1, 1930 192

Well No. H-173 Elizabeth Smith Farm

Carroll Branch District N. 50 S. 59 E. W.

REPAIRS

Commenced Dec. 10, 1928 Completed Jan. 26, 1929

CASING AND TUBING RECORD

Size	Amount in Well: Before Repairs	Amount in Well: After Repairs	Amount Pulled	Amount Put in Well	Amount Left in Well	Disposition of Amount Pulled
3"	1912'	------	1912'	---	---	Transferred to Loose Material
5-3/16	--	1912		1912		104' left over-Loose Material
6-5/8	1565	1565			1565	
8-1/4	488	488			488	
10	25	25			25	

VOLUME AND PRESSURE TEST

Before Repairs: Size Opening	Liquid Used	Reading	Pressure: Rock or Minute	Pounds	After Repairs: Size Opening	Liquid Used	Reading	Pressure: Rock or Minute	Pounds
Well Dead					2"	water	4/10	36 Hr	325

Names of Drillers	Time (Days)	Names of Tool Dressers	Time (Days)
C. W. Kimble		B. H. Smuley	
H. L. Woodall		Elmer Salmon	

If well is drilled deeper, insert below the record of deeper drilling

Formation	Top	Bottom	Formation	Top	Bottom
Big Lime- Gas		1740	Gas	2281	2293
Big Injun - water	1740	1820	Slate & Shells	2304	2354
Slate & Shells	1820	1878	Total Depth		2354
Shell	1878	1910			
Slate	1910	1925			
Shell	1925	1940			
Slate	1940	1960			
Shell	1960	2035			
Slate & Shells	2035	2279			
Berea	2279	2304			

SHOOTING RECORD

Date	Quarts	Top of Shell	Bottom of Shell	Diameter	Sand	Test Before Shot: Reading	Liquid	Opening	Test After Shot: Reading	Liquid	Opening	Test Taken After Shot No. Hours	By Whom Shot
1/28/28	30	2281	2293	--	Berea	3/10	W	2"	4/10	W	2"	48	Marietta

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PACKER RECORD

Size	Kind	Amount Anchor	Amount Above Anchor
5-3/16	B. H.	None	--

JAN 29 2015

WV Department of Environmental Protection

Tubing Record If Well Never Previously Tubed

Date Tubed	Size	Amount Put in Well

Remarks:

Well Not tubed- Shut in in 5-3/16" Casing

NOTE---Whenever a well is shot, tubed, drilled deeper, or in any way repaired, fill out this report so far as it relates to work done and mail promptly.

H. H. Rome
District Supt.

FORM H-97

HUNTINGTON DEVELOPMENT & GAS CO.

Well 806001
API 47-043-01858

Serial Well No. 6001 173 Lease No. Map Square

PARAGON PRINT 1M 5-25 53688

RECORD OF WELL No. 6001 on the

Elizabeth Smith Farm of Acres

in Carroll District

Lincoln County

Field, State of W. Va.

Rig Commenced		192
Rig Completed		192
Drilling Commenced	2-16-18	192
Drilling Completed	4-10-18	192
Drilling to cost	per foot	
Contractor is:	Ed. Kellerman	
Address:		
Driller's Names		

CASTING AND TUBING

SIZE	USED IN DRILLING	LEFT IN WELL
16		
13		
10		25
8¼		488
6⅝		1565
5 3-16		
4⅞		
4		
3		1642
2		

SHUT IN

Date 4-10-18

in Tubing or Casing

Size of Packer

Kind of Packer

1st Perf. Set from

2nd Perf. Set from

TEST BEFORE SHOT

of Water in inch 10ths

of Merc. in inch 10ths

Volume Cu. ft.

TEST AFTER SHOT

of Water in inch 10ths

7 of Merc. in 8½ inch 10ths

Volume 7,000,000 Cu. ft.

Rock Pressure 418

Date Shot

Size of Torpedo

Oil Flowed bbls. 1st 24 hrs.

Oil Pumped bbls. 1st 24 hrs.

Well abandoned and

Plugged 19

DRILLER'S RECORD

Formation	Top	Bottom	Thickness	Remarks
				Gas from Big Lime
Surface	4	30		
Sand	30	60		
Slate	60	105		5 3/16" Cy
Red rock	105	125		
Slate	125	210		
Sand	210	310		
Slate	310	340		
Sand	340	710		
Slate	710	770		
Sand	770	840		
Slate	840	850		
Sand	850	970		
Slate	970	1000		
Sand	1000	1050		
Slate & shells	1050	1120		
Salt sand	1120	1450		
Slate	1450	1480		
Coal	1480	1484		
Maxton	1480	1550		
Pencil cave	1550	1555		
Big Lime	1555			
TOTAL DEPTH	1642			

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WW4-A
Revised
2/01

1) Date: 1/27/2015
2) Operator's Well No. 806001 P&A
3) API Well No. 47-043-01858

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 Allen & Wanda Maynard
Address 2628 Virginia Avenue
Hurricane, WV 25526

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

(c) Name
Address

5) Coal Operator
(a) Name None
Address

Coal Owner(s) with Declaration
(b) Name Allen & Wanda Maynard
Address 2628 Virginia Avenue
Hurricane, WV 25526

Name
Address

Coal Lessee with Declaration
(c) Name None
Address

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

Telephone 304-389-0350

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.

Official Seal Notary Public
State of West Virginia
Phyllis A. Copley
144 Willard Circle Hurricane, WV 25526
My Commission Expires
September 16, 2018

Well Operator: Chesapeake Appalachia, L.L.C.
By:
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
Phyllis Copley Notary Public
My Commission Expires September 16, 2018
Form WW-9

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WV Department of
Environmental Protection

WW 806001
API 47-043-01858

4301858P

7010 3090 0002 9275 3462

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SUMMERSVILLE WV 26651

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	
Total	$ $7.40	01/28/2015

Sent To
Street, Apt. No., or PO Box No.
City, State, ZIP+4

806001 P&A (access)
Barbara & Claude Blankenship
1 Blankenship Lane
Summersville, WV 26651

PS Form 3800, August 2006 See Reverse for Instructions

CK 523595 $100.00

7010 3090 0002 9275 3455

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HURRICANE WV 25526

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	
Total Postage & Fees	$ $7.40	01/28/2015

Sent To
Street, Apt. No., or PO Box No.
City, State, ZIP+4

806001 P&A (surface/coal)
Allen & Wanda Maynard
2628 Virginia Avenue
Hurricane, WV 25526

PS Form 3800, August 2006 See Reverse for Instructions

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Environmental Protection

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Rev. 02/01

API Number 47-043-01858
Operator's Well No. 806001 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 Right Fork of Hungry Creek Quadrangle Hamlin, WV 7.5'

Elevation 892' County Lincoln District Carroll

Description of anticipated Pit Waste: Plugging Returns/Cement

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

Proposed Disposal Method For Treated Pit Wastes:

X 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
X 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

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Company Official (Typed Name) David 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

Official Seal Notary Public
State of West Virginia
Phyllis A. Copley
144 Willard Circle Hurricane, WV 25526
My Commission Expires
September 16, 2018

4301858P

Attachment #1

API #: 47-043-01858
Operator's Well No. 806001 P&A

LEGEND

Property Boundary
Road
Existing Fence
Planned Fence
Stream
Open Ditch
Rock
North N
Buildings
Water wells
Drill site
Diversion
Spring
Wet Spot
Drain Pipe with size in inches
Waterway
Cross Drain
Artificial Filter Strip
Pit: cut walls
Pit: compacted fill walls
Area for Land Application of Pit Waste

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: 1-30-15

Field Reviewed? (✓) Yes ( ) No

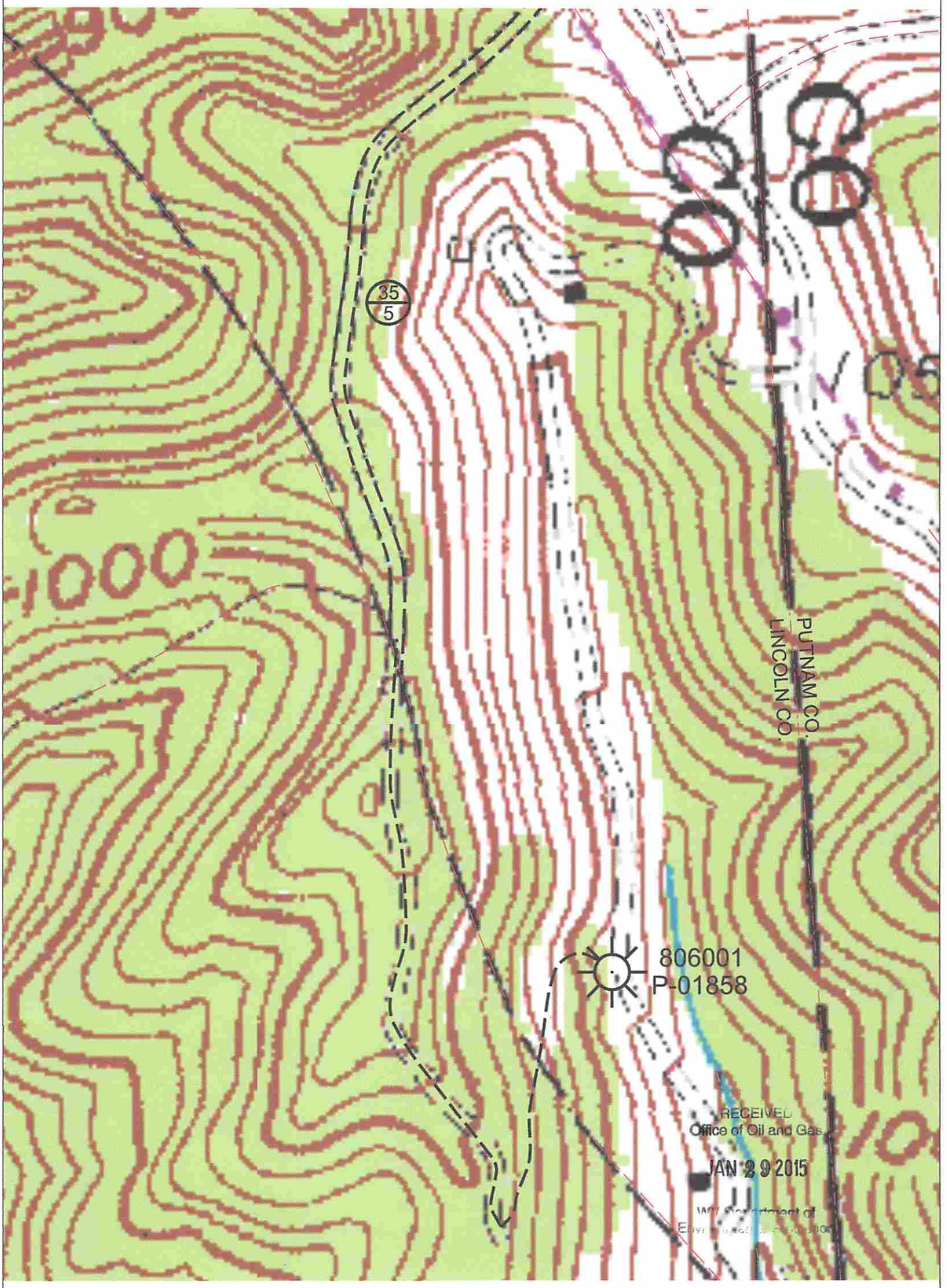
Received
Office of Oil & Gas
FEB 04 2015

4301858P

CHESAPEAKE APPALACHIA, L.L.C.

TOPOGRAPHICAL MAP OF ACCESS AND WELL LOCATION 806001

API 47-043-01858



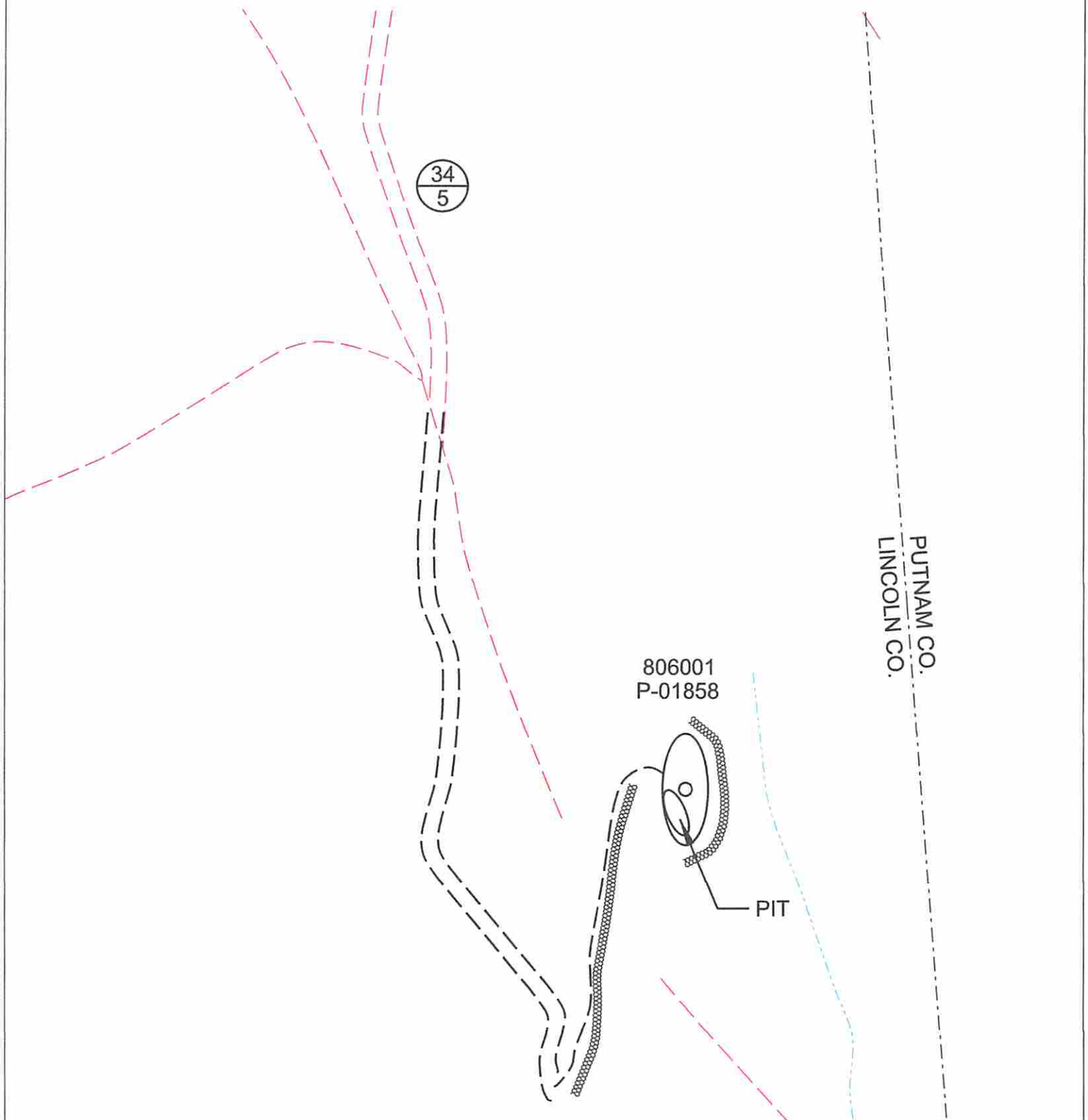
CHESAPEAKE ENERGY CORPORATION - EASTERN DIVISION
P.O. BOX 579 - 8165 COURT AVENUE - HAMLIN, WV 25523
304 824-5141 - FAX 304 824-2247

4301858P

CHESAPEAKE APPALACHIA, L.L.C.

RECLAMATION DIAGRAM
WELL LOCATION 806001

API 47-043-01858



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 structures will be considered permanent and used as such.

Permanent seeding: See Attachment #1.

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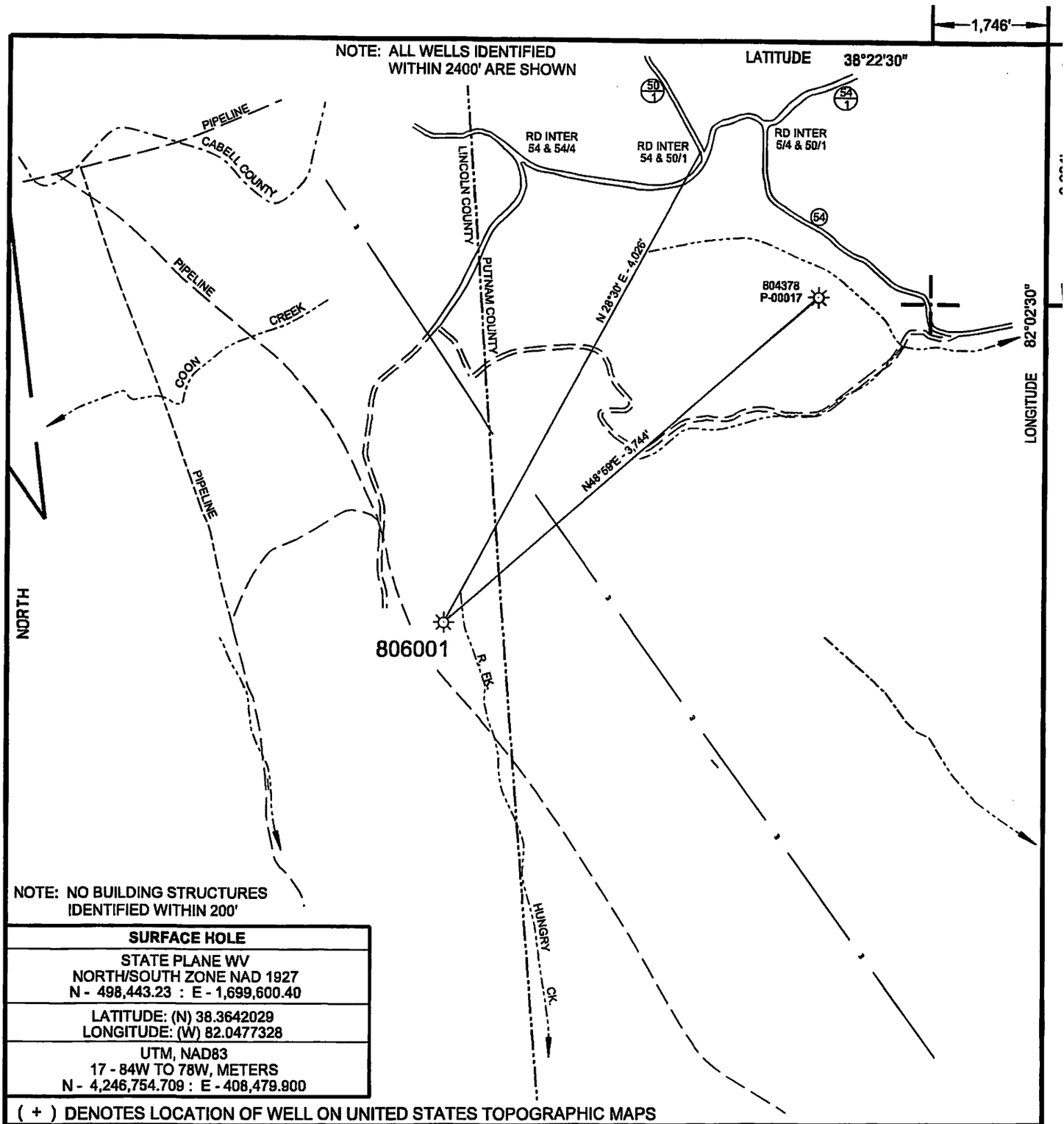
CHESAPEAKE ENERGY CORPORATION - EASTERN DIVISION
P.O. BOX 579 - 8165 COURT AVENUE - HAMLIN, WV 25523
304 824-5141 - FAX 304 824-2247



NOTE: NO BUILDING STRUCTURES IDENTIFIED WITHIN 200'

SURFACE HOLE
STATE PLANE WV NORTH/SOUTH ZONE NAD 1927 N - 498,443.23 : E - 1,699,600.40
LATITUDE: (N) 38.3642029 LONGITUDE: (W) 82.0477328
UTM, NAD83 17 - 84W TO 78W, METERS N - 4,246,754.709 : E - 408,479.900

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

FILE NO. 806001.DGN
DRAWING NO. 806001 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

PAUL E. MILLER LICENSED No. 647 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION

DATE JANUARY 21, 2015
OPERATOR'S WELL NO. 806001
API WELL NO.
47 (STATE) 043 (COUNTY) 01858 P (PERMIT)

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS,") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
LOCATION: ELEVATION 892' WATER SHED RIGHT FORK OF HUNGRY CREEK
DISTRICT CARROLL COUNTY LINCOLN
QUADRANGLE HAMLIN, WV 7.5'
SURFACE OWNER ALLEN & WANDA MAYNARD 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 PO BOX 18496, OKLAHOMA, OK 17354-0496 ADDRESS PO BOX 6070, CHARLESTON, WV 25362

COUNTY NAME
PERMIT