



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

April 17, 2015

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-4301894, 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: 6013

Farm Name: SMITH, JACOB

API Well Number: 47-4301894

Permit Type: Plugging

Date Issued: 04/17/2015

Promoting a healthy environment.

04/17/2015

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.

43018949

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

1) Date: 2/24/2015
2) Operator's Well No. 806013 P&A
3) API Well No. 47-043-01894

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 845' Watershed Big 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 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

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MAR 20 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 [Signature] Date 3-10-15

04/17/2015

806013 P&A PROCEDURE

NOTE: Well is severely bent and tools will not go below 13'.

- 1) Prepare road and location, attempt to straighten well, MIRU service rig
- 2) RIH with tools to check TD approximately at 2250'. If unable to get tools down hole, discuss procedure with DEP inspector.
- 3) Cut 2" at free-point (approximately 2080') and pull
- 4) Run W.S. as deep as possible (approximately 2090'), spot gel
- 5) Spot 150' cement plug 2090'-1940', pull W.S. to 1860'
- 6) Spot 100' cement plug 1860'-1760', pull W.S.
- 7) Rip or shoot holes approximately at 1740', 1700', 1540' and 1500'. RIH with tools to check top of cement. If TOC is below 1800' then reset plug.
- 8) Run W.S. to 1740', spot gel
- 9) Spot 100' cement plug 1740'-1640', pull W.S. to 1540'
- 10) Spot 100' cement plug 1540'-1440', pull W.S.
- 11) Cut 6 5/8" at free-point (approximately 1040') and pull
NOTE: This appears to be 5 3/16"
- 12) Run W.S. to 1040', spot gel
- 13) Spot 100' cement plug 1040'-940', pull W.S. to 850'
- 14) Spot 100' cement plug 850'-750', pull W.S. to 400'
- 15) Spot 100' cement plug 400'-300', pull W.S. to 100'
- 16) Spot 100' cement plug 100'-surface
- 17) Pull W.S. and top off with cement
- 18) Erect monument and reclaim as prescribed by law

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4301894P

Well 806013
API 47-043-01894

#6013

HUNTINGTON DEVELOPMENT & GAS CO. 043-1894

Serial Well No. 187

Lease No.

Map Square. 38-55

RECORD OF WELL No. _____ on the _____ J. Smith Farm of Acres _____ in Carroll District _____ Lincoln County _____ Field, State of W. Va.		CASTING AND TUBING <table border="1"> <tr> <th>SIZE</th> <th>USED IN DRILLING</th> <th>LEFT IN WELL</th> </tr> <tr> <td>16</td> <td></td> <td></td> </tr> <tr> <td>12</td> <td></td> <td></td> </tr> <tr> <td>10</td> <td></td> <td>20</td> </tr> <tr> <td>8 1/2</td> <td></td> <td></td> </tr> <tr> <td>6 1/2</td> <td>*</td> <td>1810</td> </tr> <tr> <td>5 1/2-10</td> <td></td> <td></td> </tr> <tr> <td>4 1/2</td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td>201</td> </tr> <tr> <td>3</td> <td></td> <td>2100</td> </tr> </table>			SIZE	USED IN DRILLING	LEFT IN WELL	16			12			10		20	8 1/2			6 1/2	*	1810	5 1/2-10			4 1/2			4		201	3		2100	TEST BEFORE SHOT 31' of Water in _____ 10ths _____ of Merc. in _____ 10ths _____ Volume _____ Cu. ft. TEST AFTER SHOT _____ of Water in _____ 10ths _____ 65' of Merc. in _____ 10ths _____ Volume 1,178,400 Cu. ft. Rock Pressure 520 Date Shot _____ Size of Torpedo 80 Qts Oil Flowed _____ bbls. 1st 24 hrs. Oil Pumped _____ bbls. 1st 24 hrs.	
SIZE	USED IN DRILLING	LEFT IN WELL																																		
16																																				
12																																				
10		20																																		
8 1/2																																				
6 1/2	*	1810																																		
5 1/2-10																																				
4 1/2																																				
4		201																																		
3		2100																																		
Rig Commenced _____ Rig Completed _____ Drilling Commenced 6-28-17 Drilling Completed 10-26-17 Drilling to cost _____ per foot Contractor Is: _____ Address: _____ Driller's Name: _____		SHUT IN Date _____ _____ in _____ Tubing or Casing Size of Packer _____ Kind of Packer _____ 1st Perf. Set _____ from _____ 2nd Perf. Set _____ from _____			Well abandoned and Plugged _____																															

ELEV. 845'

DRILLER'S RECORD

Formation	Top	Bottom	Thickness	Remarks
Surface	0	10		Gas from Berea.
Sand	10	50		
Slate	50	100		
Sand	100	150		
Slate	150	200		
Sand	200	275		
Slate	275	350		
Sand	350	400		
Slate & shells	400	525		
Slate	525	600		
Sand	600	650		
Slate	650	870		
Sand	870	900		
Slate	900	950		
Slate & shells	950	1060		
Sand	1060	1235		
Shells	1235	1360		
Sand	1360	1390		
Slate	1390	1400		
Sand	1400	1420		
Slate	1420	1430		
Maxton	1430	1505		
Little lime	1505	1530		
Pencil cave	1530	1540		
Big Lime	1540	1720		
Keener sand	1720	1730		
Slate	1730	1740		
Injun sand	1740	1800		
Slate	1800	1805		
Squaw	1805	1830		
Slate	1830	1900		
Shells	1900	2050		
Slate	2050	2105		
Shells	2105	2125		
				Slate 2125
				Brown shale 2240
				Berea sand 2254
				Slate 2276
				TOTAL DEPTH 2301

* Appears to be 5 3/8"

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 Office of Oil and Gas
 MAR 3 2015
 WV Department of Environmental Protection

4301894A

WW4-A
Revised
2/01

1) Date: 2/24/2015
2) Operator's Well No. 806013 P&A
3) API Well No. 47-043-01894

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 Helen M. Taylor
Address 7271 Hamlin Road
Hamlin, WV 25523

(b) Name Ethel Marie Hooser
Address 7265 Hamlin Road
Hamlin, WV 25523

(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 Chesapeake Appalachia, L.L.C.
Address Attention: Fred Jones
P.O. Box 6070
Charleston, WV 25362-0070

Name Pocahontas Land Corporation
Address 800 Princeton Avenue
P.O. Box 1517
Bluefield, WV 24701

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

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Office of Oil and Gas
MAR 3 2015

Subscribed and sworn before me this 24th day of February the year of 2015
Phyllis A. Copley
My Commission Expires September 16, 2018

Notary Public
West Virginia Department of
Environmental Protection

04/17/2015

Well 806013
 API 47-043-01894P
 CK 5246571
 10000

7014 2120 0003 6636 6160

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CHARLESTON WV 25362

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Postage	\$ 11.40	0523	
Certified Fee	33.30	01	
Return Receipt Fee (Endorsement Required)	2.70		Postmark Here
Restricted Delivery Fee (Endorsement Required)	0.00		
Total Postage & Fees	\$ 7.40		03/02/2015

Sent To: **806013 P&A (coal)**
 Street or P.O. Box: **Chesapeake Appalachia, L.L.C.** ✓
 City, State, ZIP: **Attention: Fred Jones**
P.O. Box 6070
Charleston, WV 25362-0070

7014 2120 0003 6636 6160

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BLUEFIELD WV 24701

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Certified Fee	33.30	01	
Return Receipt Fee (Endorsement Required)	2.70		Postmark Here
Restricted Delivery Fee (Endorsement Required)	0.00		
Total Postage & Fees	\$ 7.40		03/02/2015

Sent To: **806013 P&A (coal)**
 Street & Apt. or PO Box #: **Pocahontas Land Corp.** ✓
 City, State, ZIP: **800 Princeton Avenue**
P.O. Box 1517
Bluefield, WV 24701

7014 2120 0003 6636 6177

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HAMLIN WV 25523

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Return Receipt Fee (Endorsement Required)	2.70		Postmark Here
Restricted Delivery Fee (Endorsement Required)	0.00		
Total Postage & Fees	\$ 7.40		03/02/2015

To: **806013 P&A (surface)**
 Sent: **Helen M. Taylor** ✓
 Street or P.O. Box: **7271 Hamlin Road**
 City, State, ZIP: **Hamlin, WV 25523**

7014 2120 0003 6636 6184

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Certified Fee	33.30	01	
Return Receipt Fee (Endorsement Required)	2.70		Postmark Here
Restricted Delivery Fee (Endorsement Required)	0.00		
Total Postage & Fees	\$ 7.40		03/02/2015

Sent To: **806013 P&A (surface)**
 Street or P.O. Box #: **Ethel Marie Hooser** ✓
 City, State, ZIP: **7265 Hamlin Road**
Hamlin, WV 25523

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 Environmental Protection

04/17/2015

API Number 47-043-01894
Operator's Well No. 806013 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 Big Creek Quadrangle Hamlin, WV 7.5'
Elevation 845' 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 *R. Schindler*

Company Official (Typed Name) Rob Schindler

Company Official Title Completion Superintendent

Subscribed and sworn before me this 24th day of February, 2015.

Phyllis A. Copley Notary Public.

My Commission Expires September 16, 2018

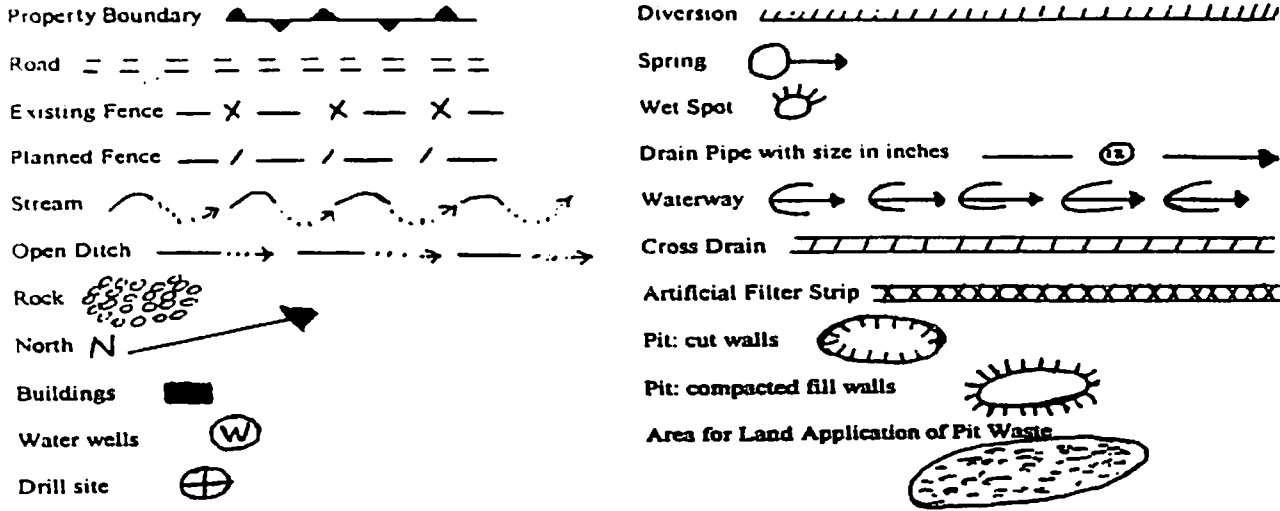


04/17/2015

Attachment #1

API #: 47-043-01894
 Operator's Well No. 806013 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	
ALSIKE CLOVER	5	ALSIKE CLOVER	
ANNUAL RYE	15		

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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: _____

Date: _____

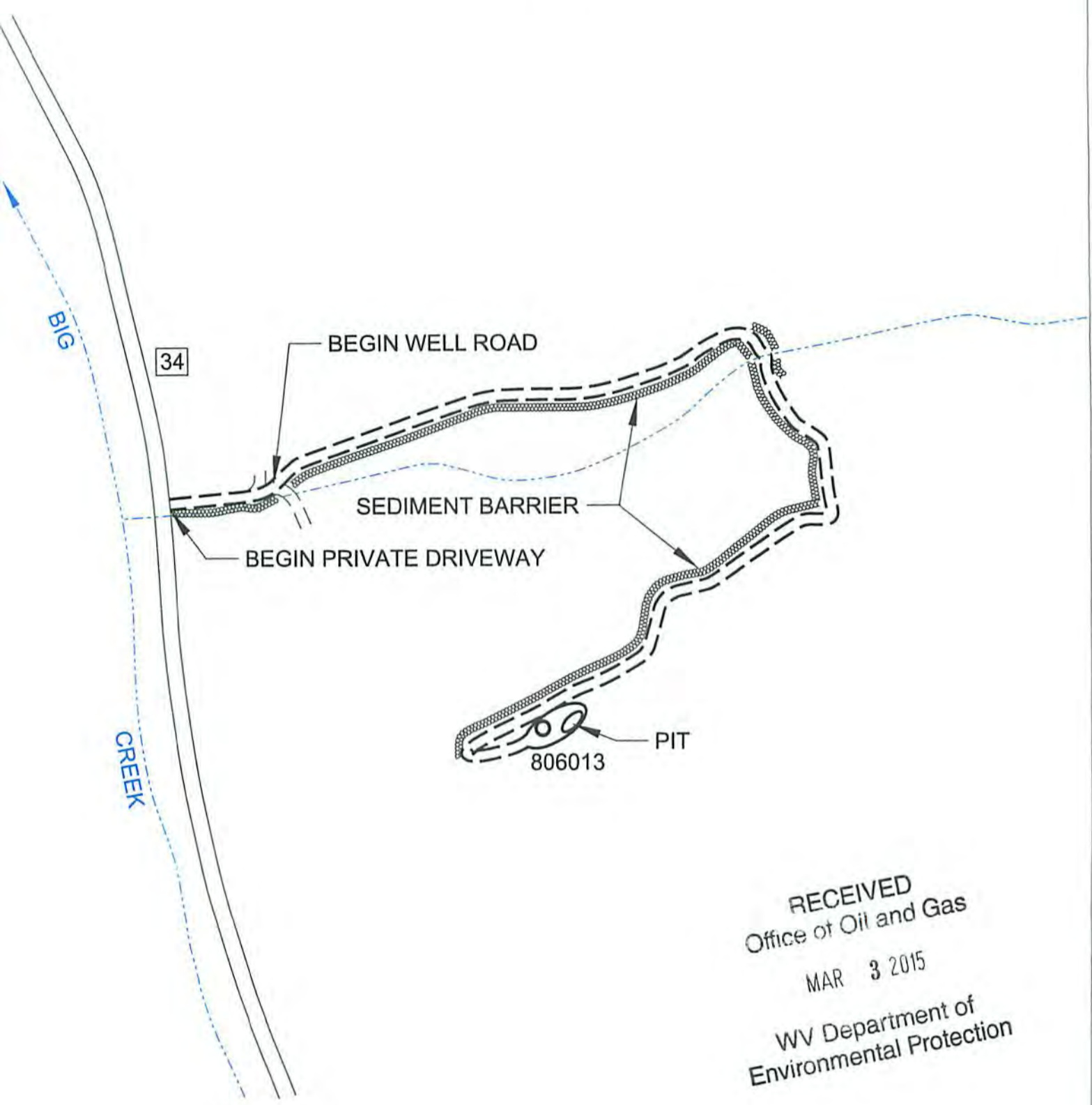
Field Reviewed? () Yes () No

4301894D

CHESAPEAKE APPALACHIA, L.L.C.

RECLAMATION DIAGRAM WELL LOCATION 806013

API 47-043-01894



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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.

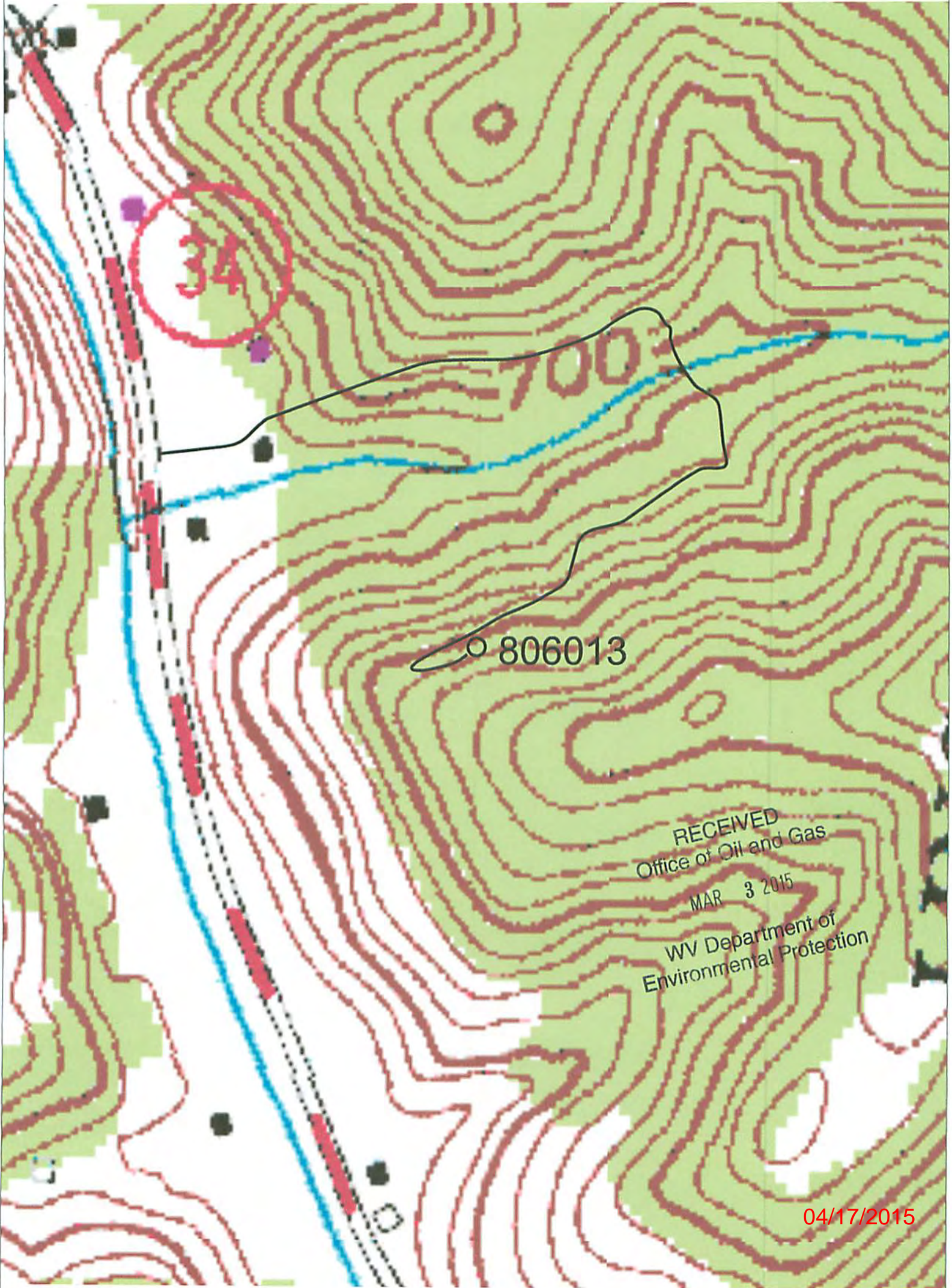
Cross drains, broad based dips, water bars, and diversion ditches, will be employed during the construction phase. These erosion and sediment control structures will be used to control erosion and sedimentation during the construction phase, where applicable, and in areas that will allow. These structures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

Permanent seeding: See Attachment #1.

04/17/2015

4301894 F

CHESAPEAKE APPALACHIA, L.L.C.
TOPOGRAPHICAL MAP OF ACCESS AND
WELL LOCATION 806013
API 47-043-01894



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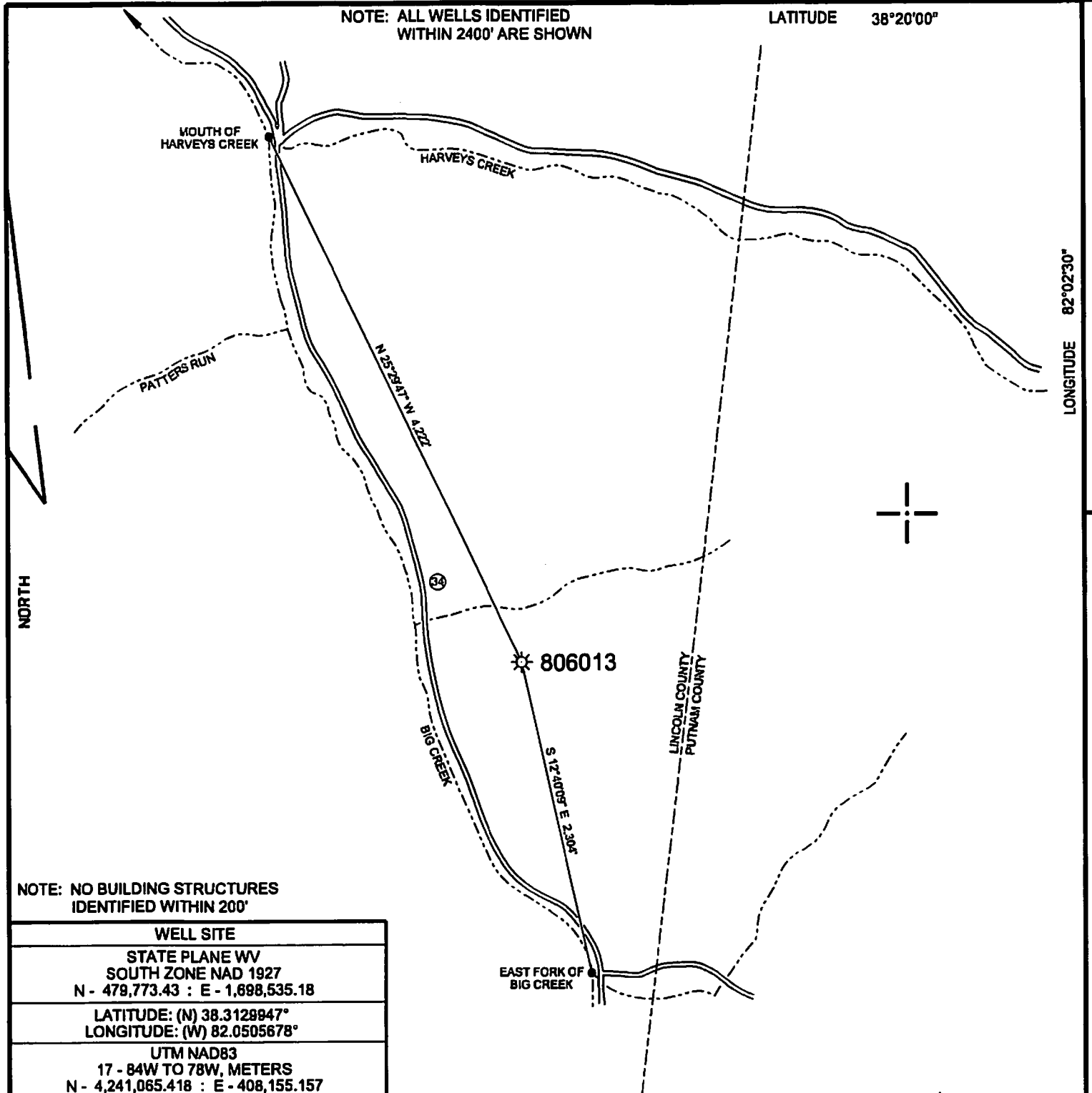
2,605'

NOTE: ALL WELLS IDENTIFIED WITHIN 2400' ARE SHOWN

LATITUDE 38°20'00"

LONGITUDE 82°20'30"

7,725'



NOTE: NO BUILDING STRUCTURES IDENTIFIED WITHIN 200'

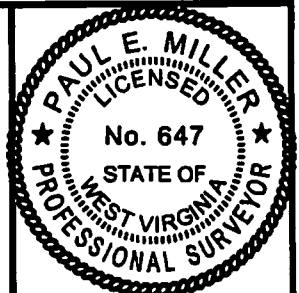
WELL SITE	
STATE PLANE WV SOUTH ZONE NAD 1927	
N - 479,773.43 : E - 1,898,535.18	
LATITUDE: (N) 38.3128847°	
LONGITUDE: (W) 82.0505678°	
UTM NAD83	
17 - 84W TO 78W, METERS	
N - 4,241,065.418 : E - 408,155.157	

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

FILE NO.	806013.DGN
DRAWING NO.	806013 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 FEBRUARY 2, 20 15
OPERATOR'S WELL NO. 806013
API WELL NO.

47 043 01894
STATE COUNTY PERMIT

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

LOCATION: ELEVATION 845' WATER SHED BIG CREEK

DISTRICT CARROLL COUNTY LINCOLN

QUADRANGLE HAMLIN, WV 7.5

SURFACE OWNER HELEN M TAYLOR ACREAGE -

OIL & GAS ROYALTY OWNER _____ 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 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 25382

COUNTY NAME

PERMIT

FORM WV-6

04/17/2015