



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

July 14, 2014

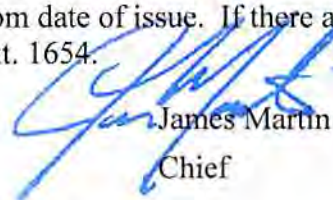
WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-4300949, 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: 806620 (6620)
Farm Name: BROWNING, SALLIE
API Well Number: 47-4300949
Permit Type: Plugging
Date Issued: 07/14/2014

Promoting a healthy environment.

07/18/2014

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 within two years of the date of issuance of this permit.

4300999

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

1) Date: 5/21/2014
2) Operator's Well No. 806620 P&A
3) API Well No. 47-043-00949

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 785' Watershed Guyandotte River
District Harts Creek County Lincoln Quadrangle Big Creek, WV 7.5'
- 6) Well Operator Chesapeake Appalachia, L.L.C. 7) Designated Agent Eric B. Gillespie
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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Office of Oil and Gas

JUN 03 2014

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

Ralph D Triplett

Date May 23, 2014

Environmental Protection

07/18/2014

806620 P&A PROCEDURE

- 1) Prepare road and location, MIRU service rig
- 2) RIH with tools to find top of cavings at approximately 1900'
- 3) Run W.S. to top of cavings, load hole with gel (Pull W.S. to 2170' if cavings are deeper)
- 4) Spot 150' cement plug 2170'-2020' (or on top of cavings), pull W.S. to 1725' *GEL TO 1725'*
- 5) Spot 100' cement plug 1725'-1625', pull W.S.
- 6) Cut 5 1/2" at free-point (approximately 1500') and pull
- 7) Run W.S. to 1500', load hole with gel
- 8) Spot 150' cement plug 1500'-1350', pull W.S.
- 9) RIH with tools to check top of plug (If TOC is below 1400', then re-set plug)
- 10) Cut 7" at free-point (approximately 825') and pull
- 11) Run W.S. to 825', load hole with gel *OK*
- 12) Spot 150' cement plug 825'-675', pull W.S. *RDT*
- 13) Attempt to pull 8 1/4" casing if present, rip at free-point (approximately 150') if necessary and pull
- 14) Run W.S. to 350', load hole with gel
- 15) Spot 100' cement plug 350'-250', pull W.S. to ~~150'~~ ^{200'}
- 16) Spot ~~150'~~ ^{200'} cement plug ~~450'~~ ^{200'} - surface
- 17) Pull W.S. and top off with cement
- 18) Erect monument and reclaim as prescribed by law *OK gwm*

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STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

Well 806620
API 47-043-00949P

WELL RECORD

Permit No. LIN-949

Oil or Gas Well Gas
(KIND)

Company United Fuel Gas Co.
Address P. O. Box 1273, Charleston 25, W. Va.
Farm W. J. McKenzie Acres 270-1/8
Location (waters) Guyandot River
Well No. 6620 Elev. 791.50'
District Harts Creek County Lincoln
The surface of tract is owned in fee by _____
Address _____
Mineral rights are owned by William & H. A. McKenzie
Houtzdale, Pennsylvania
Address _____
Drilling commenced 3-29-50
Drilling completed 12-16-50
Date Shot 12-19-50 From 2716 To 3474
With 5133-1/3# Gel.
Open Flow 42/10ths Water in 2" Inch
20/10ths Merc. in 2" Inch
Total Volume 969M. 696M- Lime, 273M- Shale Cu. Ft.
Rock Pressure 400 lbs. 24 hrs.
Oil _____ bbls., 1st 24 hrs.
Fresh water 200, 304, feet
Salt water 810 feet

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16			Kind of Packer
18			
10			Size of
2 1/2" 7"	1412'	1412'	
2 1/2" 5 1/2"	1652'	1652'	Depth set
5 3/16			
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED _____ SIZE _____ No. Ft. _____ Date _____
COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES
_____ FEET _____ INCHES FEET _____ INCHES
_____ FEET _____ INCHES FEET _____ INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Surface			0	3			
Clay			3	16			
Sand			16	25			
Slate			25	98			
Sand			98	155			
Slate			155	195			
Sand			195	215	Water	200'	Fresh
Slate			215	245			
Sand			245	276			
Slate			276	360	Water	304'	2 B.P.H.
Sand			360	375			
Slate			375	395			
Sand			395	440			
Slate			440	475			
Sand			475	520			
Slate			520	620			
Sand			620	638			
Slate			638	675			
Sand			675	685			
Slate			685	705			
Sand			705	780			
Slate			780	797			
1st Salt Sand			797	840	Water Sand	810'	
Break			840	1070			
Sand			1070	1100			
Slate			1100	1160			
Sand			1160	1250			
Slate			1250	1265			
Red Rock			1265	1280			
Mud			1280	1295			
Slate & Shells			1295	1335			
Maxon Sand			1335	1355			
Slate			1355	1360			
Little Lime			1360	1389			
Pencil Cave			1389	1393			
Big Lime			1393	1572	B.Lime Gas	1460'	
Red Rock			1572	1635			
Shell			1635	1700	B.Lime Gas	1465'	

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MAY 2 2014

WV Department of Environmental Protection

07/18/2014

Well 806620
API 47-043-00949 P

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Slate			1700	1760			
Big Shell			1760	1860			
Slate			1860	2140			
Brown Shale			2140	2150			
Berea Sand			2150	2168			
Slate & Shells			2168	3040	Gas	2725'	Show
Light Brown Shale			3040	3185	Shale Gas	3045'	4/10 W 1" 21M
Brown Shale			3185	3455	Shale Gas	3150'	inc. to 6/10 W 1" 26 M
Slate			3455	3474	Shale Gas	3185'	inc. to 2 1/2 W 1" 47 M
Total Depth			3474'		Shale Gas	3270'	inc. to 6/10 W 2" 103 M
					Shale Gas	3300'	inc. to 27/10 W 5 1/8" 1,393 M, blew down to 8/10 W 2" 119M
							Test before shot 8/10 W 2" 119 M
							Shot 12-19-50 with 5133-1/3# DuPont Gal. from 2715-3474'
							Test 21 hours after shot 42/10 W 2" 273 M
							<u>FINAL OPEN FLOW</u> - 969 M - B.Line 696M 20 Hr. R.P. 400# Shale 273M
							Shut in 12-20-50 in 5/8" casing.

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Office of Oil and Gas
MAY 22 2014

Date January 17, 1951 WY Department of Environmental Protection
APPROVED [Signature] United Fuel Gas Co. Owner
By [Signature] Chief Engineer (Title) R 07/18/2014

4300949A

WW4-A
Revised
2/01

1) Date: 5/21/2014
2) Operator's Well No. 806620 P&A
3) API Well No. 47-043-00949

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 Sallie Browning
Address 261 State Route 10
Ferrellsburg, WV 25524

(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 Alpha Natural Resources
Address 300 Running Right Way
Julian, WV 25529

Coal Owner(s) with Declaration
(b) Name Pocahontas Land Corporation
Address 800 Princeton Avenue
Bluefield, WV 24701

Name _____
Address _____

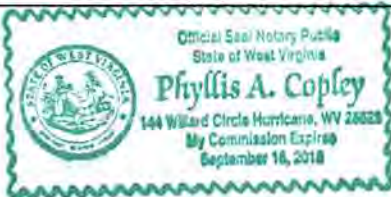
Coal Lessee with Declaration
(c) Name Alpha Natural Resources
Address 300 Running Right Way
Julian, WV 25529

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 21st day of May the year of 2014
Phyllis A. Copley Notary Public
My Commission Expires September 16, 2018
Form WW-9

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Office of Oil and Gas

MAY 22 2014

WV Department of
Environmental Protection

07/18/2014

4300949

Well 806620
API
47-043-00949

CK5150933
10600

7012 3460 0000 4499 2692

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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	05/21/2014

Sent To: **806620 P&A**
Pocahontas Land Corp.
800 Princeton Avenue
Bluefield, WV 24701

PS Form 3800, June 2013

7012 3460 0000 4499 2685

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JULIAN 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	05/21/2014

Sent To: **806620 P&A**
Alpha Natural Resources
300 Running Right Way
Julian, WV 25529

PS Form 3800, June 2013

7012 3460 0000 4499 2708

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HARTS WV 25524

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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	05/21/2014

Sent To: **806620 P&A**
Sallie Browning
261 State Route 10
Ferrellsburg, WV 25524

PS Form 3800, June 2013

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MAY 22 2014

WV Department of
Environmental Protection

07/18/2014

4300949P

Rev. 02/01

API Number 47-043-00949
Operator's Well No. 806620 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 Guyandotte River Quadrangle Big Ugly, WV 7.5'
Elevation 785' County Lincoln District Harts Creek

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:

- 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 *David Gocke*

Company Official (Typed Name) David Gocke

Company Official Title Manager - Operations, Appalachia South

Subscribed and sworn before me this 21st day of May, 2014.

Phyllis A. Copley Notary Public.

My Commission Expires September 16, 2018

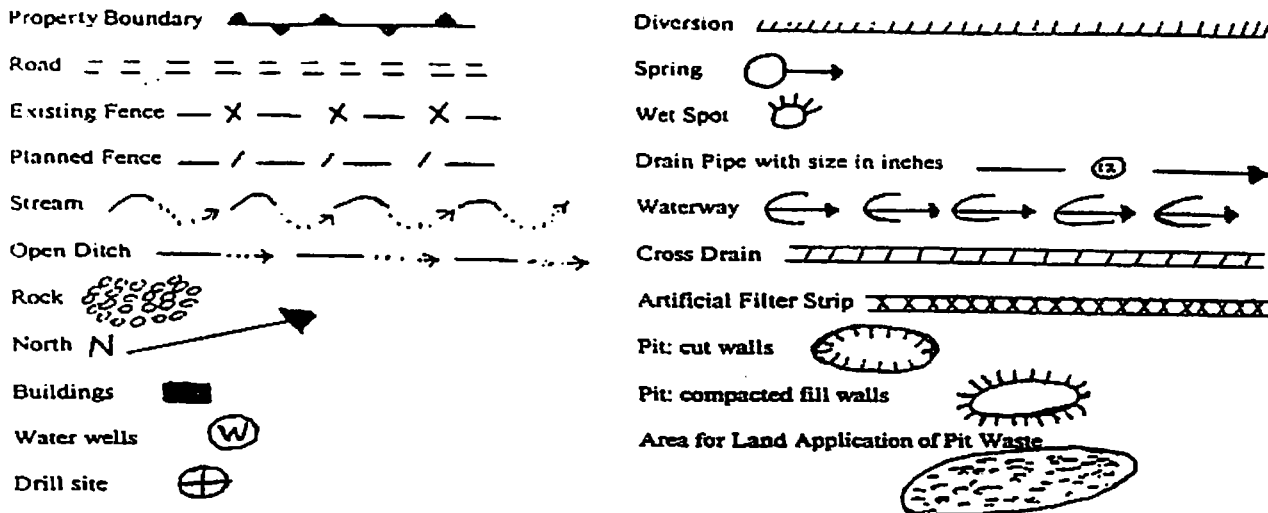


07/18/2014

Attachment #1

API #: 47-043-00949
 Operator's Well No. 806620 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.

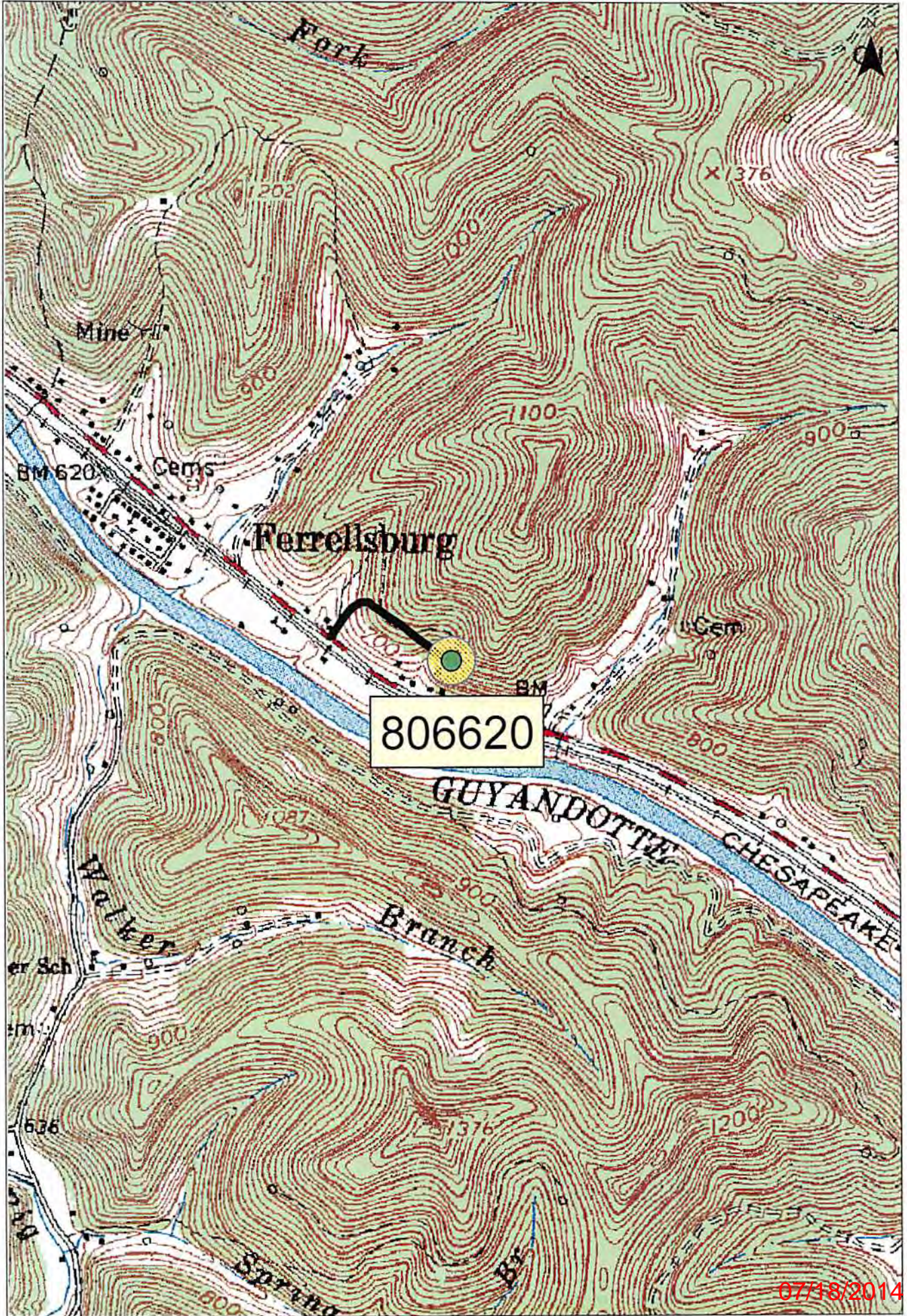
Plan Approved by: Ralph D. Trupia
 Title: District Inspector
 Date: May 23, 2014
 Field Reviewed? () Yes () No

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 Office of Oil and Gas
 JUN 03 2014
 WV Department of
 Environmental Protection

CHESAPEAKE APPALACHIA, L.L.C.

4300949P

Topographical Map of Access
and Well Location 806620
API 47-043-00949
Field Office - Branchland
County - Lincoln



07/18/2014

1:12,000

0 500 1,000 2,000 Feet

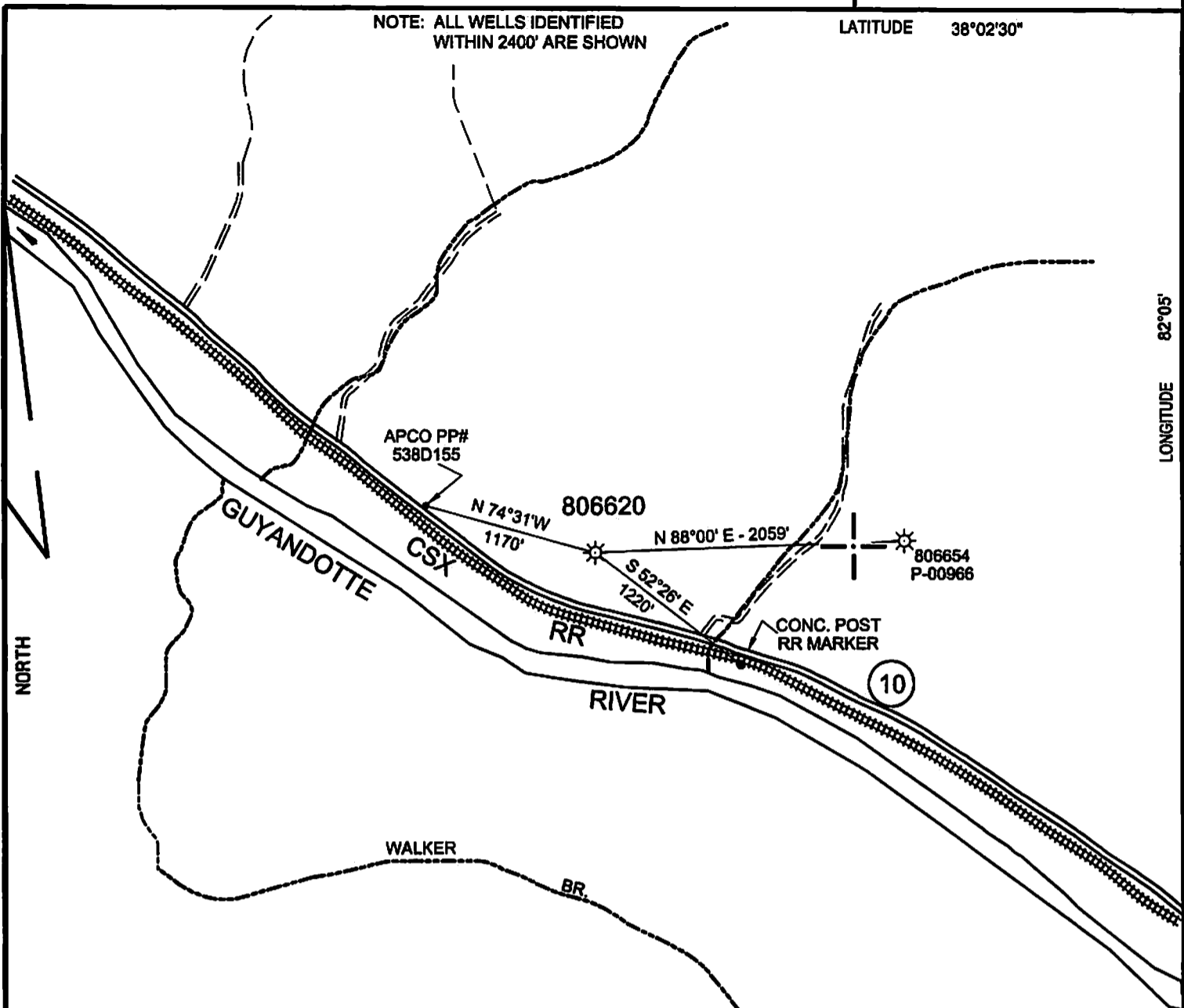
NOTE: ALL WELLS IDENTIFIED WITHIN 2400' ARE SHOWN

LATITUDE 38°02'30"

4,375'

LONGITUDE 82°05'

7,119'



SURFACE HOLE
STATE PLANE WV NORTH/SOUTH ZONE NAD 1927 N - 374,057.22 : E - 1,683,559.18
LATITUDE: (N) 38.0221262 LONGITUDE: (W) 82.0985344
UTM, NAD83 17 - 84W TO 78W, METERS N - 4,208,850.046 : E - 403,591.869

NOTE: TWO BUILDING STRUCTURES IDENTIFIED WITHIN 200'

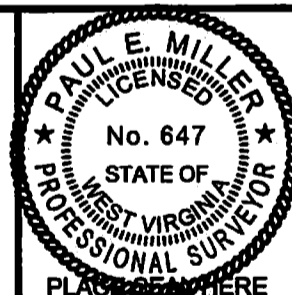
(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO.	808620P&A.DGN
DRAWING NO.	6820 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 MARCH 24, 2014
OPERATOR'S WELL NO. 808620
API WELL NO.

47 043 00949
STATE COUNTY PERMIT

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

LOCATION: ELEVATION 785' WATER SHED GUYANDOTTE RIVER

DISTRICT HARTS CREEK COUNTY LINCOLN

QUADRANGLE BIG CREEK, WV 7.5'

SURFACE OWNER SALLIE BROWNING ACREAGE 270

OIL & GAS ROYALTY OWNER ALEX MCKENZIE TRUST LEASE ACREAGE 270

LEASE NO. 1-048376-000

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 BROWN SHALE ESTIMATED DEPTH _____

WELL OPERATOR CHESAPEAKE APPALACHIA, L.L.C. DESIGNATED AGENT ERIC B. GILLISPIE

ADDRESS PO BOX 18496, OKLAHOMA CITY, OK 73154-0496 ADDRESS CHESAPEAKE APPALACHIA, L.L.C. PO BOX 6070, CHARLESTON, WV 26362

FORM WW-6

COUNTY NAME

PERMIT

07/18/2014