

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

January 16, 2015

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-4300539, 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.

Operator's Well No: 5389

Farm Name: HUNT DEV & GAS CO.

James Martin

API Well Number: 47-4300539 Permit Type: Plugging

Date Issued: 01/16/2015

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.

FORM WW-4 (I	3)
Observe	
File Copy	
(Rev. 2/01)	

1) Date: 11/12/2014
2) Operator's Well No. 805389 P&A
3) API Well No. 47-043-00539

(1101	STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
	OFFICE OF OIL AND GAS
4)	APPLICATION FOR A PERMIT TO PLUG AND ABANDON Well Type: Oil Gas X Liquid injection Waste disposal (Is Gas, Production X or Underground storage) Deep Shallow X
5)	Location: Elevation 1064' Watershed Laurel Branch of Guyandotte River District Laurel Hill County Lincoln Quadrangle Branchland, WV 7.5'
6)	Well Operator Address Chesapeake Appalachia, L.L.C. P.O. Box 18496 Oklahoma City, OK 73154-0496 7) Designated Agent Address Address P.O. Box 6070 Charleston, WV 25362
8)	Oil and Gas Inspector to be notified Name Address Address Branchland, WV 25506 9 Plugging Contractor Name Address Chesapeake Appalachia, L.L.C. Address Oklahoma City, OK 73154-0496
	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.

Received Office of Oil & Gas

Work Order approved by Inspector

NOV 1 4 2014

Date <u>11-13-14</u>

1

API Number: 47-043-00539

805389 P&A Procedure

- 1) Prepare road and location, MIRU Service Rig
- 2) RIH with tools to check TD at approximately 1850'
- 3) Run W.S. to 1850', spot gel
- 4) Spot 100' cement plug 1850'-1750', pull W.S.
- 5) Cut 3 ½" at free-point (approximately 1600') and pull
- 6) Run W.S. to 1600' (1650' if possible), load hole with gel
- 7) Spot 100' cement plug 1600'-1500' (deeper if possible), pull W.S.
- 8) Cut 6 5/8" at free-point (approximately 875') and pull
- 9) Run W.S. to 875', load hole with gel
- 10) Spot 150' cement plug 875'-725', pull W.S.
- 11) Attempt to pull 8 1/4"
 - A) If successful
 - a) Run W.S. to 325', load hole with gel
 - b) Spot 100' cement plug 325'-225'
 - c) Proceed to step #12
 - B) If unsuccessful
 - a) Rip or perforate holes at approximately 270' and 240'
 - b) Run W.S. to 325'
 - c) Spot 125' cement plug 325'-200', pull W.S.
 - d) Cut 8 1/4" at free-point (approximately 125') and pull
 - e) Proceed to step #12
- 12) Pull or run W.S. to 125'
- 13) Spot 125' cement plug 125'-surface
- 14) Pull W.S. and top off with cement
- 15) Erect monument and reclaim as prescribed by law

AMY

01/16/2015

12211



Well 805389 PMA API 47-043-00539

01/16/2015

WELL RECORD Permit No. LIN - 539 Gas Oil or Gas Well. (KIND) Company United Fuel Gas Company Casing and Tubing Used in Drilling Left in Well Packers Box 1273, Charleston 25, W. Va. Farm Huntington Dev. & Gas Co. Acres 20,590 Size Location (waters) Laurel Hill Branch Kind of Packer Elev. 1100' Bar. 5389 Well No. District Laurel Hill Lincoln County. 201 201 The surface of tract is owned in fee by Huntington Dev. Size of_ 3141 3141 Address Charleston, W. Va. & Gas Company 16251 16251 Mineral rights are owned by Huntington Dev. & Gas Co. 65% Depth set. Address Charleston, W. Va. 5 3/16. 10-12-44 Drilling commenced Perf. top 11-14-44 Drilling completed Perf. bottom Date Shot Not Shot Liners Used Perf. top. With Perf. botton Open Flow /10ths Water in Inch /10ths Merc. in CASING CEMENTED_ SIZE Date Inch No. Ft. 260,000 Volume. Cu. Ft. 48 350 Rock Pressure hrs. COAL WAS ENCOUNTERED AT 81 FEET INCHES OiL bbls., 1st 24 hrs. 253 FEET 24 INCHES FEET INCHES Fresh water feet INCHES FEET INCHES Salt water. feet FEET Hard or Soft Oil, Gas or Water Depth Found Formation Color Bottom Remarks Top Surface 0 10 Sand 10 41 50 Slate 41 50 81 Sand 81 85 Coal 85 102 Slate 102 165 Sand 165 190 Slate 190 205 Sand 205 210 Slate 220 210 Sand 220 221 Slate 253 221 Sand 253 255 Coal 275 Slate 255 275 390 Sand 412 390 Slate 412 584 Sand 590 584 Slate 590 610 Sand 610 864 Slate & Shells Salt Sand 864 1310 Received 1310 1410 Slate & Shells 1410 1461 Office of Oil & Gas Sand 1461 1470 Slate Red Rock 1470 1472 NOV 1 3 2014 1510 1472 Slate & Shells 1510 1515 Red Rock 1515 1523 Slate 1585 1523 Maron Sand 1585 1602 Lime 1611 1602 Slate 1611 1810 Big Line Gas 1825 Injun gas 1865 1810 Big Injun Injun gas 1858 1865 1890 Gas Slate 18901 Total Denth

WW4-A Revised 2/01

1) Date:	11/12/2014		
2) Operator's Well No.	805389 P&A		
3) API Well No	47-043-00530		

		DEPARTMENT OF ENVIR	RONMENTAL PROPLICATION TO PLU	TECTION, OFFICE	OF OIL AND GAS	
4)	Surface Owner(s) to be served: 5) Coal Operator					
,	(a) Name Heartwood Forestland Group			(a) Name	None	
	Address	C/O Craig Kaderavak	_	Address		
	Address	19045 Stone Mountain Road	-	Addiosa		
		Abingdon, VA 24210	_			
		Abiliguoli, VA 24210	_	Coal Owner	s) with Declaration	
	76 V Marina	Disease are additional		(b) Name	Pocahontas Land Corporation	
	(b) Name	Please see additional	_	The state of the s	800 Princeton Avenue	
	Address	sheet for access road		Address	Bluefield, WV 24701	
		surface owners	_		Bidefield, WV 24701	
	(c) Name			Name		
	Address		_	Address		
		-	_			
		-		Coal Lesse	e with Declaration	
6)	Inspector	Ralph Triplett		(c) Name	None	
-,	Address	5539 McClellan Highway		Address		
	7.1001.000	Branchland, WV 25506				
	Telephone	304-389-0350	_		-	
	relephone	304-389-0330	_			
	describes (2) The plat (s The reason yo instructions on Take notice th Notice and Ap Oil and Gas, V attached Appli mailed by regis	ation to Plug and Abandon a Well on the well its and the plugging work ordurveyor's map) showing the well local unreceived these documents is that you the reverses side. However, you are at under Chapter 22-6 of the West Virginia Department of Environment of En	er; and tion on Form WW-6, ou have rights regardi e not required to take a rginia Code, the under this for a permit to plug tental Protection, with Form WW-6. Copies of hand to the person(selivery to the Chief.	ng the application whi any action at all. rsigned well operator and abandon a well or respect to the well at of the Notice, the App anned above (or by	proposes to file or has filed the with the Chief of the Office of the location described on the dication, and the plat have been publication in certain	
	A STATE	State of Wast Victoria	Well Operator:	Chesapeake Anpal	MA	
-	F 1	Pfivilis A. Cupley ?	By:	Camplellan	alandant Annalashia South	
i	14	Willard Circle Hurricane, WV 25525	lls:		ntendent, Appalachia South	
ζ		My Commission Expires	Address:	P.O. Box 18496		
- 5		September 16, 2018		Oklahoma City, Ok	(73154-0496	
	*******		Telephone:	405-935-4073		
Sub	scribed and swo	orn before me this 12 th day	of November	the year of	2014 Notary Public	
My	Commission Exp	pires Sep	tember 16, 2018		Received	

Office of Oil & Gas NOV 1 3 2014

Well 805389 P&A API 47-043-00539

Access Road Owners

Freddie Brewster P.O. Box 332 Ranger, WV 25557

Anthony Sias 380 Vanatters Creek Ranger, WV 25557

Chris Baker Rt. 2 Box 490 McComas Road Salt Rock, WV 25559

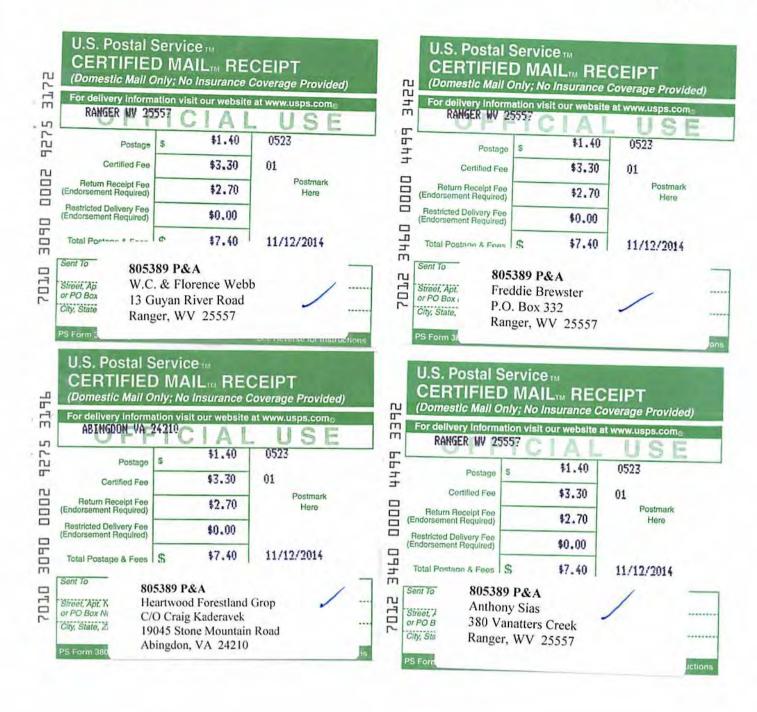
Martin Land Company P.O. Box 1133 Inez, KY 41224 Kenneth Baker 165 N. Morning Dove Drive Fayetteville, GA 30215

W.C. & Florence Webb 13 Guyan River Road Ranger, WV 25557

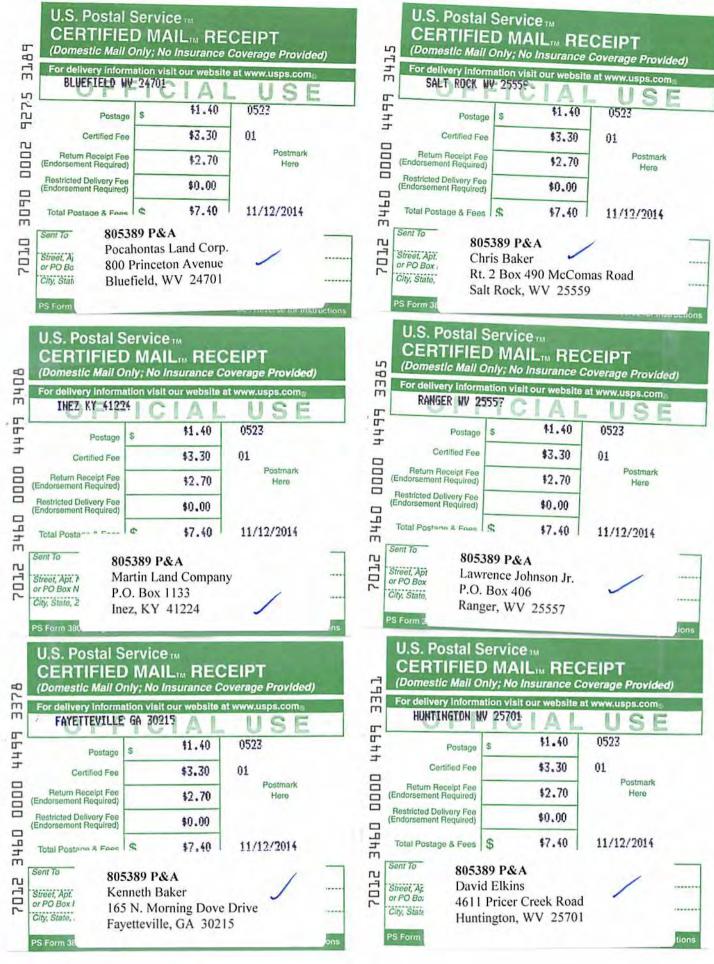
Lawrence Johnson Jr. P.O. Box 406 Ranger, WV 25557

David Elkins 4611 Pricer Creek Road Huntington, WV 25701





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NOV 1 3 2014

Form WW-9 Rev. 02/01

API Number	47-043-00539
Operator's Well No.	805389 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 Coo	de 494477557	
Watershed	Laurel Branch	of Guyandotte River	Quadra	ngle Branchla	and, WV 7.5'
Elevation10	64'	CountyI	incoln	District	Laurel Hill
Description of anti-	cipated Pit Waste:	Plugging Returns	/Cement		
Will a synthetic line	er be used in the pi	? Yes	20	MIL.	
Proposed Disposa	Underg Reuse Off Site	pplication fround Injection (UIC (at API Number Disposal (Supply for		X	
Proposed Work Fo	Drilling Workov Swabbi X Pluggin	ver ing)	
issued on Decem understand that the permit and/or othe I certify under this application fo for obtaining the i	ber 31, 1999, by the Of- ne provisions of the perior applicable law or region penalty of law that I ha rm and all attachments information, I believe the es for submitting false in the signature	200 100 100 100 100	West Virginia Department, Violations of any term of ment action. Indiam familiar with the informal indiam indiam familiar with the informal indiam in	of Environmental Pr r condition of the ger ormation submitted of iduals immediately re am aware that there onment.	otection. I neral on esponsible
Subscribed and sw		1546	November .	2014 .	Notary Public.
My Commission E	Received	ember 16, 2018		Official Geal Notary Public State of West Verginia Phyllis A. Copt Williard Circle Hurricane, W. My Commission Expires Explainber 18, 2018	ey 25524

NOV 1 3 2014

Attachment #1

API #: 47-043-00539 Operator's Well No. 805389 P&A

	LE	GEND	
Property Boundary		Diversion Control Cont	11111111
Road = = = = = = =	===	Spring -	
Existing Fence — X — X —	- × —	Wet Spot	
Planned Fence / /	/_	Drain Pipe with size in inches (3)	
Stream August Au	77 . 71	Waterway \longleftrightarrow	
	· · · · · · · · · · · · · · · · · · ·	Cross Drain	11111
Rock 685060		Artificial Filter Strip XXXXXXXXXXX	YYUYUYU
North N		Pit: cut walls	*****
Buildings		Pit: compacted fill walls	
Water wells W		Area for Land Application of Pit Waste	
		Area for Land Application of the Walls	
Drill site		GETT TO	
rerunzer (10-20-20 or eq	Mulch Hay 2	Ibs/acre (500 lbs minimum) Tons/acre ed Mixtures	
Area I	36	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 Photocopied section of involved 7.			
Plan Approved by:	2		
Title: inspector O	06		
Date: 11-13-14			
Field Reviewed?	Yes () No	

01/16/2015

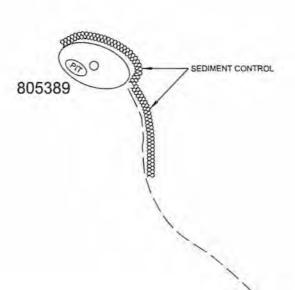
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CHESAPEAKE APPALACHIA, L.L.C.

RECLAIMATION DIAGRAM WELL LOCATION 805389

API 47-043-00539

LAUREL BRANCH



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.

824780

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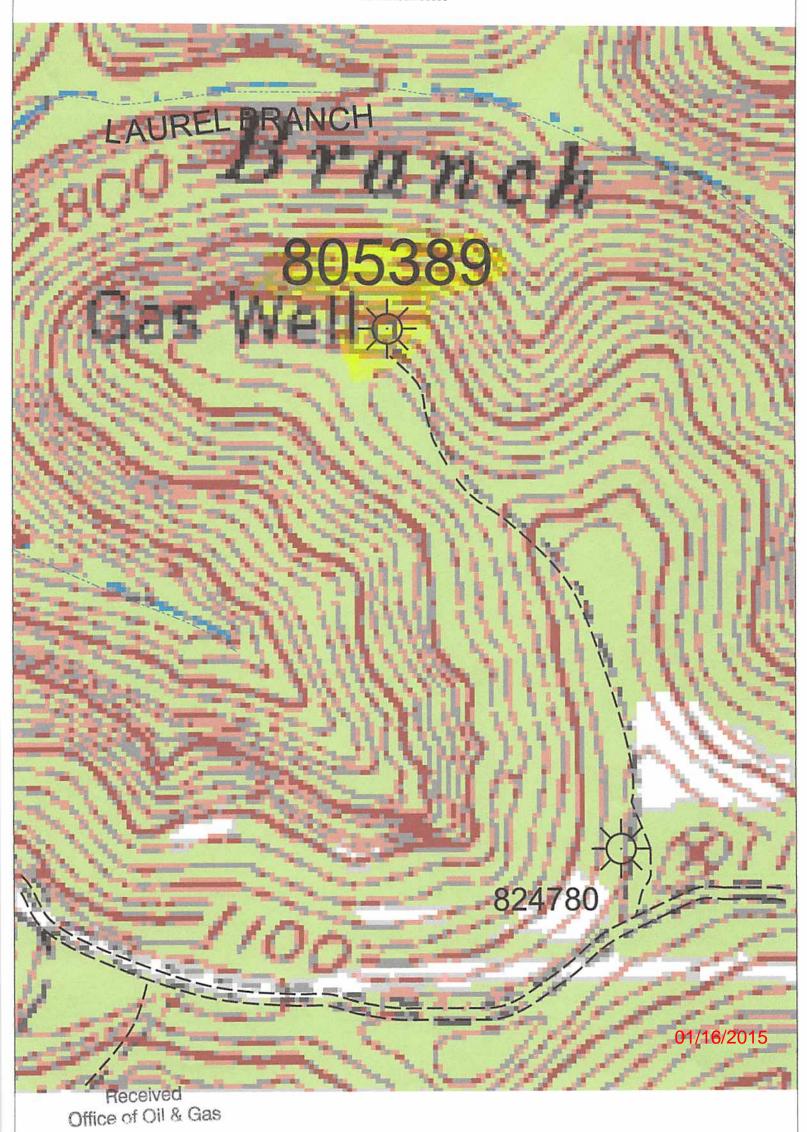
NOV 1 3 2014

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CHESAPEAKE APPALACHIA, L.L.C.

TOPOGRAPHICAL MAP OF ACCESS AND WELL LOCATION 805389

API 47-087-00539



NOV 1 3 2014

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

