



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, S.E.
Charleston, WV 25304
(304) 926-0450
fax: (304) 926-0452

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Tuesday, August 07, 2018
WELL WORK PLUGGING PERMIT
Vertical Plugging

XTO ENERGY, INC.
810 HOUSTON STREET

FORT WORTH, TX 76102

Re: Permit approval for A-E-94
47-017-02449-00-00

This well work permit 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 any additional specific 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. Please be advised that form WR-38, Affidavit of Plugging and Filling Well, is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.


James A. Martin
Chief

Operator's Well Number: A-E-94
Farm Name: NICHOLSON-SWISHER
U.S. WELL NUMBER: 47-017-02449-00-00
Vertical Plugging
Date Issued: 8/7/2018

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.

WW-4B
Rev. 2/01

1) Date 7/6, 2018
2) Operator's
Well No. A-E-94
3) API Well No. 47-017 - 02449

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 ___ /
(If "Gas, Production X or Underground storage ___) Deep ___ / Shallow X
- 5) Location: Elevation 1428' Watershed 0503020104 Headwaters Middle Island Creek
District New Milton County Doddridge Quadrangle Big Isaac
- 6) Well Operator XTO Energy Inc. 7) Designated Agent Gary Beall
Address PO Box 1008 Address PO Box 1008
Jane Lew, WV 26378 Jane Lew, WV 26378
- 8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Daniel Flack Name _____
Address 58 River Ave Address _____
Buckhannon, WV 26201

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

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

Work order approved by inspector  Date 7/6/18

08/10/2018

47-017-02449
Plugging Procedure

Nicholson Swisher A-E-94

6% gel from 5700' to surface.

Perfs - 5569' - 5221'

Cement - 5700' - 5125' = 575 x 0.0163 = 9.4 bbl = 45 sks.

6% gel - 5125' - 4775'

Perfs - 4715' - 4214'

Cement - 4775' - 4155' = 620' x 0.0163 = 10 bbl = 48 sks.

Tag cement top, if ok pull tubing and RIH to CBL.

Estimated top at 3400' - cut casing.

6% gel from 3400 to surface.

Cement at cut - 3400' - ~~3250'~~ = 1 COVER GAS SHOW @ 3058'

CEMENT AT ^{3400' - 3000'} 2600' - 2500' COVER GAS SHOW @ 2557'

6% gel - 3250' - 2000'

Cement - 2200' - 2000' = 200' x 0.0602 = 12 bbl = 57 sks.

6% gel - 2000' - 1500'.

Bottom of 8 5/8 at 1441' & elvation at 1428'.

Cement - 1500' - 1300' = 12.6 bbl = 62 sks.

6% gel - 1300' - 300' - coal @ 243'.

Cement - 300' - Surface = 300' x 0.0637 = 19 bbl = 90 sks.

Install Well Monument

Make every attempt to pull
as much casing as possible

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17-02449P
DEC 26 1979

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
Oil and Gas Division

OIL & GAS DIVISION
DEPT. OF MINES

WELL RECORD 2

Rotary Oil _____
Cable _____ Gas
Recycling _____ Comb. _____
Water Flood _____ Storage _____
Disposal _____ (Kind)

Quadrangle Big Isaac
Permit No. 47-017-2449

Company Appalachian Energy, Inc. d/b/a LDR
Address 728 Washington Road, Pgh, PA 15228
Farm Forest J. Swisher Acres 78
Location (waters) Spring Run
Well No. 1 A-E-94 Elev. 1410
District New Milton County Doddridge
The surface of tract is owned in fee by Lonnie J & Janice L. Bennett
Address Lost Creek, WV 26385
Mineral rights are owned by Same as above
Address _____
Drilling Commenced 7/19/79
Drilling Completed 7/28/79
Initial open flow 25 M cu. ft. - bbls.
Final production 380 M cu. ft. per day - bbls.
Well open 72 hrs. before test 1480 RP.
Well treatment details:

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size			
20-16			
Cond.			
13-10"			
9 5/8			
8 5/8	1441	1441	320 Sks.
7			
5 1/2			
4 1/2	5821	5821	420 Sks.
3			
2			
Liners Used			

Attach copy of cementing record.

Stimulation Record:

Date:	Interval Perforated:	From	To	Amt. Fluid	Amt. Sand
		5531	5569	525 BBLS	50,000#
		5221	5364	525 BBLS	50,000#
		4715	4214	534 BBLS	40,000#

Coal was encountered at 240' Feet _____ Inches
Fresh water 1730' Feet _____ Salt Water _____ Feet _____
Producing Sand Balltown, Benson, Alox Depth 4220, 5229, 5560

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Substructure			0	5		
Red Rock			5	15		
Sand & Shale			15	39		
Sandy Shale			39	165		
Sand			165	240		
Coal			240	243		
Sand			243	260		
White Sand			260	311		
Sand & Shale			311	560		
White Sand			560	590		
Sand & Shale			590	655		
Red Rock			655	690		
Sand & Shale			690	750		
Sand, Shale & Red Rock			750	1230		
Shale			1230	1277		
Sand			1277	1308		
Sand & Shale			1308	1463		
Sand			1463	1495		
Shale			1495	1720		
Sand			1720	1780		
Sand & Shale			1780	1845		
Red Rock & Shale			1845	2285		
Sand & Shale			2285	2339		
Sand			2339	2496		

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(over)

* Indicates Electric Log tops in the remarks section.

Formation	Color	Hard or Soft	Top Feet ±	Bottom Feet	Oil Gas or Water	Remarks
Sand & Shale			2496	2845		
Sandy Shale			2845	2900		Gas @ 2557'
Sand			2900	2963		
Sand & Shale			2963	3775		Gas @ 3058'
Sand			3775	3945		3341', 3520'
Sand & Shale			3945	4215		Gas @ 3837'
Sand			4215	4340		Gas @ 4057'
Sand & Shale			4340	4390		
Sand & Shale			4390	4461		Gas @ 4366'
Shale			4461	4523		
Sand & Shale			4523	4835		Gas @ 4644'
Shale			4835	5230		Gas @ 4923'
Little Brown Sand			5230	5250		
Sand & Shale			5250	5514		
Shale			5514	5744		Gas @ 5265', 5483'
Drillers T.D.				5744		
Speechley			3650	3679		
Balltown			4220	4246		
Bradford			4722	4745		
Benson			5218	5230		
Alexander			5546	5573		
Loggers T.D.				5702		

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08/10/2018

Date Dec. 17 1979
APPROVED Ronald B. Laughlin Owner
By President
(Title)

JUL 20 2018

WV Department of
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WW-4A
Revised 6-07

1) Date: 7/6/18
2) Operator's Well Number
A-E-94

3) API Well No.: 47 - 017 - 02449

**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL**

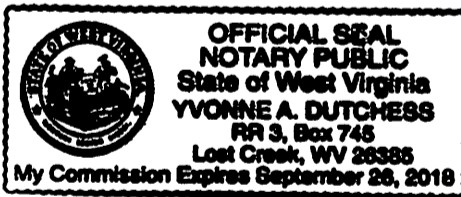
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Herbert & Betty Bickford</u>	Name <u>N/A</u>
Address <u>822 N. Houcksville Rd.</u>	Address _____
<u>Hampstead, MD 21074</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>N/A</u>
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Daniel Flack</u>	(c) Coal Lessee with Declaration
Address <u>58 River Ave</u>	Name _____
<u>Buckhannon, WV 26201</u>	Address _____
Telephone <u>304-545-0109</u>	_____

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 this 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 this 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 XTO Energy Inc.
 By: [Signature]
 Title: Regulatory Coordinator
 Address PO Box 1008
Jane Lew, WV 26378
 Telephone 304-884-6000

Subscribed and sworn before me this 6th day of July 2018
Yvonne A. Dutchess Notary Public
 My Commission Expires September 26, 2018

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

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WW-9
(5/16)

API Number 47 - 017 - 02449
Operator's Well No. A-E-94

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name XTO Energy Inc. OP Code 494487940

Watershed (HUC 10) 0503020104 Headwaters Middle Island Creek Quadrangle Big Isaac

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a pit be used? Yes No

If so, please describe anticipated pit waste: Fluids from plugging operations will be put into tanks.

Will a synthetic liner be used in the pit? Yes No If so, what ml.? NA

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection (UIC Permit Number 4707302523, 4708505151, 4708509721)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain Meadowbrook Landfill SWF#1032, RES Water Recycling -WMGR123SW005 (PA))

Will closed loop system be used? If so, describe: NA

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. NA - Plugging

-If oil based, what type? Synthetic, petroleum, etc. NA

Additives to be used in drilling medium? NA

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Any solid waste from plugging will be taken to landfill.

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) NA

-Landfill or offsite name/permit number? Meadowbrook Landfill SWF#1032

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on April 1, 2016, 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 Tim Sands

Company Official (Typed Name) Tim Sands

Company Official Title Regulatory Coordinator

Subscribed and sworn before me this 16th day of July, 20 18

Yvonne A. Ditchess Notary Public

My commission expires September 26, 2018

08/10/2018

Form WW-9

Operator's Well No. A-E-94

Proposed Revegetation Treatment: Acres Disturbed 0.87 +/- Prevegetation pH _____

Lime 2 Tons/acre or to correct to pH _____

Fertilizer type 10-20-10

Fertilizer amount 1000 lbs/acre

Mulch 2 Tons/acre

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Seed Mixtures

Temporary

Permanent

Seed Type	lbs/acre
Kentucky Bluegrass	30
Redtop	5
Birdsfoot Trefoil	15

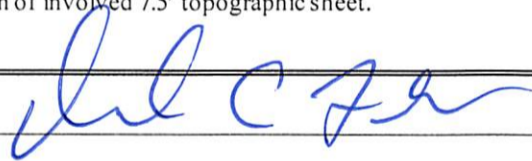
Seed Type	lbs/acre
Kentucky Bluegrass	30
Redtop	5
Birdsfoot Trefoil	15

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: _____



Comments: _____

Title: Oil & Gas Inspector

Date: 7/6/18

Field Reviewed? () Yes () No

08/10/2018

WW-9- GPP
Rev. 5/16

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API Number 47 - 017 - 02449
Operator's Well No. A-E-94

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
GROUNDWATER PROTECTION PLAN

Operator Name: XTO Energy Inc.

Watershed (HUC 10): 0503020104 Headwaters Middle Island Creek Quad: Big Isaac

Farm Name: Nicholson-Swisher

- 1. List the procedures used for the treatment and discharge of fluids. Include a list of all operations that could contaminate the groundwater.

Fluids will not be discharged.

- 2. Describe procedures and equipment used to protect groundwater quality from the list of potential contaminant sources above.

NA

- 3. List the closest water body, distance to closest water body, and distance from closest Well Head Protection Area to the discharge area.

NA

- 4. Summarize all activities at your facility that are already regulated for groundwater protection.

NA

- 5. Discuss any existing groundwater quality data for your facility or an adjacent property.

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API Number 47 - 017 - 02449
Operator's Well No. A-E-94

NA

6. Provide a statement that no waste material will be used for deicing or fill material on the property.

NA

7. Describe the groundwater protection instruction and training to be provided to the employees. Job procedures shall provide direction on how to prevent groundwater contamination.

NA

8. Provide provisions and frequency for inspections of all GPP elements and equipment.

NA

Signature: Ti Sas

Date: 6/28/18

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SCALES HORIZ: 1"=2000' VERT: CONTOUR INT: 20'	DESN BY: SDG	REV. BY: _____ DATE: _____ DESC.: _____
	DRWN BY: SDG	REV. BY: _____ DATE: _____ DESC.: _____
	RVWD BY: MMV	REV. BY: _____ DATE: _____ DESC.: _____
	FLD BK: _____	REV. BY: _____ DATE: _____ DESC.: _____
	BK PG: _____ DATE: 06/12/18	REV. BY: _____ DATE: _____ DESC.: _____

SHEET NUMBER:
1 OF 1

USGS MAP - BIG ISAAC QUADRANGLE
NICHOLSON A-E-94
 FOR: XTO ENERGY, INC.
 CR 58/4, DODDRIDGE COUNTY, WEST VIRGINIA

MORRIS KNOWLES & ASSOCIATES, INC.
 A HAMMONTREE COMPANY
 ENGINEERS, PLANNERS, SURVEYORS
 443 ATHENA DRIVE DELMONT, PA 15626
 PHN: (724) 468-4622 FAX: (724) 468-8940
 www.morisknowles.com

08/10/2018

WW-7
8-30-06



West Virginia Department of Environmental Protection
Office of Oil and Gas

WELL LOCATION FORM: GPS

API: 47-017-02449 WELL NO.: A-E-94

FARM NAME: Nicholson-Swisher

RESPONSIBLE PARTY NAME: XTO Energy, Inc.

COUNTY: Doddridge DISTRICT: New Milton

QUADRANGLE: Big Isaac

SURFACE OWNER: Bickford, Herbert & Betty

ROYALTY OWNER: See attached

UTM GPS NORTHING: 4334106.92

UTM GPS EASTING: 533616.58 GPS ELEVATION: 435.34 / 1428'

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

Survey grade GPS : Post Processed Differential

Real-Time Differential

Mapping Grade GPS : Post Processed Differential

Real-Time Differential

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4. Letter size copy of the topography map showing the well location.

I the undersigned, hereby certify this data 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 Office of Oil and Gas.

Tim Savelle
Signature

Regulatory Coordinator
Title

6/14/18
Date

08/10/2018