



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 14, 2018
WELL WORK PLUGGING PERMIT
Vertical Plugging

XTO ENERGY, INC.
810 HOUSTON STREET

FORT WORTH, TX 76102

Re: Permit approval for E-239 (LOWE 2)
47-033-04304-00-00

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: E-239 (LOWE 2)
Farm Name: CONSOL LAND DEVELOPMEI
U.S. WELL NUMBER: 47-033-04304-00-00
Vertical Plugging
Date Issued: 8/14/2018

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.

WW-4B
Rev. 2/01

1) Date _____, 20_____
2) Operator's
Well No. E-239 (Low 2)
3) API Well No. 47-033 - 04304

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 / Liquid injection ____/ Waste disposal ____/
(If "Gas, Production or Underground storage ____) Deep ____/ Shallow
- 5) Location: Elevation 1331 Watershed 0502000206 Lower West Fork River
District Eagle County Harrison Quadrangle Wallace
- 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 Sam Ward Name _____
Address PO Box 2327 Address _____
Buckhannon, WV 26201

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

See attached

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

Work order approved by inspector S. Dewar Date 7/13/2018

08/17/2018

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<u>API</u>	<u>Farm Name</u>	<u>Well Number</u>
47-033-04304	CONSOL LAND DEVELOPMENT	E-239 (LOWE 2)

Plugging Procedure

Old CBL shows cement top @ 1,240' behind 4.5" casing.

4.5" casing @ 3,307'.

6 % gel from 3,306 to surface.

Perfs - 3,230' - 2,735'.

Cement - 3,306 - 2,600' = 706' x 0.0163 = 11.6 bbl = 56 sks.

6% gel - 2,600 - 2,330'.

Perfs - 2,273' - 2,270'.

Cement - 2,330' - 2,170' - 160' x 0.0163 = 2.6 bbl = 13 sks.

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

Cut 4.5" casing @ 1,236'.

6% gel - 1,236' to surface.

Cement - 1,235' - 1,100' = 135' x 0.0420 = 6 bbl = 29 sks.

6% gel - 1,100' - 200'.

Cement - 200' - Surface = 200' x 0.0420 = 8.5 bbl = 41 sks.

Install well monument.

We will check the cement top behind the 7" casing and pull any 7" that is loose.

Cement 3,306' - 2,600'

Cement 2,330' - 2,170'

Cement 1,235' - 1,100'

Cement 200' - Surface

→ CEMENT 1800' - 1700'

JWM
8/13/18

→ CEMENT 975' - 875' (COAL)

SPW
7/13/2018

08/17/2018

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33-04304P

WR-35

DATE: 5/16/02
API#:47-33-04304

ALB

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas

Well Operator's Report of Well Work

Farm Name: LOWE Operator Well No: #2 E-239

LOCATION: Elevation: 1320.56' Quadrangle: WALLACE

District: EAGLE County: HARRISON
Latitude: _____ Feet South of _____ Deg. _____ Min. _____ Sec.
Longitude: _____ Feet West of _____ Deg. _____ Min. _____ Sec.

Company: EXCEL ENERGY, INC.

	Casing & Tubing	Used in Drilling	Left in Hole	Cement fill Up Cu. Ft.
Address: <u>PO Box 1020</u>	13 3/8	20'	20'	----
<u>Bridgeport, WV 26330</u>				
Agent: <u>H.L. Barnett</u>	9 5/8	564'	564'	155 SKS
Date Permit Issued: <u>10/10/00</u>	7"	1889'	1889'	265 SKS
Date Well Work Commenced: <u>11/17/00</u>				
Date Well Work Completed: <u>11/28/00</u>	4 1/2	3267'	3267'	170 SKS
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig				
Total Depth (feet): <u>3300</u>				
Fresh Water Depth (ft.):				
Salt Water Depth (ft.): <u>1800</u>				
Is coal being mined in area (N/Y)?				
Coal Depths (ft.): <u>920,950</u>				

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OPEN FLOW DATA

Producing formation 5th, 4th, Gordon, & Gordon Stray Pay zone depth (ft) 3228-2948
Gas: Initial open flow Show MCF/d Oil: Initial open flow Show Bbl/d
Final open flow Est. 100 MCF/d Final open flow 3 Bbl/d
Time of open flow between initial and final tests _____ Hours
Static Rock Pressure 735 psig (surface pressure) after 47 Hours

Second producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static Rock Pressure _____ psig (surface pressure) after _____ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOING: 1.) DETAILS OF PERFORATED INTERVALS, FRACTURING, OR STIMULATING, PHYSICAL CHANGE. FTC. 2). THE WELL LOG WHICH IS A SYNTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELL BORE.

Signed: _____
By: H.L. Barnett, President
Date: 5-16-02

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FORM WR-35

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

STAGE I 5th & 4th Sd. Perf. 3063-3228-13 holes

STAGE II Frac 700 bbls. H₂O, 44000 #sd, 500gals. of Acid & 100,000 scf. nz

STAGE III Gordon & Gordon Stray Perf. 3063-3228-13 holes

STAGE IV Frac 550 bbls. H₂O, 35,000 #SD, 750 gals Acid & 100,000 scf. nz

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal oil and gas
Soil	Brown		0	10	
Shale	Dk. Gray		10	45	
Sand	Lt. Gray		45	75	
Shale	Dk. Gray		75	160	
Sand	Lt. Gray		160	170	
Shale	Dk. Gray		170	315	
Sand	White		315	345	
Shale	Dk. Gray		345	400	
Sand	White		400	430	
Shale	Gray		430	555	
Sand	White		555	595	
Red Rock	Red		595	615	
Shale	Gray		615	770	
Sand	Lt. Gray		770	795	
Shale	Gray		795	900	
Shale/Sand	Gray		900	920	
Coal	Black		920	925	
Shale	Gray		925	950	
Coal	Black		950	958	
Shale	Gray		958	1030	
Sand	Lt. Gray		1030	1075	
Shale/Red Rock	Gray/Red		1075	1100	
Shale	Lt. Gray		1100	1290	
Shale	Lt. Gray		1290	1360	
Sand/Shale	Gray		1360	1390	
Sand	Gray		1390	1425	
Shale	Gray		1425	1460	
Red Rock	Red		1460	1475	
Shale	Lt. Gray		1475	1740	

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Sand	White	1740	1810	
Shale	Dk. Gray	1810		
		1800	1850	Water 2" Stream
Shale	Gray	1850	1940	
Sand	Brown	1940	2140	
Big Lime		2140	2240	
Sand	Light	2240	2380	
Sand	Brown	2380	2450	
Shale/Sand		2450	2690	
Sand	Light	2690	2940	
Shale	Dark	2940	3000	
Sand	Med	3000	3090	
Sand	Gray	3090	3175	
Shale/Sand		3175	3300	

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WW-4A
Revised 6-07

1) Date: _____
2) Operator's Well Number
E-239 (Lowe 2)

3) API Well No.: 47 - 033 - 04304

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

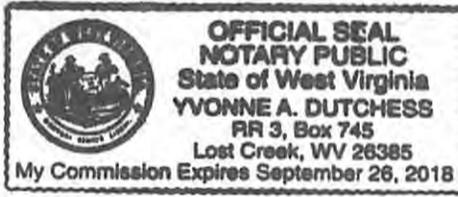
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Consolidation Coal Company</u>	Name _____
Address <u>c/o: Murray Energy Corp.</u>	Address _____
<u>46226 National Rd.</u>	
(b) Name <u>St. Clairsville OH 43950</u>	(b) Coal Owner(s) with Declaration
Address _____	Name <u>Consolidation Coal Company c/o Murray Energy</u>
	Address <u>46 226 National Road</u>
	<u>St. Clairsville, OH 43950</u>
(c) Name _____	Name _____
Address _____	Address <u>See attached</u>
6) Inspector <u>Sam Ward</u>	(c) Coal Lessee with Declaration
Address <u>PO Box 2327</u>	Name _____
<u>Buckhannon, WV 26201</u>	Address _____
Telephone <u>304-389-7583</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]
 Its: Regulatory Coordinator
 Address PO Box 1008
Jane Lew, WV 26378
 Telephone 304-884-6000

Subscribed and sworn before me this 5th day of July 2018
Yvonne A. Dutchesse 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 depprivacyoffier@wv.gov.

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33-04304P

API 47-033-04304

Well Number Lowe 2E-239

Additional Coal Owners:

Consolidation Coal Company
1000 Consol Energy Drive
Canonsburg, PA 15317

JayStern, LLC
c/o Murray Energy
Attn: Lane
46226 National Road
St. Clairsville, OH 43950

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WW-9
(5/16)

API Number 47 - 033 - 04304
Operator's Well No. E-239 (Love 2)

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) 0502000206 Lower West Fork River Quadrangle Wallace

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))

*SDW
7/3/2018*

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 5th day of July, 20 18

Yvonne A. Hutcherson Notary Public

My commission expires September 26, 2018

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Form WW-9

Operator's Well No. _____

Proposed Revegetation Treatment: Acres Disturbed 2.88 +/- 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

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Kentucky Bluegrass	30	Kentucky Bluegrass	30
Redtop	5	Redtop	5
Birdsfoot Trefoil	15	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: S. J. Dubowitz

Comments: _____

Title: COG Inspector Date: 7/3/2018

Field Reviewed? () Yes (X) No

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WW-9- GPP
Rev. 5/16

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API Number 47 - 033 - 04304
Operator's Well No. F-239 (Love)

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

Operator Name: XTO Energy Inc.
Watershed (HUC 10): 0502000206 Lower West Fork River Quad: Wallace
Farm Name: Consol Land Development

- 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 - 033 - 04304
Operator's Well No. E-239 (Love 2)

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: T. Sam

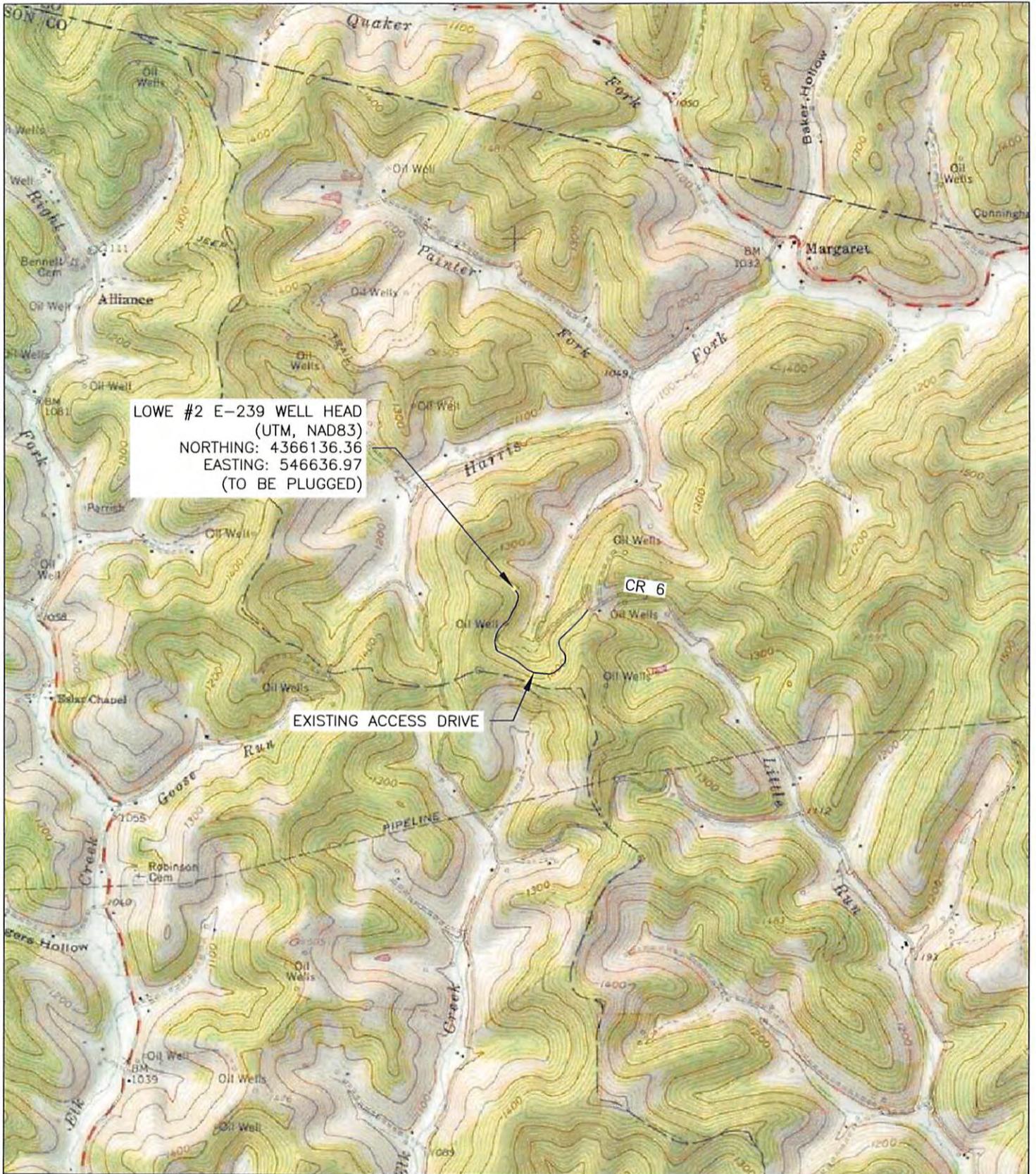
Date: 6/28/18

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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: MMY	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 - WALLACE QUADRANGLE
LOWE #2 E-239
 FOR: XTO ENERGY, INC.
 CR 6, HARRISON 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) 468-8910
 www.morris-k.com

06/17/2018

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WW-7
8-30-06



West Virginia Department of Environmental Protection
Office of Oil and Gas

WELL LOCATION FORM: GPS

API: 47-033-04304 WELL NO.: E-239 (Lowe 2)

FARM NAME: Consol Land Development

RESPONSIBLE PARTY NAME: XTO Energy, Inc.

COUNTY: Harrison DISTRICT: Eagle

QUADRANGLE: Wallace

SURFACE OWNER: Consolidation Coal Company

ROYALTY OWNER: See attached

UTM GPS NORTHING: 4366136.36

UTM GPS EASTING: 546636.97 GPS ELEVATION: 405.84 / 1331.5'

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:

- Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
- Accuracy to Datum – 3.05 meters
- Data Collection Method:
Survey grade GPS ____; Post Processed Differential ____

Real-Time Differential ____

Mapping Grade GPS ; Post Processed Differential

Real-Time Differential ____

- 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 Jones
Signature

Regulatory Coordinator
Title

6/14/18
Date

08/17/2018

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