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west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Friday, October 18, 2019  
PERMIT MODIFICATION APPROVAL  
Horizontal 6A / New Drill

XTO ENERGY, INC.  
810 HOUSTON STREET  
FORT WORTH, TX 76102

Re: Permit Modification Approval for SANDS UNIT A 3H  
47-049-02491-00-00

**Extend bottom hole location from a measured depth of 20431' to 20547'.**

XTO ENERGY, INC.

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

If there are any questions, please feel free to contact me at (304) 926- 0450.

A handwritten signature in blue ink, appearing to read 'James A. Martin', is positioned above the printed name and title.

James A. Martin  
Chief

Operator's Well Number: SANDS UNIT A 3H  
Farm Name: XTO ENERGY INC  
U.S. WELL NUMBER: 47-049-02491-00-00  
Horizontal 6A New Drill  
Date Modification Issued: 10/18/2019

Promoting a healthy environment.

WW-6B  
(04/15)

API NO. 47-049 - 02491  
OPERATOR WELL NO. Sands Unit A 3H  
Well Pad Name: Sands Pad

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
WELL WORK PERMIT APPLICATION

1) Well Operator: XTO Energy Inc.

494487940	Marion	Lincoln	Shinnston
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Operator ID      County      District      Quadrangle

2) Operator's Well Number: Sands Unit A 3H      Well Pad Name: Sands Pad

3) Farm Name/Surface Owner: XTO Energy Inc.      Public Road Access: Bingamon Road - Marion CR 48

4) Elevation, current ground: 1244'      Elevation, proposed post-construction: 1,238'

5) Well Type (a) Gas  Oil \_\_\_\_\_ Underground Storage \_\_\_\_\_  
Other \_\_\_\_\_  
(b) If Gas Shallow  Deep \_\_\_\_\_  
Horizontal

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Target Formation: Marcellus, Depth 7,396' - 7,555', Anticipated Thickness: 159', Associated pressure: 4,650 psi

8) Proposed Total Vertical Depth: 7,555' ✓

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 20,547' ✓

11) Proposed Horizontal Leg Length: 12,725' ✓

12) Approximate Fresh Water Strata Depths: 113'

13) Method to Determine Fresh Water Depths: Offsetting Reports Attached →

14) Approximate Saltwater Depths: 1,437' ✓

15) Approximate Coal Seam Depths: 28', 288', 408' ✓

16) Approximate Depth to Possible Void (coal mine, karst, other): 408' ✓

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine?      Yes \_\_\_\_\_ No \_\_\_\_\_

(a) If Yes, provide Mine Info: Name: \_\_\_\_\_  
Depth: \_\_\_\_\_  
Seam: \_\_\_\_\_  
Owner: \_\_\_\_\_

WW-6B  
(04/15)

API NO. 47- 049 - 02491  
 OPERATOR WELL NO. Sands Unit A 3H  
 Well Pad Name: Sands Pad

18) **CASING AND TUBING PROGRAM**

<b>TYPE</b>	<b>Size (in)</b>	<b>New or Used</b>	<b>Grade</b>	<b>Weight per ft. (lb/ft)</b>	<b>FOOTAGE: For Drilling (ft)</b>	<b>INTERVALS: Left in Well (ft)</b>	<b>CEMENT: Fill-up (Cu. Ft.)/CTS</b>
Conductor	24	New	PE&B	95	40	40	59 / CTS
Fresh Water	13.375	New	H40	48	460	460	415 / CTS
Coal							
Intermediate	9.625	New	J55	36	3,100	3,100	1,262 / CTS
Production	5.5	New	P110	20	20,547	20,547 ✓	3,908 / 6,089
Tubing							
Liners							

<b>TYPE</b>	<b>Size (in)</b>	<b>Wellbore Diameter (in)</b>	<b>Wall Thickness (in)</b>	<b>Burst Pressure (psi)</b>	<b>Anticipated Max. Internal Pressure (psi)</b>	<b>Cement Type</b>	<b>Cement Yield (cu. ft./k)</b>
Conductor	24	28	0.375	940	40	Standard	1.19
Fresh Water	13.375	17.5	0.33	1,730	380	Standard	1.19
Coal							
Intermediate	9.625	12.25	0.352	3,520	2,520	Standard	1.19
Production	5.5	8.5	0.361	12,640	6,130 ✓	35 65 POZ/Class H Tar	1.10 / 1.18
Tubing							
Liners							

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**PACKERS**

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Environmental Protection

Kind:				
Sizes:				
Depths Set:				

WW-6B  
(10/14)

API NO. 47- 049 - 02491  
OPERATOR WELL NO. Sands Unit A 3H  
Well Pad Name: Sands Pad

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill a new horizontal Marcellus well, utilizing synthetic mud and a closed loop system for both drilling and completion. Install new casing with centralizers.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

1. Acid Stage - Typically 1500 gallons of 7.5% hydrochloric acid to clear the perforation path in the wellbore.  
2. Sand / Proppant Stages - Several stages of pumping water combined with sand at a targeted 80 bpm rate. The highest pressure and rate anticipated is 9,500 psig and 100 bpm. The sand size may vary from 100 mesh to 30/50 mesh size. 12,500 bbls slick water with 220,000 lbs 40/70, 270,000 lbs 100 mesh sands and 2,200 gals FR 133, 1,500 gals Bioplex 301 and 1,190 gals antiscale 30.  
3. Flush Stage - Slickwater water stage to fill the wellbore to flush the sand from the wellbore. Depending on the water quality, a biocide, friction reducer, iron control, and scale inhibitor may be injected during the completion as well.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 19.73 +/-

22) Area to be disturbed for well pad only, less access road (acres): 2.69 +/-

23) Describe centralizer placement for each casing string:

Conductor: None  
Fresh Water: Every 3rd joint from shoe to surface  
Mine: Every 3rd joint from shoe to surface (if applicable)  
Intermediate: Every 3rd joint from shoe to surface  
Production: Every 3rd joint from shoe to 1,000' above the kick-off point

24) Describe all cement additives associated with each cement type:

Conductor: None  
Fresh Water: Calcium Chloride and super flake  
Mine: Calcium Chloride and super flake (if applicable)  
Intermediate: Calcium Chloride and super flake  
Production: Calcium Chloride, Bentonite, super flake, Air-Out, CR-1, FL-300, SEC10

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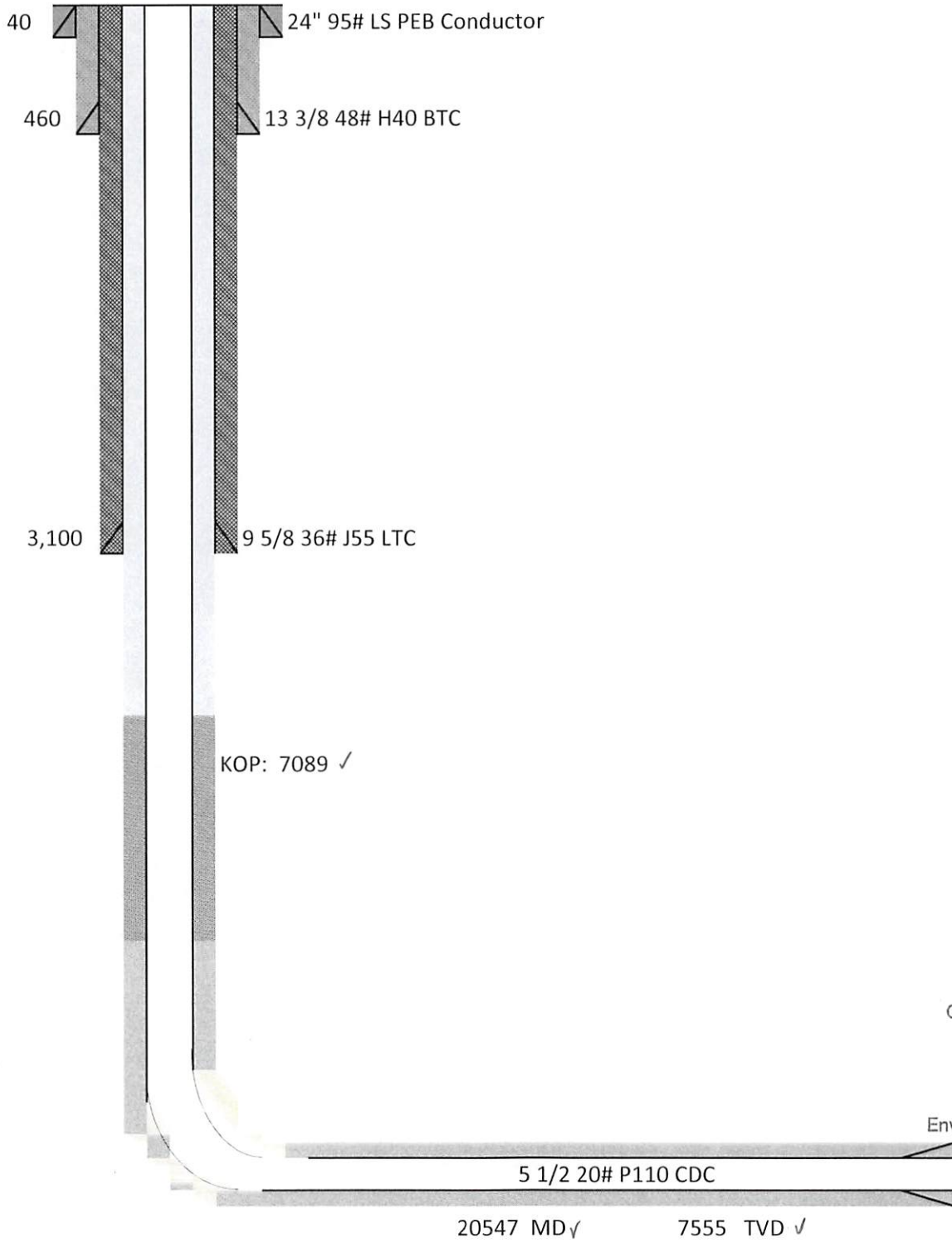
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25) Proposed borehole conditioning procedures:

Conductor: Hole is auger drilled: No conditioning required.  
Fresh Water: Condition hole with air at TD until visibly clean, run casing, circulate and clear 1.5x pipe volume with fresh water before cementing.  
Mine: Condition hole with air at TD until visibly clean, run casing, circulate and clear 1.5x pipe volume with water before cementing (if applicable).  
Intermediate: Condition hole with air at TD until visibly clean, run casing, circulate and clear 1.5x pipe volume with water before cementing.  
Production: Circulate hole with synthetic based drilling fluid at TD (1 bottoms up for each 2,000' of lateral drilled). TOOH and circulate minimum of 1 bottoms up and until returns are minimal at the base of the curve. Run casing, circulate and ensure good returns before cementing.

\*Note: Attach additional sheets as needed.

Sands A 3H  
Marion County, West Virginia



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Sands Unit A 3H

4704902491

Operator	API	Elevation	Total Depth	Producing Zones	Perforated Depths	Producing Zone Depths	Producing Zones Not Perforated	Known or reasonably expected to penetrate a depth that could be within the range of the fracture propagation?
XTO Energy Inc.	4704901298	1209	3902	Big Injun, Fifty Foot, Gordon, Balltown	1,844' - 3,700'	1,844' - 3,700'	NA	No
Never Drilled	4704901299	NA	NA	Never Drilled	Never Drilled	Never Drilled	Never Drilled	Never Drilled
Waco Oil & Gas Co Inc.	4704901412	1238	3945	BI, Gantz, Fifth, Balltown	Est. 1866-3728	Est. 1866-3728	NA	No
EQT Production Company	4704900316	1120	3871	Balltown	3561-3663	3561-3663	NA	No
Waco Oil & Gas Co Inc.	4704901470	1424	5424	BN, 3R, 2R, BD, BT	3898 - 5207	3898 - 5207	NA	No
Waco Oil & Gas Co Inc.	4704901491	1037	5023	BN, 3R, 2R, BD, BT, SL	2951-4810	2951-4810	NA	No
XTO Energy Inc.	4704901606	1100	3738	BA, FM, FO, TF	2354-3573	2354-3573	NA	No
Petroleum Service Partners,	4704900653	1319	5089	Bradford, Balltown, Speechly	3289-4241	3289-4241	NA	No
Waco Oil & Gas Co., Inc.	4704901468	927	4691	BN, RY, BD, BT, SY	2,949' - 4,537'	2,949' - 4,537'	NA	No
XTO Energy Inc.	4704901466	1048	3750	BI, 50', Gordon, 5th Sand, Balltown	1600-3464	1600-3464	NA	No
Waco Oil & Gas Co Inc.	4704901704	1232	4242	TF, FF, 5S, BF	Est. 2270 - 4152	Est. 2270 - 4152	NA	No

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WW-6A1  
(5/13)

Operator's Well No. Sands Unit A 3H

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE  
Chapter 22, Article 6A, Section 5(a)(5)  
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
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See attached

**Acknowledgement of Possible Permitting/Approval  
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:


- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

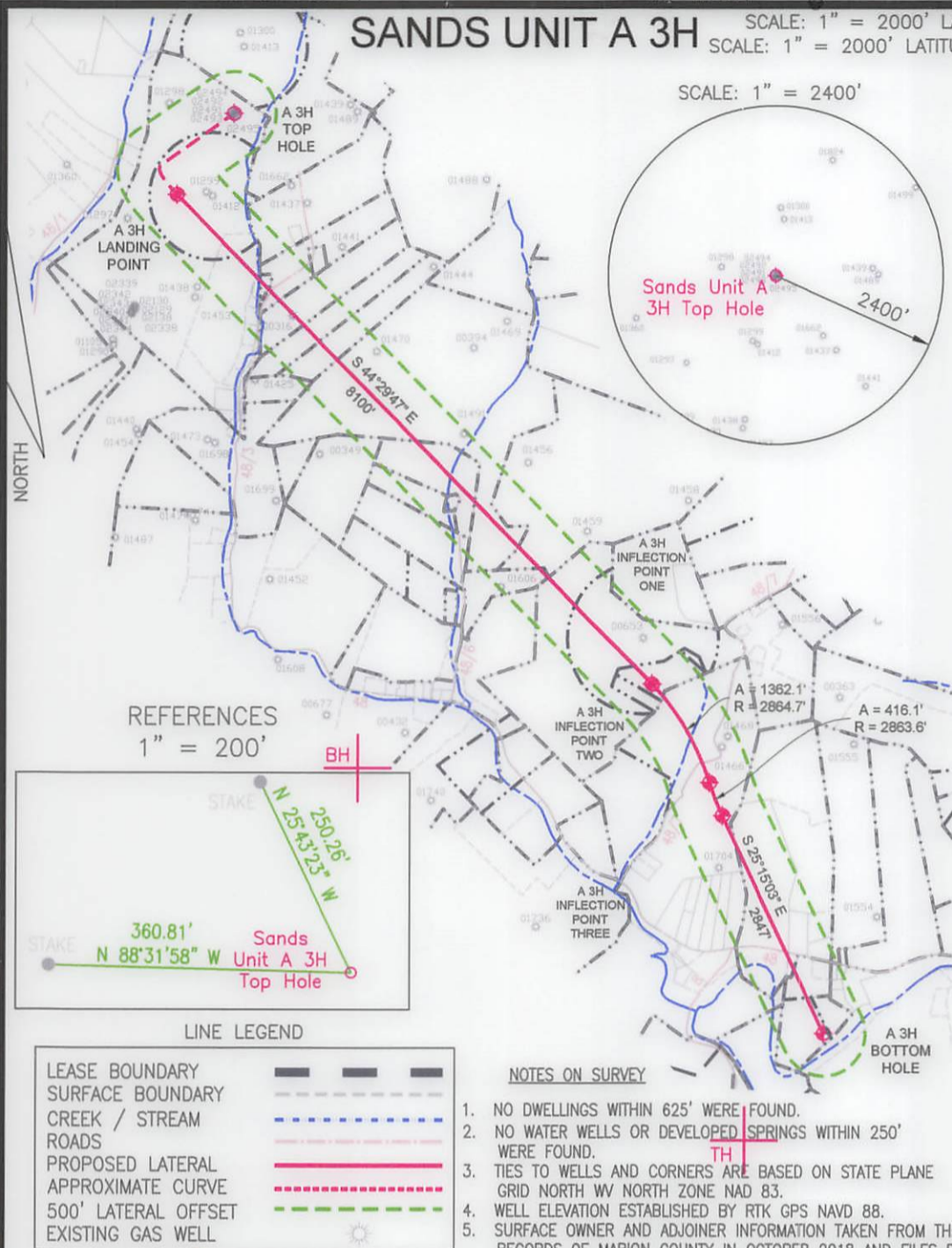
Well Operator: XTO Energy Inc.  
By:   
Its: Regulatory Coordinator

BOTTOM HOLE ← 10754' → TOP HOLE ← 6133' →

# SANDS UNIT A 3H

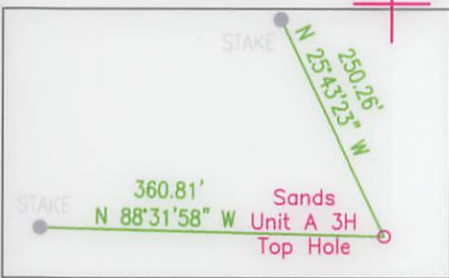
SCALE: 1" = 2000' LATITUDE: 39°30'00" (TOP HOLE)  
SCALE: 1" = 2000' LATITUDE: 39°27'30" (BOTTOM HOLE)

SCALE: 1" = 2400'



State Plane Coordinate	
West Virginia North	
Top Hole Location	
NAD 27 Feet	N: 351824.891
	E: 1770299.120
UTM Zone 17 (SPCS83) Meters	
N	4368404.929
E	559065.408
NAD 27	
N	39.4631110
W	80.3135824
Landing Point Location	
NAD 27 Feet	N: 350867.883
	E: 1769616.053
UTM Zone 17 (SPCS83) Meters	
N	4368109.894
E	558862.157
NAD 27	
N	39.4604666
W	80.3159708
Inflection Point One Location	
NAD 27 Feet	N: 345090.225
	E: 1775292.992
UTM Zone 17 (SPCS83) Meters	
N	4366378.479
E	560621.065
NAD 27	
N	39.4447442
W	80.2956841
Inflection Point Two Location	
NAD 27 Feet	N: 343932.106
	E: 1775985.420
UTM Zone 17 (SPCS83) Meters	
N	4366029.158
E	560837.904
NAD 27	
N	39.4415814
W	80.2931962
Inflection Point Three Location	
NAD 27 Feet	N: 343545.063
	E: 1776137.223
UTM Zone 17 (SPCS83) Meters	
N	4365912.011
E	560886.117
NAD 27	
N	39.4405225
W	80.2926466
Bottom Hole Location	
NAD 27 Feet	N: 340970.161
	E: 1777351.693
UTM Zone 17 (SPCS83) Meters	
N	4365133.697
E	561269.195
NAD 27	
N	39.4334826
W	80.2882667

REFERENCES  
1" = 200'



LINE LEGEND

LEASE BOUNDARY	---
SURFACE BOUNDARY	----
CREEK / STREAM	~~~~~
ROADS	=====
PROPOSED LATERAL	—————
APPROXIMATE CURVE	.....
500' LATERAL OFFSET	- - - - -
EXISTING GAS WELL	☼

NOTES ON SURVEY

1. NO DWELLINGS WITHIN 625' WERE FOUND.
2. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' WERE FOUND.
3. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH WV NORTH ZONE NAD 83.
4. WELL ELEVATION ESTABLISHED BY RTK GPS NAVD 88.
5. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF MARION COUNTY IN OCTOBER 2018 AND FILES PROVIDED BY XTO ENERGY INC.
6. WELLS SHOWN ARE TAKEN FROM RECORDS OF WDEP AND SURVEYED LOCATIONS.



2402 PENNSYLVANIA 66 DELMONT, PA 15626

(724) 757 - 2417

www.jonesconsultant.com

SHEET 1 OF 2

FILE #: JC2017-18

DRAWING #: SANDS UNIT A 3H WELL

SCALE: 1" = 2000'

MINIMUM DEGREE OF ACCURACY: 1:2500

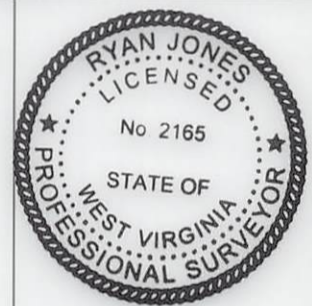
PROVEN SOURCE OF ELEVATION: RTK GPS

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 RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Signed: \_\_\_\_\_

R.P.E.: \_\_\_\_\_

P.S.: \_\_\_\_\_



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
WDEP  
OFFICE OF OIL & GAS  
601 57TH STREET  
CHARLESTON, WV 25304



DATE: 7/22/2019

OPERATOR'S WELL #: SANDS UNIT A 3H

API WELL #: 47 049 02491M  
STATE COUNTY PERMIT

Well Type:  Oil  Waste Disposal  Production  Deep  
 Gas  Liquid Injection  Storage  Shallow

WATERSHED: LOWER WEST FORK RIVER (0502000206)  
COUNTY/DISTRICT: MARION / LINCOLN  
SURFACE OWNER: XTO ENERGY INC  
OIL & GAS ROYALTY OWNER: XTO ENERGY INC

ELEVATION: 1,238' (PROPOSED GRADE)  
QUADRANGLE: SHINNSTON 7.5'  
ACREAGE: 105.34±  
ACREAGE: 774.4±

DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE   
PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  PLUG & ABANDON   
CLEAN OUT & REPLUG  OTHER CHANGE  (SPECIFY): \_\_\_\_\_

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 7,555' (TVD), 20,547' (TMD)

WELL OPERATOR: XTO ENERGY INC.  
Address: 190 THORN HILL ROAD  
City: WARRENDALE State: PA Zip Code: 15086

DESIGNATED AGENT: GARY BEALL  
Address: P.O. BOX 1008  
City: JANE LEW State: WV Zip Code: 26378



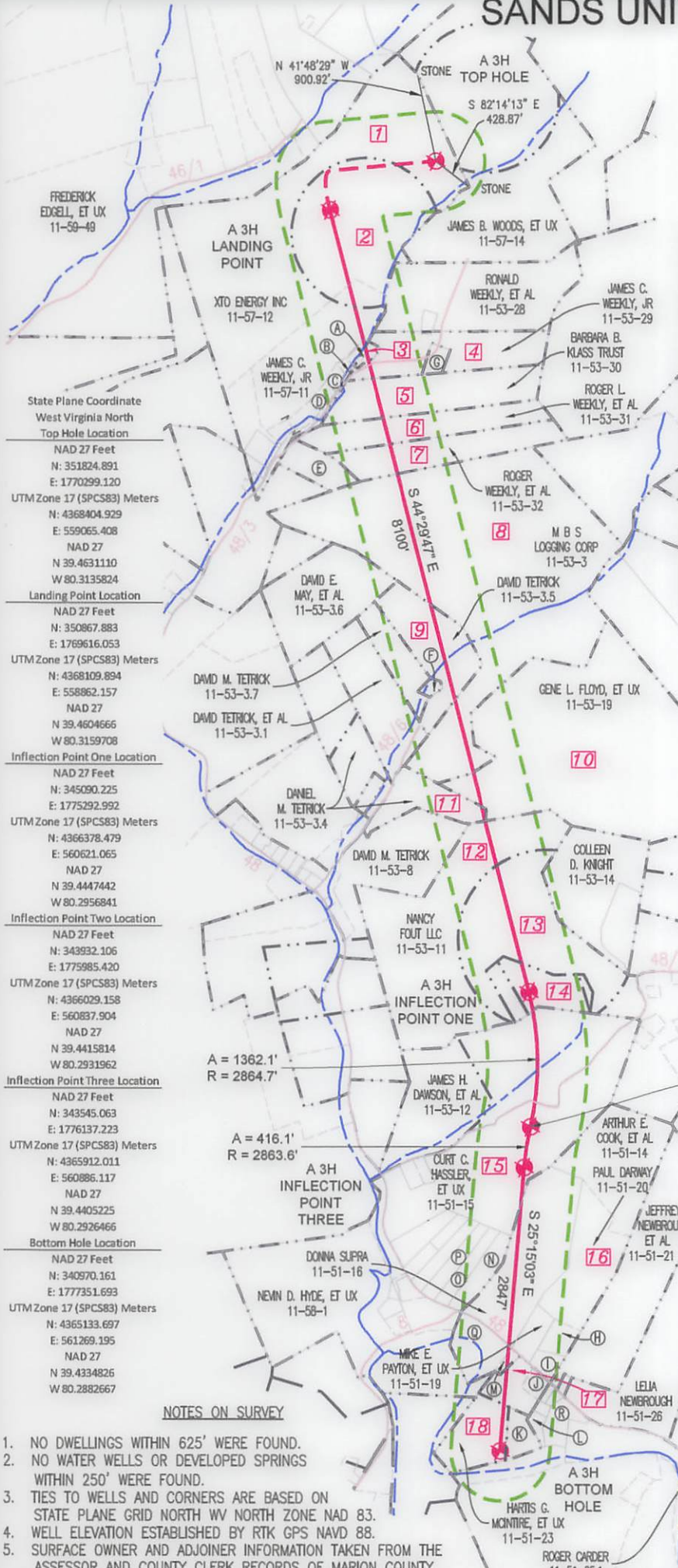
# SANDS UNIT A 3H

## LINE LEGEND

LEASE BOUNDARY	---
SURFACE BOUNDARY	- - - -
CREEK / STREAM	~ ~ ~ ~
ROADS	— · — · —
PROPOSED LATERAL	—
APPROXIMATE CURVE	- · - · -
500' LATERAL OFFSET	- · - · -

SANDS UNIT A 3H		
LEASE	LESSOR	MINERAL ACREAGE
1)	TRIO PETROLEUM CORP	138.05
2)	WACO OIL AND GAS CO. INC.	35.185
3)	JAMES C. WEEKLY, JR	0.91
4)	JAMES C. WEEKLY, JR	16.22
5)	LACY BOGGESS, ET VIR	18.00
6)	O. JOAN WEEKLY	17.00
7)	JOANNE EDGELL	15.52
8)	PATRICIA ANN JUDY, ET AL	130.00
9)	DAVID M. TETRICK	20.00
10)	WACO OIL AND GAS CO. INC.	86.00
11)	EUGENE V. TETRICK, ET AL	8.00
12)	BERTA PEARL LAUGHLIN, ET AL	80.00
13)	BERTA PEARL LAUGHLIN	31.053
14)	BRENDA K. JOSEPH, ET AL	6.50
15)	WACO OIL AND GAS CO. INC., ET AL	91.49
16)	XTO ENERGY INC	68.16
17)	XTO ENERGY INC	2.452
18)	MICHAEL JOSEPH BOUFFIQUX	9.82

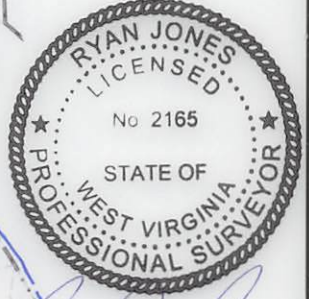
	SURFACE OWNER	TAX PARCEL
A	JEFFREY D. WEEKLY	11-53-29.1
B	JAMES C. WEEKLY, JR	11-57-11.4
C	VIRGINIA K. WEEKLY	11-57-11.2
D	JESSICA N. WEEKLY, ET VIR	11-57-11.5
E	ROGER L. WEEKLY	11-53-31.1
F	DAVID M. TETRICK, ET UX	11-53-3.8
G	JAMES B. WEEKLY	11-53-29.2
H	MANDY A. INGLES, ET VIR	11-51-20.2
I	ROBERT D. WILFONG	11-51-20.1
J	LORAN K. LOWDERMILK, ET VIR	11-51-23.2
K	MARK S. MCINTIRE, ET UX	11-51-23.5
L	COLETTE A. MELTON	11-51-21.4
M	HOMER L. ISER, ET UX	11-51-18
N	WILLIAM L. MILLER JR., ET UX	11-51-15.6
O	WILLIAM G. DECKER, ET UX	11-51-15.7
P	WILLIAM G. DECKER, ET UX	11-51-15.9
Q	HOMER L. ISER, ET UX	11-51-17
R	COLLEEN DAY	11-51-25



State Plane Coordinate  
West Virginia North  
Top Hole Location  
NAD 27 Feet  
N: 351824.891  
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5. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF MARION COUNTY IN OCTOBER 2018 AND FILES PROVIDED BY XTO ENERGY INC.
6. WELLS SHOWN ARE TAKEN FROM RECORDS OF WDEP AND SURVEYED LOCATIONS OF WELLS WITHIN 500' OF WELL BORE.



## JONES CONSULTANTS, LLC

SURVEYING • MAPPING • LAND • GAS WELL • PIPELINE  
2402 PENNSYLVANIA 66 DELMONT, PA 15626  
(724) 757 - 2417 www.jonesconsultant.com

### SUPPLEMENTAL SURFACE AND LESSOR EXHIBIT

#### SANDS UNIT A 3H

Drawn By: JRV	Date: 7/22/19	LINCOLN DISTRICT MARION COUNTY, WEST VIRGINIA
Scale: 1" = 1500'	Sheet: SHEET 2 OF 2	File No.: JC2017-18
AFE # 1003382		



Sands A 3H Lease Ref	Lessor	Lessee	Royalty	Book/Page
1	Trio Petroleum Corp.	Trio Petroleum Corp. to Waco Holding Company BK 56-879. Wacol Holding Company to Waco Oil & Gas Co. Inc. - BK 56-599. Waco Oil & Gas Co. Inc. to Linn Energy, LLC - AB 25-638. Linn Energy LLC to XTO Energy Inc. - AB 33-200.	Min. 1/8	953-1119
2	Waco Oil and Gas Co., Inc.	Waco Oil and Gas Co., Inc. to XTO Energy Inc. - AB 55-126	Min. 1/8	953-1119
3	James C. Weekly, Jr.	Cardinal Energy to XTO Energy Inc. - AB 54-558.	Min. 1/8	989-44
4	James C. Weekly, Jr.	Cardinal Energy to XTO Energy Inc. - AB 54-558.	Min. 1/8	989-44
5	Lacy Boggess and J. W. Boggess, her husband	Carnegie Production Company to EQT Production Company via Articles of Merger. EQT Production Company to XTO Energy Inc. - AB 45-444.	Min. 1/8	186-10 958-275
6	O. Joan Weekly	Cardinal Energy to XTO Energy Inc. - AB 54-558.	Min. 1/8	984-452
7	Joanne Edgell	Cardinal Energy to XTO Energy Inc. - AB 54-558.	Min. 1/8	984-457
8	Patricia Ann Judy	Waco Oil and Gas Co., Inc. to XTO Energy Inc. AB 42-37	Min. 1/8	986-794
8	Robert Fay Tetrick (Life Estate)	Waco Oil and Gas Co., Inc. to XTO Energy Inc. AB 42-37	Min. 1/8	986-970
8	Charles Robert Judy, Jr. (Remainderman)	Waco Oil and Gas Co., Inc. to XTO Energy Inc. AB 42-37	Min. 1/8	990-138
9	David M. Tetrick	XTO Energy Inc.	Min. 1/8	1091-938
10	Waco Oil and Gas Co., Inc.	Waco Oil and Gas Co., Inc. to Linn Energy LLC - AB 25-638. Linn Energy LLC to XTO Energy Inc. - AB 33-200.	Min. 1/8	981-150
11	Eugene V. Tetrick, by Attorney-in-Fact, Sharon J. Tetrick and Wendy J. Wolfe	XTO Energy Inc.	Min. 1/8	1091-932
11	Eugene V. Tetrick	Waco Oil and Gas Co., Inc. to Linn Energy LLC - AB 25-638. Linn Energy LLC to XTO Energy Inc. - AB 33-200.	Min. 1/8	986-488
11	Lionel V. Tetrick Testamentary Trust, Bank One, West Virginia, NA, Co-Trustee, and Camden P. Siegrist, Co-Trustee	Waco Oil and Gas Co., Inc. to Linn Energy LLC - AB 25-638. Linn Energy LLC to XTO Energy Inc. - AB 33-200.	Min. 1/8	986-839
12	Berta Pearl Laughlin, widow	R & P Associates to Doran & Associates, Inc. - AB 6-1038. Doran & Associates, Inc. to LaMaur Development Corp. - DB 827-976. Bison Resources Corp. as successor by merger to LaMaur Development Corp. to PSPI Partnership No. 2. - AB 15-725. PSPI Partnership No. 2 to Antero Resources Corp. - DB 1492-642. Antero Resources Corp. to XTO Energy Inc. - AB 50-570.	Min. 1/8	817-353
12	Brenda K. Joseph, a single woman, by her Attorney-in-Fact, Robert Thomas Joseph	XTO Energy Inc.	Min. 1/8	1115-415
12	Carolyn K. Capage, dealing with sole and separate property	XTO Energy Inc.	Min. 1/8	1115-400
12	Robert Thomas Joseph, dealing with sole and separate property	XTO Energy Inc.	Min. 1/8	1115-430
12	Paul C. Espel, Jr., dealing with sole and separate property	XTO Energy Inc.	Min. 1/8	1116-676
12	David Joseph, dealing with sole and separate property	XTO Energy Inc.	Min. 1/8	1116-664
12	Deborah Joseph Locke, dealing with sole and separate property	XTO Energy Inc.	Min. 1/8	1116-748
12	Bonnie Raad, dealing with sole and separate property	XTO Energy Inc.	Min. 1/8	1125-858
12	Thomas H. Mayor, dealing with sole and separate property	XTO Energy Inc.	Min. 1/8	1126-196
12	Patrick J. Doyle, dealing with sole and separate property	XTO Energy Inc.	Min. 1/8	1129-917

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12	Patrick J. Doyle, as Trustee in trust of the Mackenzie Doyle, Ciara Doyle and Patrick David Doyle Trust	XTO Energy Inc.	Min. 1/8	1131-782
13	Berta Pearl Laughlin, widow	R & P Associates to Doran & Associates, Inc. - AB 6-1038. Doran & Associates, Inc. to LaMaur Development Corp. - DB 827-976. Bison Resources Corp. as successor by merger to LaMaur Development Corp. to PSPI Partnership No. 2. - AB 15-725. PSPI Partnership No. 2 to Antero Resources Corp. - DB 1492-642. Antero Resources Corp. to XTO Energy Inc. - AB 50-570.	Min. 1/8	817-353
14	Brenda Kay Joseph, a single woman, by her Attorney-in-Fact, Robert Thomas Joseph	XTO Energy Inc.	Min. 1/8	1115-418
14	Carolyn K. Capage, dealing with sole and separate property	XTO Energy Inc.	Min. 1/8	1115-403
14	Deborah Joseph Locke, dealing with sole and separate property	XTO Energy Inc.	Min. 1/8	1116-751
14	Robert Thomas Joseph, dealing with sole and separate property	XTO Energy Inc.	Min. 1/8	1115-433
14	David Joseph, dealing in sole and separate property	XTO Energy Inc.	Min. 1/8	1116-667
14	Paul C. Espel, Jr., dealing with sole and separate property	XTO Energy Inc.	Min. 1/8	1116-679
14	Gary Sturm, dealing with sole and separate property	XTO Energy Inc.	Min. 1/8	1122-618
14	Beverly Lynne Timmins, dealing with sole and separate property	XTO Energy Inc.	Min. 1/8	1123-473
14	Milton Sturm, dealing with sole and separate property	XTO Energy Inc.	Min. 1/8	1122-582
14	Barry W. Huff, dealing with sole and separate property	XTO Energy Inc.	Min. 1/8	1123-110
14	Bonnie Raad, dealing with sole and separate property	XTO Energy Inc.	Min. 1/8	1125-864
14	Thomas H. Mayor, dealing with sole and separate property	XTO Energy Inc.	Min. 1/8	1126-199
14	Douglas William Sturm, dealing with sole and separate property	XTO Energy Inc.	Min. 1/8	1122-621
14	Mary Della Lambert, dealing with sole and separate property	XTO Energy Inc.	Min. 1/8	1128-150
14	Patrick J. Doyle, dealing with sole and separate property	XTO Energy Inc.	Min. 1/8	1129-920
14	Patrick J. Doyle, as Trustee in trust of the Mackenzie Doyle, Ciara Doyle and Patrick David Doyle Trust	XTO Energy Inc.	Min. 1/8	1131-785
15	Waco Oil & Gas Co., Inc.	Waco Oil and Gas Co., Inc. to XTO Energy Inc. AB 42-37	Min. 1/8	994-559
15	Frank C. Tetric	Waco Oil and Gas Co., Inc. to XTO Energy Inc. AB 42-37	Min. 1/8	1000-352
16	XTO Energy Inc.	XTO Energy Inc.	Min. 1/8	1095-93
17	XTO Energy Inc.	XTO Energy Inc.	Min. 1/8	1095-93
18	Michael Joseph Bouffieux, a married man dealing in his sole and separate property	XTO Energy Inc.	Min. 1/8	1239-383

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Removed # 19 from previous/initial permit



XTO Energy Inc.  
480 Industrial Park Road  
Jane Lew, WV 26378  
(304)884-6001  
(304)884-6809

WV DEP  
Office of Oil & Gas  
601 57<sup>th</sup> St. SE  
Charleston, WV 25303

**RE: Sands Unit A 3H - Modification**

To Whom It May Concern,

Please see the enclosed permit modification request for the Sands Unit A 3H well permit. The modification is to adjust the bottom hole. An updated WW-6B & WW-6A1 have been enclosed. Please don't hesitate to contact me if you have any questions or need further information.

Sincerely,

A handwritten signature in black ink, appearing to read 'TS'.

Tim Sands  
Regulatory Coordinator  
XTO Energy, Inc.  
PO Box 1008  
Jane Lew, WV 26378  
[Tim\\_Sands@xtoenergy.com](mailto:Tim_Sands@xtoenergy.com)  
304-884-6036

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