

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

Ken McQueen
Cabinet Secretary

Matthias Sayer
Deputy Cabinet Secretary

Heather Riley, Division Director
Oil Conservation Division



Administrative Order SWD-1735
May 31, 2018

**ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION**

Pursuant to the provisions of Division Rule 19.15.26.8(B) NMAC, XTO Energy, Inc. (the “operator”) seeks an administrative order for its Remuda Basin SWD Well No. 1 (the “proposed well”) with a location of 1320 feet from the South line and 1980 feet from the East line, Unit letter O of Section 25, Township 23 South, Range 29 East, NMPM, Eddy County, New Mexico, for the purpose of produced water disposal.

THE DIVISION DIRECTOR FINDS THAT:

The supplemental application has been duly filed under the provisions of Division Rule 19.15.26.8(B) NMAC and satisfactory information has been provided that affected parties as defined in said rule have been notified and no objections have been received within the prescribed waiting period. The applicant has presented satisfactory evidence that all requirements prescribed in Rule 19.15.26.8 NMAC have been met and the operator is in compliance with Rule 19.15.5.9 NMAC.

Application for Disposal in Devonian and Silurian Formations: Due to the potential for the projected injection volume of the proposed well to impact an area greater than the one-half mile radius applied in Division Form C-108 and Division rule, the applicant has provided the following supplementary information:

1. Notification following Division Rule 19.15.26.8(B) NMAC for a radius of one mile from the surface location of the proposed well;
2. An expanded Area of Review for wells penetrating the disposal interval for a radius of one mile from the surface location of the proposed well; and
3. A statement by a qualified person assessing the potential of induced-seismic events associated with the disposal activities for the predicted service life of the proposed well.

IT IS THEREFORE ORDERED THAT:

The applicant, XTO Energy, Inc. (OGRID 5380), is hereby authorized to utilize its Remuda Basin SWD Well No. 1 (API 30-015-44388) with a location of 1320 feet from the South line and 1980 feet from the East line, Unit letter O of Section 25, Township 23 South, Range 29 East, NMPM, Eddy County, for disposal of oil field produced water (UIC Class II only) through open-

hole completion into an interval consisting of the Devonian formation from approximately 15150 feet to approximately 16650 feet. Injection will occur through an internally-coated, 4½-inch or smaller tubing within the 7-inch liner and with a packer set within 100 feet of the top of the disposal interval.

This permit does not allow disposal into formations below the Silurian formations including the Montoya formation and the Ellenburger formation (lower Ordovician) or lost circulation intervals directly on top and obviously connected to these formations.

Prior to commencing disposal, the operator shall submit mudlog and geophysical logs information, to the Division's District geologist and Santa Fe Bureau Engineering office, showing evidence agreeable that only the permitted formation is open for disposal including a summary of depths (picks) for contacts of the formations which the Division shall use to amend this order for a final description of the depth for the injection interval. If significant hydrocarbon shows occur while drilling, the operator shall notify the Division's District II and the operator shall be required to receive written permission prior to commencing disposal.

The tie-in of the 7-inch liner with the 9⅝-inch casing shall be no less than 200 feet. The operator shall run a CBL (or equivalent) across the 7-inch liner from 500 feet above the liner to the bottom of the liner to demonstrate placement cement across the length of the liner and the cement bond with the tie-in with the 9⅝-inch casing. The operator shall provide a copy of the CBL to the Division's District II prior to commencing disposal.

If cement does not circulate on any casing string, the operator shall run a cement bond log (CBL) or other log to determine top of cement and shall notify the Artesia District with the top of cement on the emergency phone number prior to continuing with any further cement activity with the proposed well. If cement did not tie back in to next higher casing shoe, the operator shall perform remedial cement job to bring cement, at a minimum, 200 feet above the next higher casing shoe.

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the disposed water enters only the approved disposal interval and is not permitted to escape to other formations or onto the surface. This includes the completion and construction of the well as described in the application and, if necessary, as modified by the District Supervisor.

After installing tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

The well shall pass an initial mechanical integrity test ("MIT") prior to initially commencing disposal and prior to resuming disposal each time the disposal packer is unseated. All MIT procedures and schedules shall follow the requirements in Division Rule 19.15.26.11(A) NMAC. The Division Director retains the right to require at any time wireline verification of

completion and packer setting depths in this well.

If the disposal well fails a MIT or if there is evidence that the mechanical integrity of said well is impacting correlative rights, the public health, any underground sources of fresh water, or the environment, the Division Director shall require the well to be shut-in within 24 hours of discovery and the operator shall redirect all disposal waters to another facility. The operator shall take the necessary actions to address the impacts resulting from the mechanical integrity issues in accordance with Division Rule 19.15.26.10 NMAC, and the well shall be tested pursuant to Rule 19.15.26.11 NMAC prior to returning to injection.

The wellhead injection pressure on the well shall be limited to **no more than 3030 psi**. In addition, the disposal well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressure to the maximum allowable pressure for this well.

The Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the disposed fluid from the target formations. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable step-rate test.

The operator shall notify the supervisor of the Division's District II office of the date and time of the installation of disposal equipment and of any MIT so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of disposal to the Division's District II office. The operator shall submit monthly reports of the disposal operations that includes number of days of operation, injection volume, and injection pressure on Division Form C-115, in accordance with Division Rules 19.15.26.13 and 19.15.7.24 NMAC.

The injection authority granted under this order is not transferable except upon Division approval. The Division may require the operator to demonstrate mechanical integrity of any injection well that will be transferred prior to approving transfer of authority to inject.

The Division may revoke this injection order after notice and hearing if the operator is in violation of Rule 19.15.5.9 NMAC.

The disposal authority granted herein shall terminate two (2) years after the effective date of this Order if the operator has not commenced injection operations into the subject well. One year after the last date of reported disposal into this well, the Division shall consider the well abandoned, and the authority to dispose will terminate *ipso facto*. The Division, upon written request mailed by the operator prior to the termination date, may grant an extension thereof for good cause.

Compliance with this Order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

Jurisdiction is retained by the Division for the entry of such further orders as may be

necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the disposal authority granted herein.

A handwritten signature in black ink, appearing to read "Heather Riley", is written over a horizontal line.

HEATHER RILEY

Director

HR/prg

cc: Oil Conservation Division – Artesia District Office
State Land Office – Oil, Gas and Minerals Division
Well file 30-15-44388

Attachment: Proposed well completion diagram from C-108 application

Remuda Basin SWD #1

Proposed SWD Schematic (Nov 6, 2017)

County: Eddy

SHL: 1320' FSL, 1980' FEL
Sec 25, T 23S, R 29E

BHL: 1320' FSL, 1980' FEL
Sec 25, T 23S, R 29E



AFE # 1702847
XTO ID # 735200

API # 30-015-44388
Elevation 3061'
Rlg: TBD (RKB ~25')

<u>Geology</u>	<u>Casing & Cement</u>	<u>Wellhead</u>	<u>Hole Size</u>	<u>General Notes</u>
TVD			24"	
192' Rustler	<u>Lead (100% OH excess)</u> 140 sx 13.5ppg Poz/Class C Top of Lead @ 0' <u>Tail (100% OH excess)</u> 515 sx 14.8ppg class C Top of Tail @ 100'			
	18-5/8" 87.5# J-55 BTC		350' MD	
385' Top Salt	<u>Lead (100% OH excess)</u> 1700 sx 12.8ppg Poz/Class C Top of Lead @ 0' <u>Tail (100% OH excess)</u> 320 sx 14.8ppg Class C Top of Tail @ 2600'		17-1/2"	
3,063' Base Salt	13-3/8" 68# J-55 BTC		3100' MD	
3,288' Delaware	<u>Lead (200% OH excess)</u> 3500 sx 12.9ppg Poz/Class C Top of Lead @ 0		12-1/4"	
6,962' Bone Spring	<u>Tail (100% OH excess)</u> 140 sx 14.4ppg Class C Top of Tail @ 10550'			
10,307' Wolfcamp	9-5/8" 47# P-110 LTC		10800' MD	
11,769' Cisco	<u>Lead (100% OH excess)</u> 450 sx 11ppg Poz/Class C Top of Lead @ 10700'		8-3/4"	
12,238' Strawn	<u>Tail (100% OH excess)</u> 60 sx 13.2ppg Poz/Class C Top of Tail @ 14900'			
12,534' Atoka				
13,133' Morrow	7" 32# P-110 BTC		15150' MD	
14,018' Barnett			6"	
14,518' Mississippian				
14,952' Woodford				
15,099' Devonian				
	Open Hole to TD	16650' MD		

200' Tie PLS

4 1/2-inch tubing

Approvals (not required for planning schematics)

Prepared by: _____ Date _____

Reviewed by: _____ Date _____

Reviewed by: _____ Date _____

Approved by: _____ Date _____