

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy Minerals and Natural Resources
NM OIL CONSERVATION
Oil Conservation Division **ARTESIA DISTRICT** ☐ AMENDED REPORT

1220 South St. Francis Dr. **FEB 20 2019**
Santa Fe, NM 87505

RECEIVED

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address XTO Energy, Incorporated 6401 Holiday Hill Road, Bldg 5 Midland, Texas 79707		2. OGRID Number 005380	
		3. APL Number 30-015- 45757	
4. Property Code 325 002	5. Property Name Remuda 25 Observation Well	6. Well No. 001	

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
E	25	23S	29E		2107	North	485	West	Eddy

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County

9. Pool Information

Pool Name Stratagraphic	Pool Code 98210
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Additional Well Information

11. Work Type N	12. Well Type MW	13. Cable/Rotary Rotary	14. Lease Type State	15. Ground Level Elevation 3064
16. Multiple N	17. Proposed Depth 1200	18. Formation Salt	19. Contractor Stewart Brothers	20. Spud Date 2/22/2019
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	8-3/4"	7"	20	330	130 C + 2% CaCl	0'
Prod	5-1/8"	2-7/8"	6.5	1200	260 C + 2% CaCl	0'

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
7-1/6" Annular	5000psi	3000psi	

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
I further certify that I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable.
Signature: Stephanie Rabadue

Printed name: **Stephanie Rabadue**

Title: **Regulatory Coordinator**

E-mail Address: **stephanie_rabadue@xtoenergy.com**

Date: **02/18/2019**

Phone: **432-620-6714**

OIL CONSERVATION DIVISION

Approved By:

Raymond G. Rodary

Title:

Geologist

Approved Date: 2-20-19

Expiration Date: 2-20-21

Conditions of Approval Attached

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State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

FEB 20 2019

☐ AMENDED REPORT

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WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-45751	² Pool Code 98210	³ Pool Name Stratagaphic
⁴ Property Code 325002	⁵ Property Name REMUDA 25 OBSERVATION WELL	
⁷ OGRID No. 005380	⁸ Operator Name XTO ENERGY, INC.	⁶ Well Number 1
		⁹ Elevation 3,064'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	25	23 S	29 E		2,107	NORTH	485	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
¹² Dedicated Acres 0	¹³ Joint or Infill	¹⁴ Consolidation Code		¹⁵ Order No.					

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

<p>¹⁶</p>		<p>¹⁷ OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p>Stephanie Rabadue 02/19/2019</p> <p>Signature Date</p> <p>Stephanie Rabadue</p> <p>Printed Name</p> <p>stephanie_rabadue@xtoenergy.com</p> <p>E-mail Address</p>
<p>GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y= 484,811.5 X= 620,119.1 LAT.= 32.277285°N LONG.= 103.944673°W</p> <p>CORNER COORDINATES TABLE NAD 27 NME A - Y= 484,261.0 N, X= 619,633.9 E B - Y= 484,259.7 N, X= 622,286.2 E C - Y= 466,919.8 N, X= 622,281.3 E D - Y= 466,918.7 N, X= 619,634.1 E</p>		<p>¹⁸ SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>2-18-2019</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor:</p> <p>MARK DILLON HARP 23786</p> <p>Certificate Number</p>



RVP 2-20-19

Klein, Ranell, EMNRD

From: Rabadue, Stephanie <Stephanie_Rabadue@xtoenergy.com>
Sent: Thursday, February 21, 2019 9:48 AM
To: Klein, Ranell, EMNRD
Cc: Podany, Raymond, EMNRD
Subject: [EXT] RE: Remuda Basin Observation well
Attachments: Remuda South 25 Observation Well Sketch.pdf

Good morning, Rusty and Ray!

I have answers! And I apologize for the confusion. I believed we were drilling a standard monitoring well but we are not. We are drilling a monitoring geophysical well to study geology and to monitor subsidence.

1. The Remuda 25 Observation well is a shallow 1000' TVD (extra 200' permitted in case of unexpected changes but we plan to stop at 1000') well drilled through the shallow salt (potash) near to 101H. As NMOCD was informed back in October, there was some temporary and limited underground flow outside of casing during 101H completions activities into the adjacent salt zone that was quickly addressed and stopped. The 101H well is in the process of being repaired, this monitoring well is being drilled out of caution, as part of our commitment and close working relationship with Mosaic, and to make sure we understand any local shallow geology, flow paths, and conduits that could be in the area. This will support future well planning and risk management.
2. From the beginning of this issue in early October, we have been in regular (at least weekly) communication with Mosaic and both Dan Morehouse and Ric Bell of Mosaic are fully aware of our plans. XTO has a strong relationship with Mosaic, and both Ric and Dan have been invited to attend coring operations beginning on February 22, 2019, if we have our permit.
3. The wellbore will be cored from 450 to 650 feet so we can study the geology. We will not be perforating the well and the casing will not be open to the formation. We intend to log from 1000' to surface in order to study the geology, run and leave a 1/4" fiber optic cable in the 2-7/8" tbg annulus to monitor temperatures in the long-term. The fiber cable and 2-7/8" tbg will be cemented to surface. The well will be filled with brine to surface so long as the well is actively monitoring.

I've attached a wellbore diagram for your perusal and if you need anything else, don't hesitate to let me know! I'll follow up with a call in an hour or so if you need anything else but feel free to reach out in the meantime if you do!

I appreciate the help!

Happy Thursday!

Stephanie Rabadue
Regulatory Coordinator – Delaware District / Permian Division
432-620-6714
stephanie_rabadue@xtoenergy.com

From: Klein, Ranell, EMNRD [mailto:Ranell.Klein@state.nm.us]
Sent: Wednesday, February 20, 2019 2:38 PM
To: Rabadue, Stephanie <Stephanie_Rabadue@xtoenergy.com>
Cc: Podany, Raymond, EMNRD <Raymond.Podany@state.nm.us>
Subject: Remuda Basin Observation well

Stephanie,

Klein, Ranell, EMNRD

From: Rabadue, Stephanie <Stephanie_Rabadue@xtoenergy.com>
Sent: Thursday, February 21, 2019 12:01 PM
To: Klein, Ranell, EMNRD
Subject: [EXT] RE: Remuda Basin Observation well

Rusty,

This is the procedure for running and cementing the tubing for the well:

Running and Cementing Tubing

- a. Assess hole conditions from the logging run and last trip out of the hole. Make a wiper trip if required to ensure tubing can be run to bottom. Strap tubing while on the rack and record measurements.
- a. Monitor well for one hour to ensure hole stands full and no flow is encountered. Once it is verified that the well is overbalanced and no flow is occurring, nipple down the annular preventer in order to run tubing. (The tubing adapter flange cannot be run through the annular.)
- b. Rig up tubing tongs. Make-up and run a 2-7/8" EUE 8Rd Halliburton float shoe (part no. 837.52000) on the bottom of the first joint. Pump through the joint to ensure the float works properly.
- c. Rig up fiber optic cable sheave and cable spool. Attach the 11mm encapsulated cable to the tubing as it is run in hole. Attach the cable to the pipe every joint using stainless steel bands and the provided banding machine. Use manual slips and take care not to pinch or damage the fiber optic cable when setting the slips or during the make-up of subsequent joints.
- d. Run 2-7/8" tubing to +/- 980'. Pick up the 2-7/8" EUE x 7-1/16" 3k adapter flange with ring gasket and make up on top of the tubing. Run the fiber optic cable through the port on the adapter flange. Land the adapter flange on the wellhead, spacing out the tubing so that it is as close to bottom as possible. Check the fiber optic cable for continuity/confirm no damage to cable before cementing.
- e. Tighten the bolts on the adapter flange and nipple up the 2-9/16 5K gate valve on the top of the tubing head adapter. Run a short pup from the top of the adapter flange to the rig floor. Pump down the 2-7/8" and up the annulus taking returns through the 2" side outlets on the wellhead. Once circulation is established, begin the cement job.
- f. Regulatory requirements mandate that cement is circulated to surface. Mix and pump the following down the tubing and up the annulus taking returns through both 2" outlets on the wellhead:
 - 5-1/8" hole x 2-7/8" tubing, annular capacity 0.01748 bbl/ft
 - 17.5 bbls x 100% excess = 35 bbls = 196.5 ft³
 - 260 sacks (includes 100% excess)
 - 14.8 lb Class C Cement + 2% Calcium Chloride
 - Displace with 5.8 bbls inhibited freshwater (add corrosion inhibitor)
- g. After pumping cement, break off cement lines and install wiper plug in tubing pup. Displace tubing with ~ 5.8 bbls of inhibited freshwater from the cement unit and bump plug to 500 psi over final circulating pressure.
- h. Bleed off pressure and monitor for flowback to the cement unit and note whether float held. Shut the 2-9/16 gate valve on the tubing head adapter.
- i. Back out the landing joint and install 2-7/8" EUE bull plug with pressure gauge. Note the tubing and annulus pressure before rigging down the rig.

