

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NEW MEXICO OIL CONSERVATION DISTRICT
JAN 14 2016
RECEIVED
NOV 30 2015

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well ☐ Oil Well ☐ Gas Well ☒ Other: UNKNOWN OTH		5. Lease Serial No. NMNM89057
2. Name of Operator DEVON ENERGY PROD CO., L.P. Contact: LINDA GOOD E-Mail: linda.good@dvn.com		6. If Indian, Allottee or Tribe Name
3a. Address 333 WEST SHERIDAN AVE. OKLAHOMA CITY, OK 73102	3b. Phone No. (include area code) Ph: 405-552-6558	7. If Unit or CA/Agreement, Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 10 T26S R31E Mer NMP SENE 1980FNL 660FEL		8. Well Name and No. ROSS RANCH 10 FED 1 SWD
		9. API Well No. 30-015-29605
		10. Field and Pool, or Exploratory WILDCAT BRUSHY CANYON
		11. County or Parish, and State EDDY COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☒ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

ATTENTION: Paul Swartz

Devon Energy Prod Co., L.P. respectfully requests to increase maximum permitted injection pressure by running a Step Rate Test per the following procedure.

**SUBJECT TO LIKE
APPROVAL BY STATE**

1. Wait on BLM sundry review and approval of sundry.
2. Notify BLM 24 hours before beginning test.
3. Discontinue injection for minimum 48 hours prior to test. Document pressures.
4. MIRU pumps, iron and stage injection fluid.
5. Initiate injection at a rate of 7 GPM. Step up rates in 30 GPM stages, each for 45 minutes, to a maximum of 150 GPM. Hold final rate for 90 minutes.
6. Shut in and record pressures.

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

Accepted for record

WJ NMCD 1/15/16

14. I hereby certify that the foregoing is true and correct. Electronic Submission #323618 verified by the BLM Well Information System For DEVON ENERGY PROD CO., L.P., sent to the Carlsbad Committed to AFMSS for processing by JENNIFER SANCHEZ on 11/16/2015 ()	
Name (Printed/Typed) LINDA GOOD	Title REGULATORY SPECIALIST
Signature (Electronic Submission)	Date 11/16/2015
THIS SPACE FOR FEDERAL OR STATE OFFICE USE	
Approved By _____	Title _____
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.	

APPROVED

NOV 17 2015

Date

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

Additional data for EC transaction #323618 that would not fit on the form

32. Additional remarks, continued

7. Conclude test and RDMO pumps.
8. Run MIT test and chart. File MIT w/OCD office.
9. Return well to injection service.

Conditions of Approval

**Devon Energy Production Company
Ross Ranch - 01, API 3001529605
T26S-R31E, Sec 10, 1980FNL & 660FEL
November 17, 2015**

1. Due to being within the Lesser Prairie Chicken habitat, this workover activity will be restricted to the hours of 9:00am through 3:00am for the period of March 1 through June 15. Exceptions to these restrictions may be granted by BLM's Johnny Chopp <jchopp@blm.gov> 575.234.2227 or Bob Ballard <bballard@blm.gov> 575.234.5973.
2. Stabilized injection is required, delay the test until disposal volume rates and injection pressures have leveled out for about 3 months.
3. Subject to like approval by the New Mexico Oil Conservation Division.
4. Notify BLM 575-200-7902 Eddy Co. as work begins. Some procedures are to be witnessed. If there is no response, call 575-361-2822, leave a voice mail with the API#, workover purpose, and a call back phone number. Note the contact, time, & date in your subsequent report.
5. BLM is requesting an available electronic copy (Adobe, pdf, or tiff) of a cement bond log record from the top of the injection interval to top of cement. The CBL may be attached to a pswartz@blm.gov email.
6. Select a **targeted** maximum bbl/day injection rate. The objective is to avoid fracturing the injection formation.
7. **Devon's Notice of Intent Paragraph 5. for this operation seems to conflict with methods stipulated by BLM Conditions of Approval. The COAs will control for BLM approval of a wellhead pressure increase, if warranted. Note: the target of 150.2gpm = 5150bpd.**
8. Take a charted record of shut in psig for no less than 48 hours. If the wellhead shut in psig is not less than the approved injection pressure, bled the wellhead pressure below that approved injection pressure before beginning the Step Rate Test.
9. The Step Rate Test fluid used should be the same as the proposed injection fluid.
10. Flow rates are to be controlled with a constant flow regulator and measured with a turbine flow meter calibrated within 0.1 bbl/min.
11. Use a down hole transmitting pressure device and a surface pressure device with accuracies of ± 10 psig to measure pressures.
12. **Record in the input cell(s) of the attached "STEP RATE TEST DATA for BLM, CFO" the data information as indicated. Include the completed data information with a subsequent sundry and request a wellhead pressure change for BLM approval.**
13. **Perform a minimum of seven steps, recording rates to ± 0.1 bpm, surface pressures and formation pressures collected to ± 10 psig in five minute intervals. Use recorded time to synchronize formation pressure bomb data with the rate changes.**

14. **The last two five minute surface pressure readings of each step (minimum of 30 minutes) are to be within 15psig of each other. If not, hold that step injection rate past the 30 minute step until two consecutive pressure readings are within 15psig. Record the average of those two readings as the "Data Point" for that Step #.**
15. When a breakdown pressure is not achieved at the **targeted barrels per day rate**, the formation is accepting the injection fluid without fracturing, which is the **objective**. Stop the test.
16. When the formation fracture pressure has been exceeded as evidenced by at least two rate-pressure combinations greater than a breakdown pressure stop the test and record the bottom hole Instantaneous Shut-in Pressure. This ISIP is considered the minimum pressure to hold open a fracture in this formation at this well. Fifty psig less than the wellhead fracture pressure is the maximum surface pressure BLM will approve.
17. *Submit an injection profile survey for the well for review by BLM after the increased rate and pressure has stabilized.*

Access information for use of Form 3160-5 "Sundry Notices and Reports on Wells"

NM Fed Regs & Forms - http://www.blm.gov/nm/st/en/prog/energy/oil_and_gas.html

§ 43 CFR 3162.3-2 Subsequent Well Operations.

§ 43 CFR 3160.0-9 (c)(1) Information collection.

§ 3162.4-1 (c) Well records and reports.

STEP RATE TEST DATA for BLM CFO

Operator: Devon Energy Production Company, LP

Well: ROSS RANCH 10 FEDERAL-1

API#: 3001529605

Lease: NM89057

Data Collection Date:

Sfc Loc: T26S-R31E, 10, 1980n660e

< Input cell(s)

Tbg O.D.:	Tbg Wt.:	Grade:	Coupling:	Packer at:
Top Injection Depth:	5118	X	0.20psig/ft = Expected Surface Fracture psig:	1023.6
With Mud Wt Scale:	lbs/gal	Msrd No Flow Formation psig:		at Depth: 5118
Injection fluid lbs/gal:	Hydrostatic Pressure of fluid at top depth of injection:			
Beginning Wellhead psig:	Target Maximum Rate: bpd(barrels per day):			5150

1. Take a charted record of shut in psig for no less than 48 hours. If the wellhead shut in psig is not less than the approved injection pressure, bled the wellhead pressure below that approved injection pressure before beginning the Step Rate Test.
2. Perform a minimum of seven steps, recording rate to ± 0.1 bpm and surface pressures to ± 10 psig in five minute intervals. The first two step rate pressures must be below $0.2 \text{ psig/ft} \times \text{depth at top of injection}$.
3. The last two five minute surface pressure readings of each (minimum 30 minute) step are to be within 15 psig of each other. If not, hold that step injection rate past the 30 minute step until two consecutive pressure readings are within 15 psig. Record the average of those two readings as the Data Point for that Step #.

Step 1							bpm pmp'd for Step 1	
Target Test Rate (5% of maximum bpd/1440 = 0.2							bpm (barrels per minute) for Step 1	
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:	
Surface (psig):							End Time:	
Formation (psig)							Point #1	
bpm:							Sfc psig:	
Time:	35 min	40 min	45 min	50 min	55 min	60 min	F psig:	
Surface (psig):							bpm:	
Formation (psig):							bpd:	0
bpm:							target bpd:	258

Step 2							bpm pmp'd for Step 2		
Target Test Rate (10% of maximum bpd/1440 = 0.4							bpm for Step 2		
	Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:	
Surface (psig):								End Time:	
Formation (psig):								Point #2	
bpm:								Sfc psig:	
	Time:	35 min	40 min	45 min	50 min	25 min	60 min	F psig:	
Surface (psig):								bpm:	
Formation (psig):								bpd:	0
bpm:								target bpd:	515

Step 3							bpm pmp'd for Step 3	
Target Test Rate (20% of maximum bpd/1440 = 0.7							bpm for Step 3	
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:	
Surface (psig):							End Time:	
Formation (psig):							Point #3	
bpm:							Stc psig:	
Time:	35 min	40 min	45 min	50 min	55 min	60 min	F psig:	
Surface (psig):							bpm:	
Formation (psig):							bpd:	0
bpm:							target bpd:	1030

STEP RATE TEST DATA for BLM, CFO

Operator: Devon Energy Production Company, LP

Well: ROSS RANCH 10 FEDERAL-1

API#: 3001529605

Lease: NM89057

Data Collection Date:

Sfc Loc: T26S-R31E, 10:1980n660e

Step 4		bpm pmp'd for Step 4	
Target Test Rate (40% of maximum bpd/1440 = 1.4 bpm for Step 4)			
Time:	5 min 10 min 15 min 20 min 25 min 30 min	Start Time:	
Surface (psig):		End Time:	
Formation (psig):		Point #4	
Rate bbl/min:		Sfc psig:	
Time:	35 min 40 min 45 min 50 min 55 min 60 min	F psig:	
Surface (psig):		bpm:	
Formation (psig):		bpd:	0
bpm:		target bpd:	2060

Step 5		bpm pmp'd for Step 5	
Target Test Rate (60% of maximum bpd/1440 = 2.1 bpm for Step 5)			
Time:	5 min 10 min 15 min 20 min 25 min 30 min	Start Time:	
Surface (psig):		End Time:	
Formation (psig):		Point #5	
bpm:		Sfc psig:	
Time:	35 min 40 min 45 min 50 min 55 min 60 min	F psig:	
Surface (psig):		bpm:	
Formation (psig):		bpd:	0
bpm:		target bpd:	3090

Step 6		bpm pmp'd for Step 6	
Target Test Rate (80% of maximum bpd/1440 = 2.9 bpm for Step 6)			
Time:	5 min 10 min 15 min 20 min 25 min 30 min	Start Time:	
Surface (psig):		End Time:	
Formation (psig):		Point #6	
Rate bbl/min:		Sfc psig:	
Time:	35 min 40 min 45 min 50 min 55 min 60 min	F psig:	
Surface (psig):		bpm:	
Formation (psig):		bpd:	0
bpm:		target bpd:	4120

Step 7		bpm pmp'd for Step 7	
Target Test Rate (100% of maximum bpd/1440 = 3.6 bpm for Step 7)			
Time:	5 min 10 min 15 min 20 min 25 min 30 min	Start Time:	
Surface (psig):		End Time:	
Formation (psig):		Point #7	
bpm:		Sfc psig:	
Time:	35 min 40 min 45 min 50 min 55 min 60 min	F psig:	
Surface (psig):		bpm:	
Formation (psig):		bpd:	0
bpm:		target bpd:	5150

Instant Shut In Pressure:
 5 minute Shut In Pressure:
 10 minute Shut In Pressure:
 15 minute Shut In Pressure: