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1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources

Form C-103  
Revised August 1, 2011

HOBBS OCD

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.  
Santa Fe, NM 87505

FEB 10 2014

RECEIVED

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-025-40738
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other Injection <input type="checkbox"/>		5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
2. Name of Operator ConocoPhillips Company		6. State Oil & Gas Lease No.
3. Address of Operator P. O. Box 51810 Midland, TX 79710		7. Lease Name or Unit Agreement Name Vacuum Glorieta East Unit Tract 19
4. Well Location Unit Letter <u>K</u> : <u>2150</u> feet from the <u>South</u> line and <u>2233</u> feet from the <u>West</u> line Section <u>32</u> Township <u>17S</u> Range <u>35E</u> NMPM County <u>Lea</u>		8. Well Number <u>34</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3967' GR		9. OGRID Number 217817
		10. Pool name or Wildcat Vacuum; Glorieta

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐  
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐  
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐  
DOWNHOLE COMMINGLE ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐  
COMMENCE DRILLING OPNS. ☐ P AND A ☐  
CASING/CEMENT JOB ☐

OTHER: Step rate testing ☒

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

R-10020-B

ConocoPhillips respectfully request to perform a step rate tests for the VGEU Tract 19-34 to obtain data for application to increase injection pressure.

Attached are the procedures.

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE

TITLE Staff Regulatory Technician

DATE 02/04/2014

Type or print name Rhonda Rogers

E-mail address: rogerrr@conocophillips.com

PHONE: (432)688-9174

For State Use Only

APPROVED BY:

Accepted for Record Only

DATE

Conditions of Approval (if any):

MJR 2/11/2014

FEB 11 2014

## **VGEU Injection well 19-34**

**API# 30-025-40738**

### **Step-Rate Testing**

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**Objective:** Run step-rate tests to obtain data for application to increase injection pressure.

### **Importance of Safety**

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Safe operations are of utmost importance at all ConocoPhillips properties and facilities. All parties shall review proposed upcoming steps, procedures, and potentially hazardous situations. Occurrence of these meetings shall be recorded in the Daily Report.

**Location:** Section 32, T17S, R35E, 2233 FWL & 2150 FSL, Lea County, NM  
Lat 32° 37' 23.87" N Long 103° 28'50.56" W

**Depths:** 6355' PBTD (tagged 1/13 during completion, logging states 6348')

**Elevations:** 3967' GL, original KB 3980.6'

**Perforations:** Paddock 6096-6158'

Step rate tests are to be conducted with Vacuum field produced brine (current injection fluid). Service Company is to provide a high-pressure pump truck and chart the results. The intent is to track, monitor and record rate & pressure data as water injection pressure is increased, then record ISIP and fall-off pressures for 30 minutes after injection ceases. The step-rate tests should demonstrate that formation fracturing will not occur at the proposed injection pressure (2000#). Resulting data will be used in an NMOCD application to increase the permitted injection pressure.

### **Well Category, BOP Class, ROE and Exceptions**

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**Well Category:** One

**BOP Class:** None recommended

**ROE:** Possibility of H2S in produced water

***Prior to test, review Well Data Report in WellView for casing information & Well Summary***

### **Preparation:**

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1. Notify NM OCD and EPA before beginning any tests.
2. Ensure that Service Company equipment can pump at rates ranging from 100 to 3500 BPD (0.1 to 2.4 bpm) and that sufficient capacity exists for higher rate wells.
3. Two days prior: Close in master valve and injection line valve. Leave well shut-in for 48 hours and record SITP prior to start of work.

**On location:**

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1. Conduct JSA. Ensure pump truck operator has a copy of the procedure and understands scope of work. Make sure chart recorder, flow meter and pressure data logger are used during the test.
2. Bleed-off trapped pressure. NU Service Company pump truck discharge to injection well. NU suction line to load transport(s) with Vacuum injection water (if transport is equipped with mud balance, weigh injection brine – anticipated to be 9 ppg):
3. Test surface lines @ 2500#.
4. Open master valve. Run the following step rate test schedule. Each rate step should be the same duration. Service Company should record data at 5-minute intervals. Record stabilized injection rate and pressure at end of each 30 minute flow period:

Step	Time: minutes		Surface Pressure	Test Pressure	Injection Rate: BPM		Injected Volume: bbl	
	per step	cum	psi	psi	BPM	equiv BPD	per step	cum
1	30	30	500					
2	30	60	750					
3	30	90	1000					
4	30	120	1500					
5	30	150	1800					
6	30	180	2000					
7	30	210	2200					
8	30	240	2400					
Falloff	ISIP							
	5							
	10							
	15							
	30							

Monitor ISIP and pressures at 5 minute intervals for 30 minutes after injection ceases (or until pressure falls to 0 psi). Maximum step rate pressures should be limited to 2400# during testing.

5. RDMO Service Company. Return well to injection.

**Notes on Procedure:**

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Stabilized SITP may be too high to obtain injection rates at lower pressures.

Pressure steps do not have to be exact – purpose is to record several pressures & associated rates below and above the current permitted 1184#. Anticipated rates at injection pressures less than 1200# are estimated as less than 1.7 BPM (based on maximum rate for 19-33).

If parting pressure is achieved, continue with a minimum of 2 pressure step increases past that point, but at no time exceed maximum pressure of 2400#.

Subject wells are surface equipped for 3000# WP. Maximum step rate pressures are limited to 2400#.

String	Specs	ID	Burst	Set Depth	TOC
Surface	8-5/8", 24#, J-55	8.097	2950	1528	circ
Production Casing	5-1/2", 15.5#, J-55	4.95	4810	6396	circ
Injection Tubing	2-3/8", 4.7#, J-55	1.995	7700	6061	