

Submit 1 Copy To Appropriate District Office  
 District I – (575) 393-6161  
 1625 N. French Dr., Hobbs, NM 88240  
 District II – (575) 748-1283  
 811 S. First St., Artesia, NM 88210  
 District III – (505) 334-6178  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 District IV – (505) 476-3460  
 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
 Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION  
 1220 South St. Francis Dr.  
 Santa Fe, NM 87505

Form C-103  
 Revised July 18, 2013

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. 30-025-51970
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other Acid Gas Injection		5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
2. Name of Operator Targa Northern Delaware, LLC		6. State Oil & Gas Lease No.
3. Address of Operator 110 W. 7 <sup>th</sup> Street, Suite 2300, Tulsa, OK 74119		7. Lease Name or Unit Agreement Name Red Hills AGI
4. Well Location Unit Letter I : 3116 feet from the North line and 1159 feet from the East line Section 13 Township 24S Range 33E NMPM Lea County		8. Well Number 003
11. Elevation (Show whether DR, RKB, RT, GR, etc.)		9. OGRID Number 331548
10. Pool name or Wildcat		

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
DOWNHOLE COMMINGLE <input type="checkbox"/>			
CLOSED-LOOP SYSTEM <input type="checkbox"/>			
OTHER: <input checked="" type="checkbox"/>		OTHER: <input type="checkbox"/>	

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.

Propose to perform a Step Rate test on the Cherry Canyon and the Bell Canyon Zones in the Delaware Mountain Group as per the attached procedure. 2 separate Step rate tests will be run, one on the Cherry Canyon and one on the Bell Canyon. OCD District Office IV will be notified prior to the tests.

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 Kim Hamlet TITLE ESH Coordinator DATE 10-5-2023

Type or print name Kim Hamlet E-mail address: khamlet@targaresources.com PHONE: 307-761-1733

**For State Use Only**

APPROVED BY: \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

Conditions of Approval (if any):

## **Targa Red Hills AGI #3**

**Bell Canyon / Cherry Canyon**

**Lea County, NM**

**9/21/2023**

## **Step Rate Test Program**

**1.0 – General Information:**

**Directions:** West of Jal, NM. From the intersection of Hwy 128 and CR21 (Delaware Basin Road), go north on CR21 0.5 mile to Targa Red Hills construction entrance on left. Turn left, go 0.5 mile to rig location on left. Check in at guard shack.

COMPANY	NAME	PHONE
TBD		

## **2.0 – Safety and Concerns**

Targa Northern Delaware, LLC will protect the health and safety of its employees, contractors, and public communities, while protecting the environment in which the Company conducts its business.

Targa engages contractors to conduct the work outlined in this well completion program. The supervisors of contractor employers will plan and conduct their work in a manner which minimizes risk to the contractors' personnel and maximizes safe work performance.

Site leaders and workers will ensure that:

1. Personnel are physically and mentally fit, capable of performing their duties efficiently and safely,
2. The right equipment is used for the job at hand and that tools and equipment are maintained in safe operating condition,
3. Individual workers are trained and competent at performing the task in a safe manner. If a worker is not fully competent to perform a task, then a competent worker will provide direct supervision,
4. Pre-task hazard assessments are conducted and the methods used to control or eliminate the hazards identified,
5. The appropriate PPE is worn for the task,
6. Time is allowed to exercise contractors' safety initiatives, including hazard mitigation, job observation programs, site inspections, safety reviews and on-the-job training,
7. Work that poses imminent danger to workers is stopped. Resume the work when the factor(s) causing the imminent danger are alleviated,
8. Operations are in compliance with regulations. Regulations are minimum standards and basic legal requirements.
9. All personnel have the right to exercise stop work authority if the job is deemed unsafe.
10. OBEY POSTED SPEED LIMIT

## **3.0 – Objectives**

Targa Midstream intends to perform an initial step rate test (SRT) on the newly drilled Red Hills AGI #3 to evaluate initial injectivity and to acquire data to fulfill the terms of the approved injection order and support a request for an increased Maximum Allowable Surface Injection Pressure (MASIP) from the New Mexico Oil and Gas Commission. A SRT will not have been previously performed on this well. Due to the large perforated interval within the Bell Canyon and Cherry Canyon formations and operational concerns regarding achieving an effective post-SRT acid cleanup, Targa is proposing that the SRT be split into two stages, where the Cherry Canyon will be tested separately from the Bell Canyon. Real-time analysis of the downhole pressure response during the initial SRTs will be performed as per NMOCD standards.

**4.0 – Wellbore Data****Targa Red Hills AGI #3**

<b>API:</b>	30-025-51970	
<b>PO #:</b>		
<b>Elevations:</b>	GL 3579', 3604' KB	
<b>Location:</b>	Sec 13 T24S R33E	
<b>Depths:</b>	TD – <b>7,640'</b>	PBTD – <b>7,600'</b>
	DV Tool – <b>5280' &amp; 5580' (TBD)</b>	Packer – <b>5250' (TBD)</b>
<b>Top Flange:</b>	API 3-1/16" 10M	

**Casing specifications**

CASING						
Hole Size	Wt./ft.	Grade	Connection	Top Set	Bottom Set	Length
7"	32.0	L-80	VAMSTL	0'	5,280'	5,280'
7"	32.0	G3 CRA	VAMHDL	5,280'	5,580'	300'
7"	32.0	L-80	VAMSTL	5,580'	7,600'	2,020'
L-80 VAMSTL CASING DETAILS						
ID: 6.094 in				Internal Yield Pressure: 9060		
Drift: 5.969 in				Pipe Body Strength: 745		
Coupling OD: N/A				Joint Strength: 500		
Collapse: 8610				Capacity: .0361		
MU Torque: 5.2-6.8K 6.0K opt						
G3 VAMHDL CASING DETAILS						
ID: 6.094				Internal Yield Pressure: 14160		
Drift: 5.969				Pipe Body Strength: 1165		
Coupling OD: N/A				Joint Strength: 690		
Collapse: 11710				Capacity: .0361		
MU 7.7-8.9K						
Torque: 8.3K opt						

## **5.0 – Cherry Canyon Step Rate Test**

1. Per regulatory requirements, notify NM OCD District IV office (505-476-3460) of plans to perform SRT at least 72 hours prior to operations.
2. Prior to commencing operation perform pre-job safety meeting. Review job requirements, objectives, personnel assignments, and perform JSA. Ensure proper PPE (steel toes, safety glasses, FR clothing, hard hats, and chemical suits (where necessary)) is used for the duration of the job. Ensure every individual understands they have “Stop Work” Authority should they see any unsafe operations.
3. Job Volumes: 1650 bbl per SRT, recommended FW on location 3500 bbls (7 x 500 bbl tanks)
4. All pressure equipment on location should be rated to a minimum of **5,000 psi**.
5. MIRU wireline unit and perforate Cherry Canyon (6220’ to TD, approx. 1300’ perfs @ 6 spf, 60 deg, 3 1/8” guns). RD wireline unit.
6. PU 7” test packer and 3 ½” 15# DP workstring. Set test packer at 6200’.
7. RIH with wireline BHP gauge to target depth of **6220’ (top perf)**.
8. MIRU pressure pumping company.
9. Pressure test lines to ~4,000 psi. Maximum allowable pressure during injection to be 4,000 psi (80%).
10. Equalize pressure to ~500 psi above expected opening well pressure.
11. Open well and begin injection per planned SRT treatment schedule shown in **Table 1**. It is CRITICAL that all rate steps be held for the requisite ~30 minutes. Monitor and record annulus pressure during injection test.

**Table 1:** Recommended SRT treatment schedule.  
(Treatment string: 3-1/2" 15# Drill Pipe Workstring x 7", 32 lb/ft, L-80 casing)

Stage #	Stage Time (min)	Fluid Volume (bbl)	Pump Rate (bpm)	Fluid Type
1	30:00	30	1.0	Fresh Water
2	30:00	60	2.0	Fresh Water
3	30:00	90	3.0	Fresh Water
4	30:00	120	4.0	Fresh Water
5	30:00	150	5.0	Fresh Water
6	30:00	180	6.0	Fresh Water
7	30:00	210	7.0	Fresh Water
8	30:00	240	8.0	Fresh Water
9	30:00	270	9.0	Fresh Water
10	30:00	300	10.0	Fresh Water
12	30:00	--	--	Shut-In

11. Monitor pressure fall-off for 30 minutes.
12. POOH w/ wireline BHPG.
13. RD WL equipment.
14. Unseat 7" packer and TOH w/ workstring. LD test packer.
15. RU wireline. PU 7" composite BP and set @ 6200'.

## 6.0– Bell Canyon Step Rate Test

1. Wireline perforate Bell Canyon (5600' to 6200', approx. 600' perfs @ 6 spf, 60 deg, 3 1/8" guns). RD wireline unit.
2. PU 7" test packer and 3 1/2" DP workstring. Set test packer at 5580'.
3. RIH with wireline BHP gauge to target depth of **5600' (top perf)**.
4. RU pressure pumping company.
5. Pressure test lines to ~4,000 psi. Maximum allowable pressure during injection to be 4,000 psi (80%).
6. Equalize pressure to ~500 psi above expected opening well pressure.
7. Open well and begin injection per planned SRT treatment schedule shown in **Table 2**. It is CRITICAL that all rate steps be held for the requisite ~30 minutes. Monitor and record annulus pressure during injection test.

**Table 2:** Recommended SRT treatment schedule.  
(Treatment string: 3-1/2" 15# Drill Pipe Workstring x 7", 32 lb/ft, L-80 casing)

Stage #	Stage Time (min)	Fluid Volume (bbl)	Pump Rate (bpm)	Fluid Type
1	30:00	30	1.0	Fresh Water
2	30:00	60	2.0	Fresh Water
3	30:00	90	3.0	Fresh Water
4	30:00	120	4.0	Fresh Water
5	30:00	150	5.0	Fresh Water
6	30:00	180	6.0	Fresh Water
7	30:00	210	7.0	Fresh Water
8	30:00	240	8.0	Fresh Water
9	30:00	270	9.0	Fresh Water
10	30:00	300	10.0	Fresh Water
12	30:00	--	--	Shut-In

8. Monitor pressure fall-off for 30 minutes.
9. POOH w/ wireline BHPG.



10. RDMO WL equipment.
11. Monitor pressure fall-off for 30 minutes prior to shutting in well. RDMO pressure pumping company.
12. Unseat 7" packer and TOH w/ workstring. LD test packer.
13. PU 5.875" bit & bit sub. TIH to CBP and drill out plug. TIH to PBTD and circulate hole clean w/ cut brine fluid in pits. **POTENTIAL FOR H2S AT SHAKERS WHILE CIRCULATING. FOLLOW H2S PROCEDURES AS PER PROJECT SAFETY PLAN.**
14. TOH and LD bit & bit sub.
15. Proceed with 3 ½" x 7" packer set and run 3 ½" tubing as per D&C program.

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**District IV**  
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Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS  
  
Action 273015

CONDITIONS

Operator: Targa Northern Delaware, LLC. 110 W. 7th Street, Suite 2300 Tulsa, OK 74119	OGRID: 331548
	Action Number: 273015
	Action Type: [C-103] NOI General Sundry (C-103X)

CONDITIONS

Created By	Condition	Condition Date
mgebremichael	RBP separating the two formations during SRT being pressure test to make sure no leak to lower formation occurs.	10/12/2023