

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

Form C-103
Revised July 18, 2013

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

WELL API NO.
30-045-35747

5. Indicate Type of Lease
STATE ☐ FEE ☒

6. State Oil & Gas Lease No.

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.)

1. Type of Well: Oil Well ☐ Gas Well ☐ Other ☒ Waste Water Disposal Well

2. Name of Operator
Western Refining, Southwest, Inc.

3. Address of Operator
#50 County Road 4990 (PO Box 159), Bloomfield, NM 87413

4. Well Location

Unit Letter H : 2028 feet from the North line and 111' feet from the East line
Section 27 Township 29N Range 11W NMPM San Juan County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
5535' GL

7. Lease Name or Unit Agreement Name

8. Well Number WDW #2

9. OGRID Number 267595

10. Pool name or Wildcat
SWD; Entrada

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 ☐
CLOSED-LOOP SYSTEM ☐
OTHER: Step Rate Test

SUBSEQUENT REPORT OF:

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

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.

Western Refining Southwest, Inc. intends to perform a "Step Rate Test" (SRT) as per the attached general procedure in an attempt to achieve a higher allowable maximum injection surface pressure:

OIL CONS. DIV DIST. 3
NOV 27 2017

See attached Quick Lines

Spud Date:

8/15/2016

Rig Release Date:

9/9/2016

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

SIGNATURE

John C. Thompson

TITLE Engineer/Agent

DATE 10/11/2017

Type or print name John Thompson E-mail address: john@walsheng.net PHONE: 505-320-1748

For State Use Only

APPROVED BY:

Monica Kuehling

TITLE

Compliance Officer

DATE 11-27-17

Conditions of Approval (if any):

Well Information			
Well	WDW #2	Field	Entrada
Location	2028' FNL & 111' FEL Section 27, T29N, R11W San Juan Co. New Mexico	Elevations	5535' GL 5549.5' RKB
PO #		Engineer	J. Thompson (505.320.1748)
Date	29 November 2017	Lease	Fee
Surface Casing	13 ³ / ₈ " 48# H-40 ST&C @ 298' KB	Int. Csg Prod. Csg	9 ⁵ / ₈ " 36# J55 @ 3500' KB 7", 23#, L80 @ 7525'
Tubing	4 ¹ / ₂ " 11.6# L80 @ 7230' KB	Packer	7" Arrow Set RCP set at 7230' KB.
Perforations	7321'-7470' (492 holes, 0.41" EHD)	Stimulation	264,100 lbs. 20/40 PW sand in 23#, X/L gel system (2605 bbls)

Prior to MIRU

1. Spot 2 ea. 400 bbl frac tanks and fill with produced water.
2. Filter Water to 5 μ

Set BHP gauges

1. MIRU slickline unit with lubricator
2. RIH w/ dual pressure gauges and hang at perforations

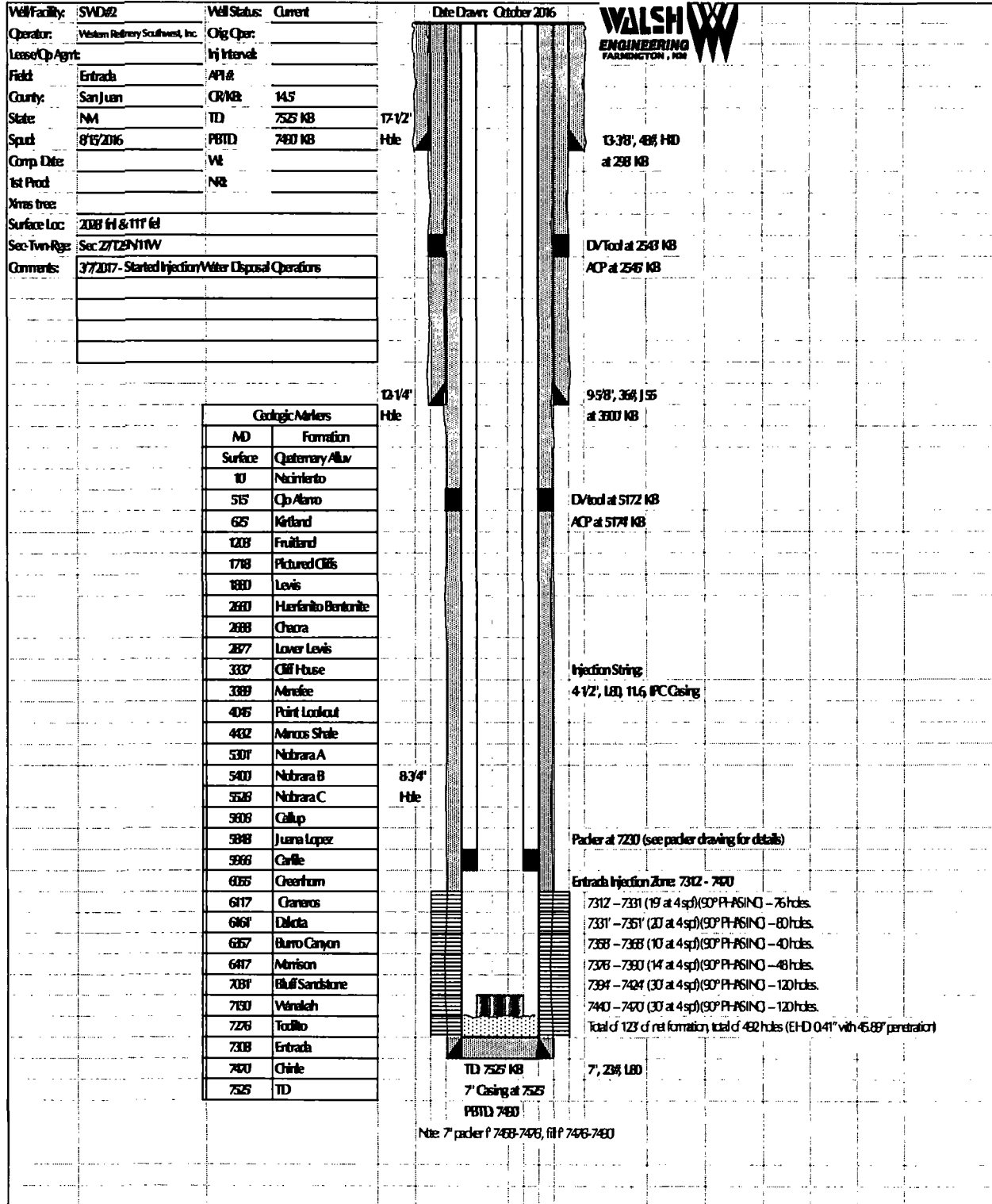
Conduct step rate test

1. MIRU Pump trucks
2. Install pressure gauges on 9⁵/₈" casing side outlet valve and Braden head
3. Install pressure sensor at wellhead
4. Install dual flowmeters in pump line
5. Pump through tree to confirm flowmeter redundancy
6. Install chokes downstream from pump ahead of flowmeters to regulate injection rate
7. Test Lines to 3500 psi.
8. Open well and record ISIP
9. Begin injecting according to following rate schedule

0.5	30	15
1.0	30	30
1.5	30	45
2.0	30	60
2.5	30	75
3.0	30	90
3.5	30	105
4.0	30	120
5.0	30	150

Total water requirement = 690 bbl

10. Record ISIP, 5, 10, 15 min SITP
11. RDMOL
12. Pull BHP gauges



District III Guidelines for conducting step-rate tests

The operator must submit a written procedure and rig-up diagram to the OCD at least 24 hours before starting the test. The procedure will contain the following information:

- A description of the mechanical configuration of the well.
- The history of injection pressures and volumes.
- The history of any fracture treatments and pressures especially ISIP.

A bottom hole pressure recorder will be required for wells deeper than 2000' and injection rates greater than 1 BPM.

A pressure gauge and recorder of the appropriate range will be used during the test.

Wells currently injecting must be shut-in at least 24 hours before the test unless the shut-in pressures indicate that the well has not adequately stabilized and a longer time is necessary.

A Bradenhead test will be conducted before the Step Rate Test begins.

Starting pump rates and pressures must be lower than the current rates and pressures if the well is currently injecting and there must be at least 3 steps below the .2psi/ft gradient and 3 steps above the break-over point.

Pumping equipment must be able to pump at the rates and pressures needed for the test.

Rate changes will be .5bpm or smaller unless the OCD witness determines that bigger rate changes are necessary due to small incremental increases in pressure.

Each step will be at least 15 minutes in duration unless otherwise determined by the OCD. Step duration must not be changed during the test.

The operator must have enough water on hand for the test.

The casing and bradenhead pressures will be monitored during the test.

All wellhead equipment must be rated for the anticipated pressures.