

UICI - __011__

C-103s

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 <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name
8. Well Number WDW #2
9. OGRID Number 267595
10. Pool name or Wildcat SWD; Entrada
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 5535' GL

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

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:

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS ☐ P AND A ☐
CASING/CEMENT JOB ☐
OTHER: ☒ Fracture Stimulate Entrada

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 fracture stimulate the Entrada through the existing perforations (7312' - 7470') w/ 246,000 lbs of premium white sand in a 23 lb cross linked gel system at rates of ~ 50 bpm. Please see attachments for details.

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 [Signature] TITLE Engineer/Agent DATE 4/7/2017

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

For State Use Only

APPROVED BY: [Signature] TITLE Environmental Engineer DATE 4/26/2017

Conditions of Approval (if any):

**Western Refining Southwest, Inc. (UICI-011)
UIC Class I (Non-hazardous) Injection
Well WDW-2 (API #: 30-045-35747)**

**C-103 “Fracture Stimulate Entrada”
OCD Santa Fe and Aztec District
Conditions of Approval (4/26/2017)**

- 1) The operator shall submit a “Net Pressure Plot” from fracture stimulation within 30-days of well work completion. The plot shall verify that any or all fracturing occurred within the Entrada Formation.
- 2) The Oil and Gas Act applies to all UIC Class II operations on all lands within the state of New Mexico including federal lands. OCD Rule 19.15.16 NMAC was amended pursuant to the Oil and Gas Act and hydraulic fracturing fluid disclosure form requirements became effective February 12, 2012. 19.15.16.19(A) NMAC requires that “within 20 days after the completion of a well drilled under oil or gas laws, or the recompletion of a well into a different common source of supply, the operator shall file a completion report with the division . . . [disclosing] whether the well has been hydraulically fractured.” Rule 19.15.16.19(B) NMAC requires that “for a hydraulically fractured well, the operator shall also complete and file the OCD’s hydraulic fracturing disclosure form within 45 days after completion of the well.” Disclosure on FracFocus is not a substitute for the Rule 19.15.16.19 NMAC disclosure requirements. Operators who have not complied with Rule 19.15.16 NMAC disclosure requirements and do not submit the OCD’s hydraulic fracturing disclosure form will be considered in violation of 19.15.16 NMAC and the Oil and Gas Act.
- 3) The operator shall comply with the applicable provisions of the OCD approved Discharge Permit, i.e., MITs after well workovers.

Please be advised that OCD approval does not relieve Western Refining Southwest, Inc. from responsibility should its operations pose a threat or impact to groundwater, human health or the environment. In such event, OCD may order the operator to plug and abandon its well pursuant to the Water Quality Control Commission Regulations. In addition, OCD approval does not relieve Western Refining Southwest, Inc. of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Western Refining, Southwest - WDW #2

2028' fnl & 111' fse SECTION 27, T29N, R11W
 SAN JUAN COUNTY, NEW MEXICO
 API #: 30-045-35747

ENTRADA STIMULATION PROCEDURE

See WBD for wellbore information

1. All personal must check in at Western office prior to entering location.
2. Spot 8 ea. 400 bbl frac tanks and fill with 2% KCl water (may use water from refinery if chemical tests show that water is compatible with Halliburton Delta 200 system).
3. RU slick line company and RIH w/ 2.81" blanking plug and set in XN Profile Nipple in Weatherford packer that is set at 7230' KB.
4. MOL & RU service rig. ND WH & NU BOPE. Set pipe racks for laying down/picking up casing.
5. TOH, laying down 4-1/2" IPC casing string and seal assembly.
6. Install seal assembly with 3-1/2" change over. PU and RIH w/ 3-1/2" casing
7. Space out & land in WH with tubing hanger. NU WH & 10K frac valve.
8. RD rig & related equipment & MOL. Have slick line pull blanking plug from packer. SD operations until frac crew is available.
9. RU Halliburton Frac crew. PT pumps & lines to 9000 psi. Note: Max STP for job is 8100 psi
10. Note: Refer to Halliburton Procedure for Frac Details. Frac Entrada with 246,000# 20/40 Premium White sand in 107,900 gal of 23# X-linked gel water @ 50 BPM. Bottom hole pressure to be monitored by computer van. All sand to be tagged w/ 0.40 mci/1000# Ir-192 tracer. Anticipated surface pressure= 2350 psi. Max pressure = 3500 psi. Frac using the following schedule:

STAGE	Clean Volume (GALS.)	Sand (lbs)
Pad	20,000	-----
1.0 ppg	19,500	19,500
2.0 ppg	18,500	37,000
3.0 ppg	17,500	52,500
4.0 ppg	25,000	100,000
5.0 ppg	7400	37,000
Flush	<u>3121</u>	-----
Totals	111,021	246,000#

11. Make all sand is displaced below packer. RD & Release frac crew. Consolidate frac water and release frac tanks. RU slick line & RIH w/ 2.81" blanking plug and set in XN profile nipple in packer.
12. MOL & RU. Remove frac valve & NU WH & BOPE. Set pipe racks for laying down/picking up casing.

13. Lay down 3-1/2" frac string & haul back to Cave Tubulars.
14. RIH w/ seal assembly and 4-1/2" IPC casing. Circulate "packer fluid" and land in packer/wellhead as before. Pressure up one 4-1/2" & 7" annulus to 500 psi and make sure it holds and will pass MIT test.
15. RU slickline & RIH. Retrieve blanking plug from profile nipple in packer.
16. Monitor well for pressure, which will determine if flowback will be necessary or clean operations can begin.
17. After flowback, PU 2-3/8" work string w/ 1-1/4" tail pipe to clean through and below 7" packer.
18. Reverse out down to PBTD (7476'). Once, sand inflows have diminished TOH, laying down 2-3/8" work string and tailpipe.
19. Set blanking plug in packer w/ slick line (if necessary). ND BOP & related equipment. NU WH and manifold flowlines back in place.
20. Remove blanking plug from packer. Return well to injection status. Schedule MIT w/ NMOCD.

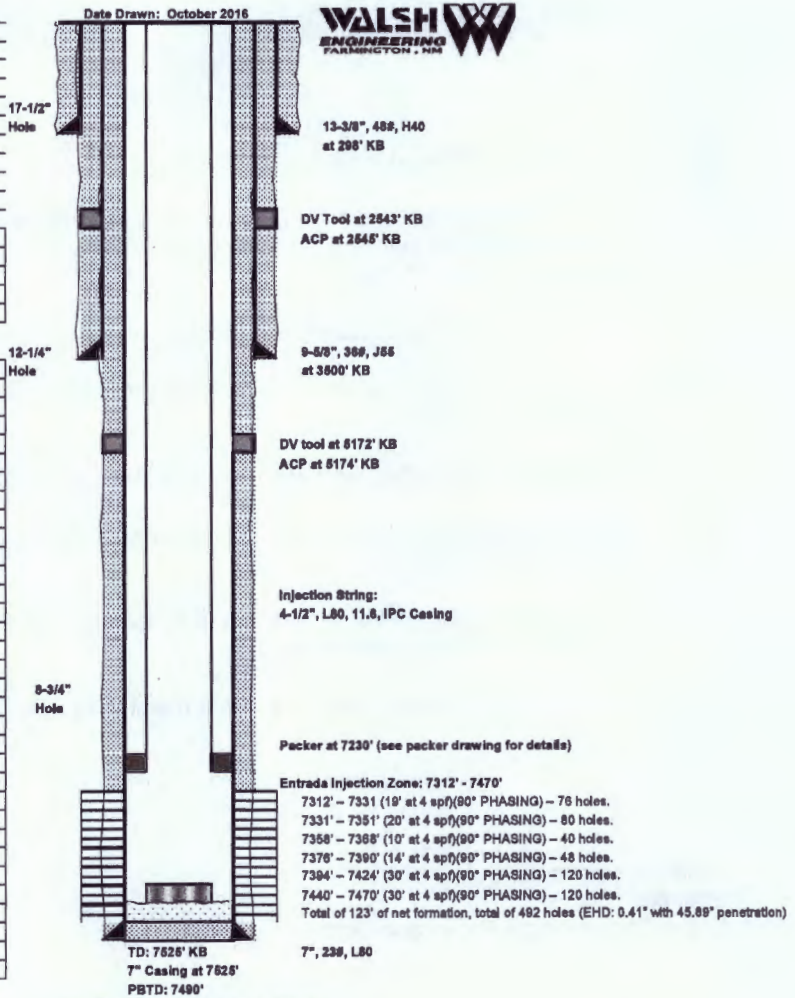
John Thompson
Engineer
Walsh Engineering & Production Corp.

Well/Facility: SWD #2 Well Status: Current
 Operator: Western Refinery Orig Oper:
 Lease/Op Agmt: Inj Interval:
 Field: Entrada API #:
 County: San Juan GR/KB: 14.5'
 State: NM TD: 7626' KB
 Spud: 8/15/2016 PBTD: 7490' KB
 Comp. Date: WI:
 1st Prod: NRI:
 Xmas tree:
 Surface Loc: 2028' fnl & 111' fnl
 Sec-Twn-Rge: Sec 27/T29N/11W
 Comments: 3/7/2017 - Started Injection/Water Disposal Operations

Date Drawn: October 2016



Geologic Markers	
MD	Formation
Surface	Quaternary Alluv
10'	Nacimiento
818'	Ojo Alamo
828'	Kirtland
1203'	Fruitland
1718'	Pictured Cliffs
1880'	Lewis
2660'	Huerfano Bentonite
2888'	Chaco
2877'	Lower Lewis
3337'	Cliff House
3389'	Mesefee
4045'	Point Lookout
4432'	Mancos Shale
5301'	Niobrara A
5400'	Niobrara B
5526'	Niobrara C
5606'	Gallup
5848'	Juana Lopez
5966'	Carlisle
6055'	Greenhorn
6117'	Graneros
6151'	Dakota
6357'	Burro Canyon
6417'	Morrison
7031'	Bluff Sandstone
7160'	Wenakah
7276'	Todilto
7308'	Entrada
7475'	Chinle
7626'	TD



Note: 7" packer f 7458'-7476', 8" f 7476'-7490'

Western Refinery SWD #2

