

UICI - __011__

C-103s

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

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 Entrada
11. Elevation (<i>Show whether DR, RKB, RT, GR, etc.</i>)

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 Wastewater 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 East feet from the _____ 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:		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: Fall Off Test <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.

Pursuant to the Bloomfield Terminal Injection Well Discharge Permit (UICI-011), Western Refining Southwest, Inc. ("Western") is scheduled to perform a Fall-Off Test (FOT) on WDW #2. The fall-off test will consist of three phases:

- Phase 1: Build-Up
- Phase 2: Pressure Fall-Off Monitoring
- Phase 3: Post Monitoring Operations

Phase 1: Build-Up

The Build-Up Phase involves the injection of the Terminal's treated wastewaters into the well for 72 hours or until the injection pressure reaches the high-pressure set-point of 1,400 psi, whichever occurs first. A stabilized injection rate will be established using the dedicated injection well pump. Due to the limited time the injection well can operate before reaching the high-pressure set-point of 1,400 psi, tandem memory gauges will first be installed through the crown valve and lubricator using a slick-line unit. The gauges will be positioned at 7,312 ft below grade (reflective to the top of the injection interval). The memory gauges to be used are SP-2000 hybrid-quartz gauges provided by Tefteller, Inc. that will have a resolution of 0.01 psi and an accuracy of ± 0.05% of full scale. The pressure range of the gauges will be 0-5,000 psi minimum. The dedicated injection well will operate for 72-hours or until the discharge pressure approaches the 1,400 psi shutdown pressure following the placement of the tandem memory gauges to allow the gauges to stabilize. During this time, down-hole pressure readings will be recorded. Once the stabilization time has elapsed, the injection well pump will be shut down and the well will be blocked-in by closing the valve at the wellhead and in the pump room (double-block).

Phase 2: Pressure Fall-Off Monitoring

With the well blocked-in, bottom-hole readings will be recorded for a minimum of 3 days and up to 14 days. The recording period will be set to record pressures at a minimum of 5-minute intervals, with readings collected more frequently during the early part of the Fall-Off Test period.

Phase 3: Post Monitoring Operations

Following completion of the fall-off monitoring, the gauges will be pulled while making 5-minute stops at each 1,000 ft interval starting at 7,000 ft to collect pressure gradient readings. After removal of the gauges, the well will return to normal operation.

Upon receipt of NMOCD approval of this test protocol, Western will coordinate with NMOCD District III to provide the opportunity to witness all testing activities. The intent is to initiate field-testing activities on Friday, September 18th to ensure completion of field activities prior to September 30, 2020.

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 *Kelli Rodman* TITLE Environmental Supervisor DATE 9/16/20

Type or print name _____ E-mail address: _____ PHONE: _____
For State Use Only

APPROVED BY: *Carl J. Chisney* TITLE Environmental Engineer DATE 9/17/2020

Conditions of Approval (if any):

- 1) Permittee shall gradually increase the injection flow rate and injection pressure over time to attain and achieve the appropriate steady-state condition below the permit MSIP before FOT monitoring.
- 2) If the Permittee is unable to achieve a steady-state condition before FOT monitoring, the test shall proceed in order to study and evaluate test results and provide observations, conclusions and final recommendations from the test based on operational conditions.
- 3) The Permittee shall ensure the perforated interval, borehole and the immediate injection interval is free from obstructions before the FOT.
- 4) The Permittee shall apply a pressure gauge with the resolution and accuracy requirements commensurate with the Fall-Off Test Plan requirements.
- 5) The Permittee shall provide notice of the dates and times for installation of any bottom hole gauge(s) start of FOT monitoring, bottom hole gauge recovery and MITs to the OCD District Office.

Submit 1 Copy To Appropriate District Office
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State of New Mexico
 Energy, Minerals and Natural Resources

Form C-103
 Revised July 18, 2013

OIL CONSERVATION DIVISION
 1220 South St. Francis Dr.
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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. 30-045-35747
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2. Name of Operator Western Refining Southwest, Inc.		6. State Oil & Gas Lease No.
3. Address of Operator 50 County Road 4990 (PO Box 159) Bloomfield, NM 87413		7. Lease Name or Unit Agreement Name
4. Well Location Unit Letter <u>H</u> : <u>2028</u> feet from the <u>North</u> line and <u>East</u> feet from the _____ line Section <u>27</u> Township <u>29N</u> Range <u>11W</u> NMPM San Juan County		8. Well Number: WDW #2
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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: Braden Head Test <input checked="" type="checkbox"/>		OTHER: <u>APR 11 2019 PM03:35</u> <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.

Pursuant to Condition 3.D.1 of the Bloomfield Terminal Injection Well Discharge Permit (UICI-011), Western Refining Southwest, Inc. intends to perform a Braden Head Test prior to conducting the Fall-Off Test. The test will be performed on the Braden Head and intermediate casing. The test will consist of blocking-in the Braden Head and Intermediate casing valves independently for at least 24-hour prior to conducting the test. The discharge of each casing valve will be a pressure gauge on the down-hole side of the valve to measure the casing pressure. With a representative of NMOCD on-site to witness the test, the Braden Head and Intermediate casing valves will be opened for a minimum of 15-minutes to witness any discharge of fluids. Once the test is completed, the Fall-Off Testing activities will begin (procedures are to be submitted as a separate Sundry Notice for Agency Review).

Upon receipt of NMOCD's approval of the testing protocol, Western will coordinate with NMOCD Aztec District Office to schedule the field activities that best work their availability.

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 Kelly Robinson TITLE Environmental Supervisor DATE 4-5-19
 Type or print name Kelly Robinson E-mail address: Kelly.Robinson@andover.com PHONE: 505-632-4166
For State Use Only
 APPROVED BY: [Signature] TITLE Environmental Engineer DATE 4/12/19
 Conditions of Approval (if any):

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CLOSED-LOOP SYSTEM <input type="checkbox"/>			
OTHER: Fall Off Test <input checked="" type="checkbox"/>		OTHER: <input type="checkbox"/>	

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- Phase 1: Build-Up
- Phase 2: Pressure Fall-Off Monitoring
- Phase 3: Post Monitoring Operations

APR 11 2019 PM03:34

Phase 1: Build-Up

The Build-Up Phase involves the injection of the Terminal's wastewaters into the well for 72 hours or until the injection pressure reaches the high-pressure set-point of 1,400 psi, whichever occurs first. A stabilized injection rate will be established using the dedicated injection well pump. Following the 24-hour stable injection period, tandem memory gauges will be installed through the crown valve and lubricator using a slick-line unit. The gauges will be positioned at 7,312 ft below grade (reflective to the top of the injection interval) while maintaining a stable injection rate. The memory gauges to be used are SP-2000 hybrid-quartz gauges provided by Tefteller, Inc. that will have a resolution of 0.01 psi and an accuracy of $\pm 0.05\%$ of full scale. The pressure range of the gauges will be 0-5,000 psi minimum. The stable injection rate will continue for a minimum of 48-hours following the placement of the tandem memory gauges to allow the gauges to stabilize. During this time, down-hole pressure readings will be recorded. Once the stabilization time has elapsed, the injection well pump will be shut down and the well will be blocked-in by closing the valve at the wellhead and in the pump room (double-block).

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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 Kelly Robinson TITLE Environmental Supervisor DATE 4/5/19

Type or print name Kelly Robinson E-mail address: Kelly.Robinson@caudeavor.com PHONE: (305) 652-4166
For State Use Only

APPROVED BY: [Signature] TITLE Environmental Engineer DATE 4/12/19
Conditions of Approval (if any):

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, April 5, 2019 1:46 PM
To: 'Robinson, Kelly'
Cc: Powell, Brandon, EMNRD; Kuehling, Monica, EMNRD; Roberts, Tommy D; Dooling, Frank; Griswold, Jim, EMNRD
Subject: RE: Sundry Notifications for Class 1 Injection Well Testing - Bloomfield Terminal

Kelly, received.

Thank you.

Mr. Carl J. Chavez, CHMM (#13099)
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St Francis Drive
Santa Fe, New Mexico 87505
Ph. (505) 476-3490
E-mail: CarlJ.Chavez@state.nm.us

“Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?” (To see how, go to: <http://www.emnrd.state.nm.us/OCD> and see “Publications”)

From: Robinson, Kelly <Kelly.Robinson@andeavor.com>
Sent: Friday, April 5, 2019 1:12 PM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Cc: Powell, Brandon, EMNRD <Brandon.Powell@state.nm.us>; Kuehling, Monica, EMNRD <monica.kuehling@state.nm.us>; Roberts, Tommy D <Tommy.D.Roberts@andeavor.com>; Dooling, Frank <Frank.F.Dooling@andeavor.com>
Subject: [EXT] Sundry Notifications for Class 1 Injection Well Testing - Bloomfield Terminal

Good Afternoon Sir!

Pursuant to Permit Condition 3.D.1 of Discharge Permit UICI-011, Western Refining is submitted the attached protocols to conduct the Braden Head Test and Fall-Off Test, respectively. As stated in the attached protocols, Western will coordinate the schedule for conducting the field tests with the New Mexico Oil Conservation Division Aztec District Office to provide opportunity for them to observe the testing activities. If you have any questions regarding these protocols, please feel free to contact me at your convenience. A hard copy of these notifications will be submitted to Aztec District Office and Santa Fe District Office as previously requested.

Thank you so much for your time!

Sincerely,

Kelly R. Robinson | Environmental Supervisor– Terminalling, Transportation and Storage
Andeavor | 111 County Road 4990, Bloomfield, NM 87413
Office: 505.632.4166 | Mobile: 505.801.5616 | Kelly.Robinson@andeavor.com

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DOWNHOLE COMMINGLE <input type="checkbox"/>			
CLOSED-LOOP SYSTEM <input type="checkbox"/>			
OTHER: Braden Head Test <input checked="" type="checkbox"/>		OTHER: <input type="checkbox"/>	

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Upon receipt of NMOCD's approval of the testing protocol, Western will coordinate with NMOCD Aztec District Office to schedule the field activities that best work their availability.

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 Kelly Robinson TITLE Environmental Supervisor DATE 4-5-19
 Type or print name Kelly Robinson E-mail address: Kelly.Robinson@audravor.com PHONE: 505-632-4166
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APPROVED BY: _____ TITLE _____ DATE _____
 Conditions of Approval (if any): _____

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SIGNATURE Kelly Robinson TITLE Environmental Supervisor DATE 4/5/19

Type or print name Kelly Robinson E-mail address: Kelly.Robinson@caudeavor.com PHONE: (305) 632-4166
For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____

Conditions of Approval (if any):

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, September 28, 2018 2:30 PM
To: Robinson, Kelly
Cc: Griswold, Jim, EMNRD; Jones, William V, EMNRD; Powell, Brandon, EMNRD; Kuehling, Monica, EMNRD
Subject: RE: WDW-2 (UICI-011) - Fall-Off Test Extension Request (API# 30-045-28653)

Kelly:

Re: Fall-Off Test Extension Request for On or Before April 30, 2019

Approved.

Please be aware of the 1 year non-injection period under [19.15.26 NMAC](#) (see applicable regulation below). OCD UIC Class I (Non-hazardous) Disposal Wells must meet all of the requirements of Class II Disposal Wells.

19.15.26.12 COMMENCEMENT, DISCONTINUANCE AND ABANDONMENT OF INJECTION

OPERATIONS:

A. The following provisions apply to injection projects, storage projects, salt water disposal wells and special purpose injection wells.

B. Notice of commencement and discontinuance.

(1) Immediately upon the commencement of injection operations in a well, the operator shall notify the division of the date the operations began.

(2) Within 30 days after permanent cessation of gas or liquefied petroleum gas storage operations or within 30 days after discontinuance of injection operations into any other well, the operator shall notify the division of the date of the discontinuance and the reasons for the discontinuance.

(3) Before temporarily abandoning or plugging an injection well, the operator shall obtain approval from the appropriate division district office in the same manner as when temporarily abandoning or plugging oil and gas wells or dry holes.

C. Abandonment of injection operations.

(1) Whenever there is a continuous one year period of non-injection into all wells in an injection or storage project or into a salt water disposal well or special purpose injection well, the division shall consider the project or well abandoned, and the authority for injection shall automatically terminate ipso facto.

(2) For good cause shown, the director may grant an administrative extension or extensions of injection authority as an exception to Paragraph (1) of Subsection C of 19.15.26.12 NMAC, provided that any such extension may be granted only prior to the end of one year or continuous non-injection, or during the term of a previously granted extension.

[19.15.26.12 NMAC - Rp, 19.15.9.705 NMAC, 12/1/08]

Please contact me if you have questions. Thank you.

Mr. Carl J. Chavez, CHMM (#13099)
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St Francis Drive
Santa Fe, New Mexico 87505
Ph. (505) 476-3490
E-mail: CarlJ.Chavez@state.nm.us

“Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?” (To see how, go to: <http://www.emnrd.state.nm.us/OCD> and see “Publications”)

From: Robinson, Kelly <Kelly.Robinson@andeavor.com>
Sent: Friday, September 28, 2018 12:04 PM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Subject: [EXT] WDW-2 (UICI-011) - Fall-Off Test Extension Request

Good Morning Sir!

Thank you so much for taking the time to talk with me earlier today. As we discussed earlier, Western Refining Southwest, Inc. – Bloomfield Terminal (“Western”) is requesting the New Mexico Oil Conservation Division’s approval to extend the deadline to conduct the 2018 Fall-Off Test on the facility Waste Disposal Well No. 2 (UICI-011). The annual test is required pursuant to WDW-2 Permit Condition 3.E.

Due to the lack of precipitation and lower volume of wastewater effluent produced by the Bloomfield Terminal operations in 2018, the Terminal has not operated the injection well for a continuous period of over 24-hours since May 2018. As of August 2018, the facility’s wastewater treatment system is producing on average approximately 15 gallon per minute of treated wastewaters. These waters are pumped to the on-site evaporation ponds prior to being injected into the on-site Class I Injection Well. Due to lack of precipitation in the Four Corners Area and the higher consistent summer temperatures, the rate of evaporation at the evaporation ponds has exceeded the rate of wastewater production. As such, currently we have evaporated all the waters previously stored in the north evaporation pond, and we currently are storing approximately less than 6-inches of water in the south evaporation pond. The level in the evaporation pond continues to lower due to the continued higher temperatures resulting in continued higher natural evaporation rates.

At this time, Western has no interest to pursue closure and/or abandonment of the well. The request for extending the Fall-Off Testing is to allow for sufficient waters to collect in the evaporation pond during the cooler months of the year so that the well can be operated continuously for a period of time before the Fall-Off pressures are recorded for testing. At this time, Western is requesting permission to conduct the test prior to April 2019. The respective Sundry notifications will be submitted to NMOCD for approval prior to testing so as to provide NMOCD the opportunity to witness the testing activities.

I very much appreciate your time and consideration of this request. If you have any questions or would like additional information for justification, please do not hesitate to contact me at your convenience.

Sincerely,

Kelly R. Robinson - Environmental Supervisor

111 County Road 4990 I Bloomfield, NM 87413
O: (505) 632-4166| C: (505) 801-5616
E: Kelly.Robinson@andeavor.com



Please note: My email address changed to Kelly.Robinson@andeavor.com on July 31, 2017. Please update your records.

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

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. 30-045-35747
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other Waste Water Disposal Well		5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
2. Name of Operator Western Refining, Southwest, Inc.		6. State Oil & Gas Lease No.
3. Address of Operator #50 County Road 4990 (PO Box 159), Bloomfield, NM 87413		7. Lease Name or Unit Agreement Name
4. Well Location Unit Letter <u>H</u> : <u>2028</u> feet from the <u>North</u> line and <u>111'</u> feet from the <u>East</u> line Section <u>27</u> Township <u>29N</u> Range <u>11W</u> NMPM San Juan County		8. Well Number WDW #2
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 5535' GL		9. OGRID Number 267595
		10. Pool name or Wildcat SWD; Entrada

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

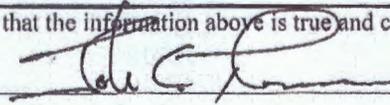
NOTICE OF INTENTION TO: PERFORM REMEDIAL WORK <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> CHANGE PLANS <input type="checkbox"/> PULL OR ALTER CASING <input type="checkbox"/> MULTIPLE COMPL <input type="checkbox"/> DOWNHOLE COMMINGLE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

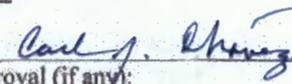
Spud Date: 8/15/2016 Rig Release Date: 9/9/2016

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

SIGNATURE  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:  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 POCEDURE

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	3121	-----
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.

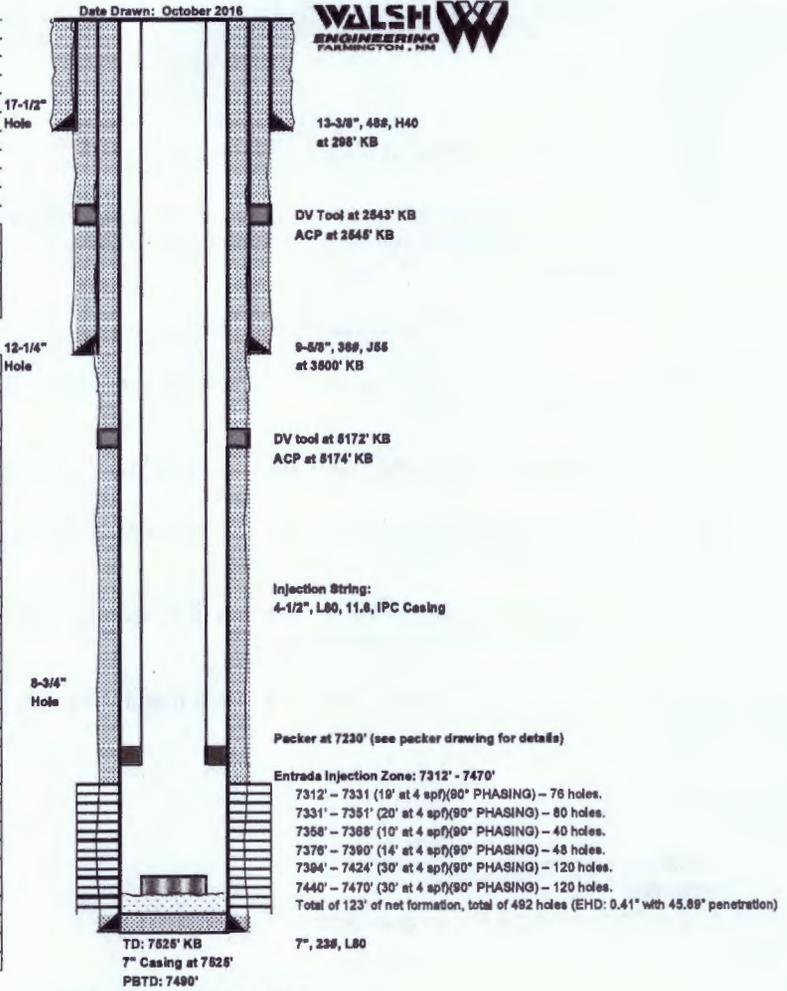
John Thompson
Engineer
Walsh Engineering & Production Corp.

Well/Facility: **8WD #2** Well Status: **Current**
 Operator: **Western Refinery** Orig Oper: _____
 Lease/Op Agmt: _____ Inj Interval: _____
 Field: **Entrada** API #: _____
 County: **San Juan** OR/KB: **14.5'**
 State: **NM** TD: **7628' KB** 17-1/2"
 Spud: **8/15/2016** PBTD: **7490' KB** Hole
 Comp. Date: _____ WI: _____
 1st Prod: _____ NRI: _____
 Xmas tree: _____
 Surface Loc: **2028' fnl & 111' fcl**
 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
1890'	Lewis
2660'	Huerfano Bentonite
2688'	Chaca
2877'	Lower Lewis
3337'	Cliff House
3389'	Menefee
4045'	Point Lookout
4432'	Mancos Shale
5301'	Niobrara A
5400'	Niobrara B
5526'	Niobrara C
5606'	Gallup
5848'	Juana Lopez
5966'	Carlisle
6058'	Greenhorn
6117'	Graneros
6161'	Dakota
6357'	Burro Canyon
6417'	Morrison
7031'	Bluff Sandstone
7160'	Wenakah
7278'	Todilto
7308'	Entrada
7475'	Chinle
7628'	TD



Note: 7" packer f 7458'-7476', III f 7478'-7490'

Western Refinery SWD #2

