

UICI – I – 8-1

**EPA FALL
OFF TEST
(WDW-2)**

2012

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 August 1, 2011

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

WELL API NO. 30-015-27592
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. B-2071-28
7. Lease Name or Unit Agreement Name Mewbourne WDW-1
8. Well Number WDW-1
9. OGRID Number 15694
10. Pool name or Wildcat: Navajo Permo-Penn 96918

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 **Injection Well**

2. Name of Operator
Navajo Refining Company

3. Address of Operator
Post Office Box 159, Artesia, New Mexico 88211

4. Well Location
 Unit Letter **O** : **660** feet from the **South** line and **2210** feet from the **East** line
 Section **31** Township **17S** Range **28E** NMPM County **Eddy**

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
3678' GL

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"/>			
OTHER: PERFORM PRESSURE FALLOFF TEST, ANNULUS PRESURE 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.

- May 12, 2014** - Perform annulus pressure tests on WDW-1, WDW-2, and WDW-3 at an annulus pressure above 300 psig for 30 minutes on each well.
- May 13, 2014** - Install bottomhole gauges into WDW-1, WDW-2, and WDW-3 by 11:45am. Continue injection into all three wells.
- May 14, 2014** - Continue injection into all three wells.
- May 15, 2014** - At 2:00 PM, the offset wells WDW-2 and WDW-3 will be shut-in. A constant injection rate will be established for WDW-1 at 160 GPM and continue for a 30 hour injection period. Do not exceed 1200 psig wellhead pressure.
- May 16, 2014** - At 8:00pm, WDW-1 will be shut in for a 30-hour falloff period. WDW-2 and WDW-3 will remain shut-in.
- May 17, 2014** - All three wells will continue to be shut in while monitoring falloff pressure in all three wells.
- May 18, 2014** - At 8:00am, acquire downhole pressure gauges from all three wells. Tag bottom of fill and come out of hole very slowly, making 7-minute gradient stops while coming out of WDW-1 every 1000 feet (7000 ft, 6000 ft, 5000 ft, 4000 ft, 3000 ft, 2000 ft, 1000 ft, surface). Turn the wells back to Navajo personnel.

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 Timothy J. TITLE Project Engineer DATE 4-24-14

Type or print name: _____ E-mail address: _____ PHONE: _____

For State Use Only

APPROVED BY: Carl J. Chavez TITLE Environmental Engineer DATE 4/25/14
Conditions of Approval (if any):

The Fall-off Test (FOT) shall comply with Section III (Developing a Test Plan) of the "NM Oil Conservation Division UIC CLASS I Well FOT Guidance" (December 3, 2007),



Procedure for Testing Well #1 (Mewbourne)

April 21, 2014

Sunday, May 11, 2014

Subsurface personnel travel to Artesia, NM

Monday, May 12, 2014

Subsurface personnel and Pro-Well Testing personnel attend Navajo safety orientation.

Subsurface personnel will perform an annulus pressure test on WDW-1, WDW-2, and WDW-3 using a chart recorder. The annulus pressure must be above 300 psig during testing.

Tuesday, May 13, 2014

1. Install bottom hole memory gauges in all three wells and continue normal injection for 48 hours. Downhole Gauges need to be in wells by 11:45 am. Install surface pressure recorder on Mewbourne Well No. 1. Downhole Gauges to be set at the top of the perforations in all three wells as follows:

Mewbourne Well No. 1	7924 feet
Chukka Well No. 2	7570 feet
Gaines Well No. 3	7660 feet

Subsurface personnel will return to Houston, TX.

Wednesday, May 14, 2014

Continue normal injection into the wells.

Thursday, May 15, 2014

1. At 2:00 pm, Navajo personnel will shut-in offset wells, Chukka Well No. 2 and Gaines Well No. 3, start the 30-hour injection period for Mewbourne Well No. 1 at rate of approximately 160 GPM. The Chukka Well No. 2 and Gaines Well No. 3 will have to be isolated at the wing valve, MOV, and at the main pipeline valve.
2. Navajo Refining is to maintain a constant injection rate of approximately 160 GPM into the Mewbourne Well No. 1 for a minimum of 30 hours prior to shutting in the well. The 30 hours was the agreed upon time interval by the OCD and Navajo in previous falloff tests.
3. The rate should be constant during the 30-hour injection period. This might be best accomplished

SUBSURFACE

by opening the pipe line and wellhead valves wide open allowing full flow to the well. Record the rate and wellhead pressure in the control room on a minimum of 15 second intervals during the injection period. Do not exceed 1200 psig wellhead pressure.

4. Plant personnel will record rate, volume, and pressure during the injection period for all wells to confirm that a constant pre-falloff injection rate is maintained.
5. Collect a grab sample of the injection fluid every 10 hours; analyze the fluid for pH and Specific Gravity.

Friday, May 16, 2014

6. At 8:00 pm, Navajo personnel will shut in Mewbourne Well No. 1 for the 30-hour falloff period. Chukka Well No. 2 and Gaines Well No. 3 will remain shut-in during the 30-hour falloff period. The Mewbourne No. 1 will need to be isolated at the wing valve, MOV, and at the main pipeline valve.

Saturday, May 17, 2014

7. Leave all three wells shut in and continue to monitor falloff pressures in all three wells. Subsurface personnel (Tim Jones) to return to site.

Sunday, May 18, 2014

8. At 8:00 am, acquire downhole pressure memory gauges from all three wells.
9. Tag bottom of fill and come out of hole very slowly (no faster than 30 feet per minute), making 7-minute gradient stops while coming out of Mewbourne Well No. 1 every 1000 feet (7000 feet, 6000 feet, 5000 feet, 4000 feet, 3000 ft., 2000 feet, 1000 feet, Surface).
10. Turn well over to Navajo personnel. Subsurface personnel to return to Houston, TX.

Submit 1 Copy To Appropriate District Office
District I – (575) 393-6161
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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 August 1, 2011

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

WELL API NO. 30-015-20894
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. 6852
7. Lease Name or Unit Agreement Name Chukka WDW-2
8. Well Number WDW-2
9. OGRID Number 15694
10. Pool name or Wildcat: Navajo Permo-Penn 96918
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3607' GL, 3623' RKB

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 **Injection Well**

2. Name of Operator
Navajo Refining Company

3. Address of Operator
Post Office Box 159, Artesia, New Mexico 88211

4. Well Location
 Unit Letter **E** : **1980** feet from the **North** line and **660** feet from the **West** line
 Section **12** Township **18S** Range **27E** NMPM County **Eddy**

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"/>	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: PERFORM PRESSURE FALLOFF 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.

June 16, 2014 – Install bottomhole gauges into WDW-1, WDW-2, and WDW-3 by 11:45am. Continue injection into all three wells.
June 17, 2014 – Continue injection into all three wells.
June 18, 2014 – At 12:00 pm, the offset wells WDW-1 and WDW-3 will be shut-in. A constant injection rate of 160 GPM will be established for WDW-2 and continue for a 30 hour injection period. Do not exceed 1200 psig wellhead pressure.
June 19, 2014 – At 6:00pm, WDW-2 will be shut in for a 30-hour falloff period. WDW-1 and WDW-3 will remain shut-in.
June 20, 2014 – All three wells will continue to be shut in while monitoring falloff pressure in all three wells.
June 21, 2014 – At 8:00am, acquire downhole pressure gauges from all three wells. Tag bottom of fill and come out of hole very slowly, making 7-minute gradient stops while coming out of the WDW-2 every 1000 feet (7000 ft, 6000 ft, 5000 ft, 4000 ft, 3000 ft, 2000 ft, 1000 ft, surface). Turn the wells back to Navajo personnel.

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 Timothy Jan TITLE Project Engineer DATE 7-29-14

Type or print name _____ E-mail address: _____ PHONE: _____

For State Use Only

APPROVED BY: Leslye Chavez TITLE Environmental Engineer DATE 4/25/14

Conditions of Approval (if any):

The Fall-off Test (FOT) shall comply with section III (Developing a Test Plan) of the "NM Oil Conservation Division UIC Class I Well FOT Guidance" (December 3, 2007).



Procedure for Testing Well #2 (Chukka)

April 21, 2014

Sunday, June 15, 2014

Subsurface personnel will travel to Artesia, NM

Monday, June 16, 2014

Install bottom hole memory gauges in all three wells and continue normal injection for 48 hours. Gauges need to be in wells by 12:00 pm. Install surface pressure recorder on Chukka Well No. 2. Gauges to be set at the top of the perforations in all three wells as follows:

Mewbourne Well No. 1	7924 feet
Chukka Well No. 2	7570 feet
Gaines Well No. 3	7660 feet

Tuesday, June 17, 2014

Continue normal injection into the wells.

Wednesday, June 18, 2014

1. At 12:00 pm, Navajo personnel will shut-in offset wells, Mewbourne Well No. 1 and Gaines Well No. 3, start the 30-hour injection period for Chukka Well No. 2. The Mewbourne Well No. 1 and Gaines Well No. 3 will have to be isolated at the wing valve, MOV, and at the main pipeline valve.
2. Navajo Refining is to maintain a constant injection rate of 160 GPM into the Chukka Well No. 2 for a minimum of 30 hours prior to shutting in the well. The 30 hours was the agreed upon time interval by the OCD and Navajo in the approved test plan.
3. The rate should be constant during the 30 hour injection period. This might be best accomplished by opening the pipe line and wellhead valves wide open allowing full flow to the well. Record the rate and wellhead pressure in the control room on a minimum of 15 second intervals during the injection period. Do not exceed 1200 psig wellhead pressure.
4. Plant personnel will record rate, volume, and pressure during the injection period for all wells to confirm that a constant pre-falloff injection rate is maintained.
5. Collect a grab sample of the injection fluid every 10 hours; analyze the fluid for pH and Specific

SUBSURFACE



Gravity.

Thursday, June 19, 2014

6. At 6:00 pm, Navajo personnel will shut in Chukka Well No. 2 for the 30-hour falloff period. Mewbourne Well No. 1 and Gaines Well No. 3 will remain shut-in during the 30 hour falloff period. The Chukka Well No. 2 will need to be isolated at the wing valve, MOV, and at the main pipeline valve.

Friday, June 20, 2014

7. Continue monitoring pressure falloff in Chukka Well No. 2.

Saturday, June 21, 2014

8. Leave all three wells shut in and continue to monitor falloff pressures in all three wells. Subsurface personnel (Tim Jones) to return to site.
9. At 8:00 am, acquire downhole pressure memory gauges from all three wells.
10. Tag bottom of fill and come out of hole very slowly (no faster than 30 feet per minute), making 7-minute gradient stops while coming out of Chukka Well No. 2 every 1000 feet (7000 feet, 6000 feet, 5000 feet, 4000 feet, 3000 feet, 2000 feet, 1000 feet, Surface).
11. Turn well over to Navajo personnel. Subsurface personnel (Tim Jones) to return to Houston, TX.

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 811 S. First St., Artesia, NM 88210
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 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 August 1, 2011

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

WELL API NO. 30-015-26575
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. NM-0557371
7. Lease Name or Unit Agreement Name Gaines WDW-3
8. Well Number WDW-3
9. OGRID Number 15694
10. Pool name or Wildcat: Navajo Permo-Penn
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3609' GL, ' RKB

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 Injection Well

2. Name of Operator
Navajo Refining Company

3. Address of Operator
Post Office Box 159, Artesia, New Mexico 88211

4. Well Location
 Unit Letter **N** : **790** feet from the **South** line and **2250** feet from the **West** line
 Section **01** Township **18S** Range **27E** NMPM County **Eddy**

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"/>		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: PERFORM PRESSURE FALLOFF 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.

July 14, 2014 - Install bottomhole gauges into WDW-1, WDW-2, and WDW-3 by 12:00 pm. Continue injection into all three wells.
July 15, 2014 - Continue injection into all three wells.
July 16, 2014 - At 12:00 pm, the offset wells WDW-1 and WDW-2 will be shut-in. A constant injection rate of 160 GPM will be established for WDW-3 and continue for a 30 hour injection period. Do not exceed 1200 psig wellhead pressure.
July 17, 2014 - At 6:00pm, WDW-3 will be shut in for a 30-hour falloff period. WDW-1 and WDW-2 will remain shut-in.
July 18, 2014 - All three wells will continue to be shut in while monitoring falloff pressure in all three wells.
July 19, 2014 - At 8:00am, acquire downhole pressure gauges from all three wells. Tag bottom of fill and come out of hole very slowly, making 7-minute gradient stops while coming out of WDW-3 every 1000 feet (7000 ft, 6000 ft, 5000 ft, 4000 ft, 3000 ft, 2000 ft, 1000 ft, surface). Turn the wells back to Navajo personnel.

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 Timothy J. TITLE Project Engineer DATE 4-24-14

Type or print name _____ E-mail address: _____ PHONE: _____

For State Use Only

APPROVED BY: Carolyn Chiny TITLE Environmental Engineer DATE 4/25/14

Conditions of Approval (if any):

The Fall-off Test (FOT) shall comply with Section III (Developing a Test Plan) of the "NM Oil Conservation Division UIC Class I Well FOT Guidance" (December 3, 2007).



**Procedure for Testing Well #3 (Gaines)
April 21, 2014**

Sunday, July 13, 2014

Subsurface personnel to travel to Artesia, NM

Monday, July 14, 2014

1. Install bottom hole memory gauges in all three wells and continue normal injection for 48 hours. Gauges need to be in wells by 12:00 pm. Install surface pressure recorder on Gaines Well No. 3. Gauges to be set at the top of the perforations in all three wells as follows;

Mewbourne Well No. 1	7924 feet
Chukka Well No. 2	7570 feet
Gaines Well No. 3	7660 feet

Subsurface personnel will return to Houston.

Tuesday, July 15, 2014

Continue normal injection into the wells.

Wednesday, July 16, 2014

1. At 12:00 pm, Navajo personnel will shut-in offset wells, Chukka Well No. 2 and Mewbourne Well No. 1, start the 30-hour injection period for Gaines Well No. 3. The Chukka Well No. 2 and Mewbourne Well No. 1 will have to be isolated at the wing valve, MOV, and at the main pipeline valve.
2. Navajo Refining is to maintain a constant injection rate at approximately 160 GPM into the Gaines Well No. 3 for a minimum of 30 hours prior to shutting in the well. The 30 hours was the agreed upon time interval by the OCD and Navajo in the approved test plan.
3. The rate should be constant at 160 GPM during the 30-hour injection period. This might be best accomplished by opening the pipe line and wellhead valves wide open allowing full flow to the well. Record the rate and wellhead pressure in the control room on a minimum of 15 second intervals during the injection period. Do not exceed 1200 psig wellhead pressure.
4. Plant personnel will record rate, volume, and pressure during the injection period for all wells to confirm that a constant pre-falloff injection rate is maintained.
5. Collect a grab sample of the injection fluid every 10 hours; analyze the fluid for pH and Specific Gravity.

SUBSURFACE

Thursday, July 17, 2014

6. Continue constant injection into Gaines Well No. 3. The offset wells Mewbourne and Chukka will remain shut-in.
7. At 6:00 pm, Navajo personnel will shut in Gaines Well No. 3 for the 30-hour falloff period. Chukka Well No. 2 and Mewbourne Well No. 1 will remain shut-in during the 30-hour falloff period. The Gaines No. 3 will need to be isolated at the wing valve, MOV, and at the main pipeline valve.

Friday, July 18, 2014

8. Continue to monitor pressure falloff in Gaines Well No. 3.

Saturday, July 19, 2014

9. At 8:00 am, acquire downhole pressure memory gauges from all three wells.
10. Tag bottom of fill and come out of hole very slowly (no faster than 30 feet per minute), making 7-minute gradient stops while coming out of Gaines Well No. 3 every 1000 feet (7000 feet, 6000 feet, 5000 feet, 4000 feet, 3000 feet, 2000 feet, 1000 feet, Surface).
11. Turn well over to Navajo personnel. Subsurface personnel to return to Houston, TX.

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, July 11, 2013 9:16 AM
To: Holder, Mike (Mike.Holder@hollyfrontier.com)
Cc: Sanchez, Daniel J., EMNRD; Dade, Randy, EMNRD; VonGonten, Glenn, EMNRD; Dawson, Scott, EMNRD
Subject: FW: UICI-8 Post Mtg. Determination on FOTs & Lo P Differential in Wells 2 & 3
Attachments: UICI-8 Post Mtg. Determination on FOTs & Lo P Differential in Wells 2 & 3

Mike:

Re: UICI-008 WDWs 2 & 3 Fall-Off Tests (FOTs) Low Pressure Differentials 2012

The New Mexico Oil Conservation Division (OCD) has considered the issue above and determined that it concurs with the operator's technical basis (see attachment) and explanation supporting satisfactory FOTs for the above subject well with accurate reservoir characteristics. The log-log charts indicate that radial flow conditions were achieved during the FOTs.

The operator performed the tests similar to past FOTs with similar flow rates. While the operator has indicated in recent communications with the OCD that the reservoirs are pressuring up, the operator indicated that it has been limited by the pressure capacity because the current pumps are located about 12 – 14 miles back at the refinery from the well heads. The OCD notes that it recently approved a modification request by the operator to install booster pumps near to the well heads, which may allow the operator to increase the pseudo-steady state injection rates to more effectively stress the reservoir during future FOTs, which may result in increased pressure differentials during FOTs. In addition, the booster pumps will increase the surface injection pressures closer to the permitted maximum surface injection pressures and increase the disposal capacity of the wells.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Department
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Drive, Santa Fe, New Mexico 87505
Office: (505) 476-3490
E-mail: CarlJ.Chavez@State.NM.US
Website: <http://www.emnrd.state.nm.us/ocd/>

“Why Not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward With the Rest of the Nation?” To see how, please go to: “Pollution Prevention & Waste Minimization” at <http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental>

Chavez, Carl J, EMNRD

Subject: UICI-8 Post Mtg. Determination on FOTs & Lo P Differential in Wells 2 & 3

Start: Thu 7/11/2013 8:00 AM
End: Thu 7/11/2013 8:30 AM

Recurrence: (none)

Organizer: Chavez, Carl J, EMNRD

Note to Daniel S and Randy D on 6/13/2013:

- **UICI-008 Class I (NH) WDWs 1, 2 & 3 Wells Navajo Artesia Refinery:**

Carl held a FOT 2012 communication meeting w/ Mike Holder and Subsurface Reps. (Thurman Witty and Tim Johnson) on 6/13 on the WDWs 1, 2 & 3 Fall-Off Well Tests (FOTs) conducted in 2012. WDWs 2 & 3 resulted in a pressure differential of less than 100 psi., which is a requirement of the OCD's UIC FOT Guidance. Subsurface indicated that as long as a radial flow condition is achieved as depicted in the FOT Log-Log Plots, the FOT results are accurate and the 100 psi differential should not apply. The OCD noticed that the well injection pressures during the FOTs ranged from 700 to 900 psi well below the permit MSIP ~ 1500 psi. While the injection intervals appear to be pressured up, the Operator is planning to install booster pumps closer to the well head in order to increase efficiency in achieving injection pressures greater than 700 – 800 psi (current max. inject. pressure w/ current pump system). Similar total volumes of fluids and injection rates were maintained during the FOTs as in past years. Operator will be sending modif. Request for booster pumps to be installed around 10/2013. C-103s for caliper surveys, acid stimulation (coiled tubing) and WDW-2 30 – 50 ft. perforation within approved injection interval forthcoming w/ copy to Artesia DO. An application for a 4th Injection Well will be submitted; however, the decision to do so may occur after the boosters pumps are installed, etc. from above. FOT is not an MIT.