UIC-I - 9

MECHANICAL INTEGRITY TEST (MITs)

DATE: _____

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, August 30, 2012 11:07 AM
To: 'Robinson, Kelly'
Cc: Sanchez, Daniel J., EMNRD; VonGonten, Glenn, EMNRD; Kuehling, Monica, EMNRD
Subject: RE: UIC-CL-009 Annual Testing for 2012 - Request for Approval
Attachments: MIT Approval 8-30-2012.pdf

Kelly:

The New Mexico Oil Conservation Division (OCD) hereby approves the C-103 (See attachment) for specified well testing proposed by Western Refining Southwest, Inc. - Bloomfield Refinery (Western). Western must coordinate with Ms. Kuehling at the OCD Aztec DO to witness the testing.

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

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From: Robinson, Kelly [mailto:Kelly.Robinson@wnr.com]
Sent: Thursday, August 30, 2012 10:41 AM
To: Chavez, Carl J, EMNRD
Subject: RE: UIC-CL-009 Annual Testing for 2012 - Request for Approval

Carl,

I apologize. I was not aware that the FOT was currently being evaluated by OCD. I would like to withdraw my C-103 for the Annual Fall-Off Test at this time. Western would rather postpone the testing until such time that OCD had determined that a Fall-Off Test for the injection well at the Bloomfield Refinery is needed. I appreciate the courtesy reminder.

After receipt of your approval on the C-103 for the MIT, Bradenhead, and High-Pressure Fall-Off Test, we will make sure those tests are scheduled and completed prior to the September 30, 2012 deadline.

Thanks gain for the reminder.

Sincerely,

Kelly R. Robinson
Environmental Supervisor

Western Refining Southwest, Inc.
111 County Road 4990
Bloomfield, NM87413

(o) 505-632-4166
(c) 505-801-5616
(f) 505-632-4024
(e) kelly.robinson@wnr.com

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Thursday, August 30, 2012 10:31 AM
To: Robinson, Kelly
Subject: RE: UIC-CL-009 Annual Testing for 2012 - Request for Approval

Kelly:

Based on the attached OCD E-mail dated August 2, 2012, I believe that Western may not have to conduct a Fall-Off Test this year. Please let me know if you wish to proceed with conducting a FOT and I will address the C-103 for it today.

Western does need to proceed to complete the annual Bradenhead and MIT by Midnight 9/30 under the OCD Discharge Permit and for OCD reporting to the EPA. I will respond to the C-103 today hopefully after you let me know if Western still wishes to proceed with the FOT this year.

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

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From: Robinson, Kelly [mailto:Kelly.Robinson@wnr.com]
Sent: Wednesday, August 29, 2012 1:30 PM
To: Chavez, Carl J, EMNRD
Cc: Powell, Brandon, EMNRD; Kuehling, Monica, EMNRD; Schmaltz, Randy
Subject: UIC-CL-009 Annual Testing for 2012 - Request for Approval

Good Afternoon Sir,

On behalf of Western Refining Southwest, Inc. – Bloomfield Refinery (Western), I am requesting OCD's approval to conduct the following annual testing on the Bloomfield Refinery's injection well (UIC-CL-009):

- MIT, Bradenhead, and High-Pressure Shutdown Tests; and
- Annual Fall-Off Test.

Attached are the completed C-103 notifications for these events. The proposed testing protocol for the Annual Fall-Off Test mirrors the procedures followed in previous years. A more detailed summary of the proposed testing procedures for the Annual Fall-Off Test is included with the C-103 notification attached.

Pending OCD approval and availability to witness the testing, Western would like to conduct the MIT, Bradenhead, and High-Pressure Shutdown Tests on Thursday, September 6th. Western is currently in communication with OCD-Aztec to confirm a date for testing that would work with their availability. In addition pending OCD approval, Western would like to initiate the Annual Fall-Off Test starting Monday, September 10th, 2012.

If you have any questions or need any additional information, please do not hesitate to contact me at your convenience.

Thank you for your time!

Sincerely,

Kelly R. Robinson
Environmental Supervisor

Western Refining Southwest, Inc.
111 County Road 4990
Bloomfield, NM87413

(o) 505-632-4166
(c) 505-801-5616
(f) 505-632-4024
(e) kelly.robinson@wnr.com

Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
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
May 27, 2004

WELL API NO.
30-045-29002-00

5. Indicate Type of Lease
STATE ☐ FEE X☐

6. State Oil & Gas Lease No.
N/A

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.)

7. Lease Name or Unit Agreement Name
Disposal

1. Type of Well: Oil Well ☐ Gas Well ☐ Other X (Disposal)

8. Well Number #001

2. Name of Operator
Western Refining Southwest, Inc. – Bloomfield Refinery

9. OGRID Number
037218

3. Address of Operator
#50 Road 4990 Bloomfield, NM 87413

10. Pool name or Wildcat
Blanco/Mesa Verde

4. Well Location
Unit Letter I : 2442 feet from the South line and 1250 feet from the East line
Section 27 Township 29 S Range 11 E NMPM County San Juan

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type_____ Depth to Groundwater_____ Distance from nearest fresh water well_____ Distance from nearest surface water_____

Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

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

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	☐	PLUG AND ABANDON	☐	REMEDIAL WORK	☐	ALTERING CASING	☐
TEMPORARILY ABANDON	☐	CHANGE PLANS	☐	COMMENCE DRILLING OPNS.	☐	P AND A	☐
PULL OR ALTER CASING	☐	MULTIPLE COMPL	☐	CASING/CEMENT JOB	☐		
OTHER: MIT, Bradenhead, and High Pressure Shut-Down Tests	☒			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 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Bloomfield Refinery requests permission to perform the annual High Pressure Shutdown Test, Bradenhead Test, and Mechanical Integrity Test on the Class I injection well referenced above on September 6th, 2012, pending final scheduling with OCD Aztec representative's schedule. Western will contact the OCD Aztec office to ensure testing is performed at a time that a representative from their office is able to be on-site to witness the testing activities

I hereby certify that the information above is true and complete to the best of my knowledge and belief. **I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.**

SIGNATURE Kelly Robinson TITLE Environmental Supervisor DATE 8/29/2012

Type or print name Kelly Robinson E-mail address: Kelly.Robinson@wnr.com Telephone No. (505) 632-4166

For State Use Only

APPROVED BY: Carl J. Chavez TITLE Environmental Engineer DATE 8/30/2012
Conditions of Approval (if any):

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, August 02, 2012 8:06 AM
To: pthompson@merrion.bz; Holder, Mike (Mike.Holder@hollyfrontier.com); Combs, Robert (Robert.Combs@hollyfrontier.com); Schmaltz, Randy (Randy.Schmaltz@wnr.com); Cheryl.Johnson@wnr.com
Cc: Sanchez, Daniel J., EMNRD; VonGonten, Glenn, EMNRD
Subject: UIC Class I (NH) Injection Well Operators (Annual MIT Reminder) Due on/or before September 30, 2012

Dear Sir or Madam:

It is that time of year again to remind operators that their annual MIT for this season must be completed by 9/30/2012. The list of operator names with associated UIC Class I (non-hazardous) Injection Wells are provided above.

Operators are aware of the MIT (30 min @ 300 psig or more MIT with Bradenhead) requirement(s) that are typically run with the Fall-Off Test (FOT). The OCD is currently evaluating the FOT frequency requirement at OCD UIC Class I Facilities in New Mexico and until further notice either specified in a discharge permit renewal and/or via communication, you will know when a FOT is required for your well soon.

Please contact me at (505) 476-3490 on or before June 30, 2012 to schedule your MIT date and time. I will coordinate with the District Staff to finalize the MIT date and time so that an OCD District Office inspector may be present to witness the MIT. Thank you for your cooperation in this matter.

File: UICI- 5, 8, 8-0, 8-1 & 9

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

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 August 1, 2011

	WELL API NO. 30-045-29002-00
	5. Indicate Type of Lease STATE ☐ FEE ☒
	6. State Oil & Gas Lease No. N/A
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 – (Disposal Well)	7. Lease Name or Unit Agreement Name Disposal
	8. Well Number: #001
2. Name of Operator San Juan Refining Co. / Western Refining Southwest, Inc. – Bloomfield Refinery	9. OGRID Number: 037218
3. Address of Operator # 50 Road 4990, Bloomfield, NM, 87413	10. Pool name or Wildcat: Blanco/Mesa Verde
4. Well Location Unit Letter I : 2442 feet from the south line and 1250 feet from the East line Section 27 Township 29 S Range 11 E NMPM County San Juan	
	11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
OTHER: Annual Fall-Off Test ☒		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. – Bloomfield Refinery requests permission to perform the annual Fall-Off Test on the Class I injection well referenced above. The bottom hole pressure memory gauges (two gauges in total) are scheduled to be lowered into the well no later than Monday, September 10th, 2012. The gauges will be allowed to stabilize before the well is shut-in. The well will be shut-in for a minimum of 72 hours.

A more detailed outline of the proposed procedure is attached.

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 8/29/2012

Type or print name Kelly Robinson E-mail address: kelly.robinson@wnr.com PHONE: 505-632-4166

For State Use Only

APPROVED BY: TITLE DATE

Conditions of Approval (if any):

2012 WELL BUILDUP/FALLOFF TEST PLAN
WESTERN REFINERY - BLOOMFIELD, NM
WASTE DISPOSAL WELL NO. 1

1.0 INTRODUCTION

The following procedure describes the proposed activities to be conducted to perform the annual bottom-hole pressure survey and pressure fall-off test on Waste Disposal Well (WDW) #1, located at the Bloomfield Refinery in Bloomfield, New Mexico. The proposed procedures are in accordance with the United States Environmental Protection Agency (USEPA) 40 FCR 146.13 and the State of New Mexico Fall-Off Guidelines.

1.1 Well Information

Well Name & No.	OCD UIC or Discharge Permit #	Well Classification	API Number
WDW #1	UIC-CL1-009 GW-130	Class I Non-Hazardous	30-045-29002

2.0 BACKGROUND

2.1 Previous Fall-Off Testing

Western Refining Southwest, Inc. (Western) has conducted fall-off tests annually on WDW-1 using quartz crystal bottom-hole memory gauges. The tests followed EPA guidelines and complied with OCD directives for UIC non-hazardous Class I injection wells.

In July 2006, a build-up/fall-off test was conducted after the well stimulation. The 72 hour build-up portion of the testing was done at a constant injection rate of 70 gallons per minute (gpm). The fall-off portion of the testing was terminated after 84 hours.

In August 2008, an additional test was conducted with a final flowing rate of 80 gpm prior to shutting in the well for a fall-off monitoring duration of 189 hours.

The results of the previous fall-off tests produced measureable results with all flow skin, storage, and linear flow regimes present. The WDW-1 had linear flow at the end of these fall-off tests. Radial flow was not observed. As a result, the calculated permeability based on radial flow equations is not a reliable estimate of injection zone permeability.

2.2 Geology

The injection zones arc porous sandstones of the lower portion of the Cliff House formation and the carbonate section of the Menefee formation. These formations occur in Waste Disposal Well #1 at the depths shows in the table below. The injection zones are shown in the attached well log for Waste Disposal Well #1.

Injection Zone Formation	Waste Disposal Well #1	
	KB Elevation = 5545 feet	
	MD below KB (ft)	SS Depth (ft)
Cliff House	3,276	2,269
Menefee	3,435	2,110

The WDW-1 is in a confined low permeability sand interval and historically is not capable of producing a bottom-hole 100 psi differential pressure drop between the final injection and shut-in pressures. Records show that WDW-1 was hydraulically fractured after it was drilled. The 2006, 2008, 2009, 2010, and 2011 Fall-Off Test data confirm this with a linear flow regime observed after the end of storage effects.

3.0 SUMMARY OF PROPOSED TESTING ACTIVITES

3.1 Data Research

Before performing the 2012 Fall-Off Test, a one-mile Area of Review (AOR) will be conducted to determine the status of any off-set wells that may be injecting into or producing from the WDW-1 injection interval. If any are found, arrangements will be made with the owners of the wells to monitor the well(s) during the build-up/fall-off test period. Historically there has not been any production or injection in the current injection interval within a one mile radius of WDW-1.

3.2 Summary of Field Activities

The proposed Fall-Off Test is similar to the procedures conducted in years prior. The initial three days of testing activities are considered the "build-up" phase of the test. The Bloomfield Refinery injection well (WDW-1) will be operated at a constant rate for a minimum of 72 hours.

After 24 hours of stable injection, bottom-hole pressure memory gauges will be lowered into the well (two gauges total) and allowed to equalize for a minimum of 48 hours, during which time down-hole pressure readings will be recorded. The memory gauges that will be used are SP-2000 hybrid-quartz gauges provided by Tefteller, Inc. These gauges 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 from 0-5,000 psi, minimum.

After installation and equalization of the down-hole gauges, the injection well will be blocked-in and the pressure down-hole will be monitored using bottom-hole pressure memory gauges. The recording period will be set to record pressures at a minimum of every 5 minutes, with more frequent readings collected during the early part of the fall-off test period.

The amount of time anticipated to monitor down-hole pressures will be approximately three to eight days. After such time as elapsed, the bottom-hole pressure gauges will be pulled from the well, making gradient stops every 1,000 feet. A more detailed listing of activities to be completed is described below.

The fluid that will be used for the injection test is the refinery's brine waste water (effluent). A current waste analysis of the fluid will be included in the final report.

Attachment A is the well schematic for WDW-1. Table 1 is a summary of the injection intervals for the well. Table 2 is a summary of the injection fluid analysis. Table 3 is a summary of the formation fluid analysis. A connate water analysis prior to injection was not found in any of the records, therefore the original formation water properties will have to be estimated from offset wells. The majority of the background information can also be found in the permit application that was submitted to the State of New Mexico Oil Conservation Division for the well on September 10, 1992.

3.3 Chronology of Field Activities

The following is a day-to-day summary of the activities proposed to fulfill the annual Fall-Off Testing requirement for the Bloomfield Refinery injection well (WDW-1).

During the Initial 72-hours of Testing (Build-up Phase):

1. A stabilized injection rate (approximately 60 gallons per minute) will be established using the Refinery pumps. A stable injection rate will be maintained for a minimum of 24-hours before the memory gauges are installed.
2. The injection well is equipped with a crown valve. Using a slick-line unit, the tandem memory gauges will be run down-hole through the crown valve and lubricator to 3,250 feet, the top of the injection interval.
3. Stable injection of the Refinery's effluent will continue into the well for a minimum of 48 hours following placement of the tandem memory gauges to allow the tandem memory gauges to stabilize. During this time, down-hole pressure readings will be recorded.
4. Once the stabilization time for the memory gauges has elapsed, the injection pump will be shut down and the well blocked-in by closing wing valve on the wellhead and in the pump room.

Pressure Fall-Off Monitoring:

5. While the well is isolated from service, bottom hole pressure readings will be recorded for a minimum of three days and up to eight days. The recording period will be set to record pressures at a minimum of every 5 minutes, with more frequent readings recorded during the early part of the fall-off test period.

Following Down-Hole Monitoring:

6. Once the appropriate fall-off monitoring time has elapsed, the memory gauges will be pulled making five minute gradient stops at 3250 ft, 3000 ft, 2000 ft, 1000 ft.
7. After the gradient interval pressure readings are collected, the fall-off test is considered complete. The slick line unit will rig down and the well will return to normal operation.

4.0 TESTING REPORT

All background information will be included in the final report, which will include a log of the events (Chronology of Field Activity), a overview of the geology, a current Area-of-Review (AOR) update, fall-off analysis including previous injection data (rate and volume history), gauge calibration certificates, bottom hole pressure analysis, well schematic, electric logs, reservoir fluid description, and injection fluid analysis. The procedure to do the fall-off test will also be included in the final report. If necessary, an AOR update will be included prior to the build-up/fall-off testing to ascertain the offset injection wells current condition. Historically there has not been any production or injection in the current injection interval within a one mile radius of WDW-1.

4.1 Evaluation of the Test Results

The fall-off and other analysis will be completed by a geologist and/or qualified engineer. The Reservoir Engineer will utilize the standard transient pressure analysis methods and the results will be reviewed for accuracy by a licensed professional engineer (PE). The fall-off analysis will include the following;

- A log-log plot with a derivative diagnostic plot used to identify flow regimes.
- A wellbore storage portion and infinite acting portion of the plot.
- A linear flow plot with wellbore storage, P*, and slope.
- An expanded portion of the linear flow plot showing the infinite acting pressure portion (linear flow).
- The height of the injection interval used for the calculations will be 106 feet (average of 27 feet and 185 feet) unless test data indicate a different interval should be used.
- The viscosity of the formation fluid used for the calculations will be based on historical data.
- A summary of all the equations used for the analysis.
- An explanation of any temperature or pressure anomalous.

The injection records for one year prior to the testing will be included in the analysis.

Well Data Table 1

	WDW – 1
Tubing	2.875", 7.55 lb/ft, Fluoroline Cement Lined, 3221'
Packer	5.5"x 2.875", Guiberson Tools, Uni-6, ID 1.87", 3221'
Perforations	Top of the Cliff House at 3276' 3276' – 3408', 4SPF 0.5 EHD Top of the Menefee at 3400' 3435' – 3460', 4SPF 0.5 EHD
Protection Casing	5.5", 15.5 lb/ft, 3600'
Cement Top Protection Casing	Surface
PBTD / TD	RBP at 3520', Fill Tagged on 4/20/06 at 3325' & cleaned out
Formation	Cliff House / Menefee

Injected Brine Waste Water Table 2

Chemical Date	Refinery Waste Water March 10, 1998	Refinery Waste Water Sept 27, 2005
Arsenic (mg/L)	0.014	-
Calcium (mg/L)	120	68
Magnesium (mg/L)	39	33
Potassium (mg/L)	27	-
Sodium (mg/L)	920	1659
Chloride (mg/L)	1200	2200
Sulfate (mg/L)	400	708
Alkalinity (CaCO3) (mg/L)	330	100
pH (s.u.)	7.7	8.0
Specific Gravity (g/L)	1.00 – 1.01	1.00 – 1.01

Formation Brine Waste Water Table 3

Chemical Date	Formation Water May 22, 1995
Arsenic (mg/L)	0.023
Cadmium (mg/L)	0.003
Calcium (mg/L)	375
Lead (mg/L)	0.063
Magnesium (mg/L)	99
Potassium (mg/L)	69
Selenium (mg/L)	0.006
Sodium (mg/L)	3610
Chloride (mg/L)	5370
Sulfate (mg/L)	1620
Alkalinity (CaCO3) (mg/L)	306
pH (s.u.)	8.5
Specific Gravity (g/L)	-

ATTACHMENT A

WESTERN REFINING DISPOSAL WELL #1

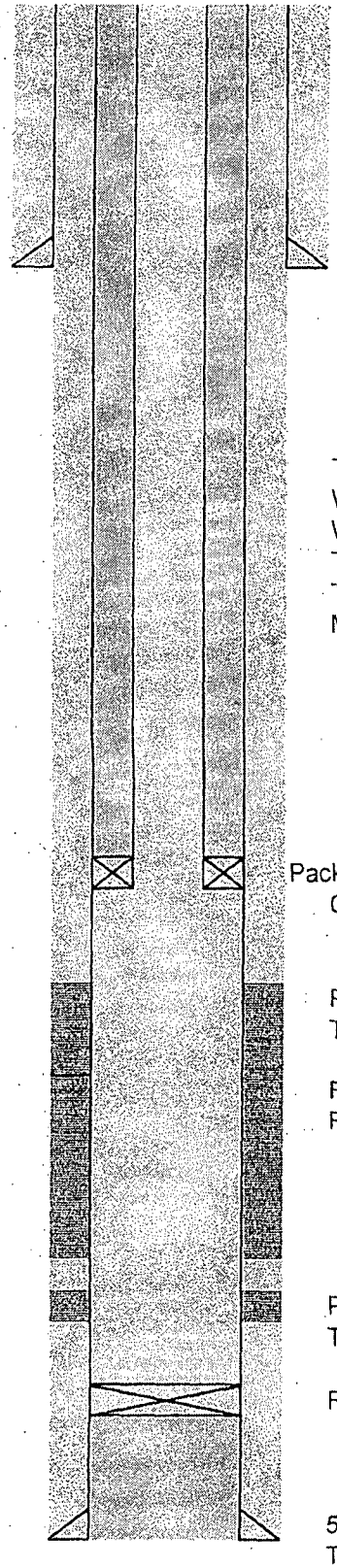
NW, SW SECTION 26, T29N, R11W

NO.: 30-045-29002

SUBSURFACE
HOUSTON, TX
SOUTH BEND, IN
BATON ROUGE, LA

FIGURE 1
DISPOSAL WELL #1 WELL SCHEMATIC
Western Refining Inc.
Bloomfield, NM

Date:	4/26/2006	Approved By:	rls	Job No.:	70F5830
Drawn By:	rls	Checked By:		Scale:	N/A



8-5/8", 48#/ft, Surface Casing @ 830'
TOC: Surface
Hole Size: 11.0"

Tubing: 2-7/8", Acid Resistant Fluoroline Cement Lined
Wt of Tubing: 6.5 #/ft
Wt of Tubing Lined: 7.55 #/ft
Tubing ID: 2.128"
Tubing Drift ID: 2.000"
Minimum ID @ Packer: ~1.87" estimated

Packer: Unknown Packer Type @ 3221'
Could be a Guiberson or similar model Uni-6

Perforations: 3276' - 3408' 4JSPF 0.5 EHD
Top of the Cliff House Formation: 3276'

Fill was cleaned out of well on 4/20/06
Fill was orginally tagged at 3325'

Perforations: 3435' - 3460' 4JSPF 0.5 EHD
Top of the Menefee Formation: 3400'

RBP: 3520'

5-1/2", 15.5#/ft, Production Casing @3600'
TOC: Surface
Hole Size: 7-7/8"

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, August 02, 2012 8:06 AM
To: pthompson@merrion.bz; Holder, Mike (Mike.Holder@hollyfrontier.com); Combs, Robert (Robert.Combs@hollyfrontier.com); Schmaltz, Randy (Randy.Schmaltz@wnr.com); Cheryl.Johnson@wnr.com
Cc: Sanchez, Daniel J., EMNRD; VonGonten, Glenn, EMNRD
Subject: UIC Class I (NH) Injection Well Operators (Annual MIT Reminder) Due on/or before September 30, 2012

Dear Sir or Madam:

It is that time of year again to remind operators that their annual MIT for this season must be completed by 9/30/2012. The list of operator names with associated UIC Class I (non-hazardous) Injection Wells are provided above.

Operators are aware of the MIT (30 min @ 300 psig or more MIT with Bradenhead) requirement(s) that are typically run with the Fall-Off Test (FOT). The OCD is currently evaluating the FOT frequency requirement at OCD UIC Class I Facilities in New Mexico and until further notice either specified in a discharge permit renewal and/or via communication, you will know when a FOT is required for your well soon.

Please contact me at (505) 476-3490 on or before June 30, 2012 to schedule your MIT date and time. I will coordinate with the District Staff to finalize the MIT date and time so that an OCD District Office inspector may be present to witness the MIT. Thank you for your cooperation in this matter.

File: UICI- 5, 8, 8-0, 8-1 & 9

Carl J. Chavez, CHMM
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http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental

Western Refining

WNR LISTED NYSE

Carl J. Chavez, CHMM
New Mexico Oil Conservation Division
Environmental Bureau
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

RECEIVED OCD
2010 JUL -1 P 2:43

Certified Mail: #7007 0220 0004 0187 1401

June 29, 2010

RE: Western Refining Southwest, Inc. – Bloomfield Refinery
EPA ID# NMD089416416
GW - 001 & UICL-9

Dear Mr. Chavez,

Western Refining Southwest, Inc – Bloomfield Refinery has scheduled inspection of all water-draw sumps located in the Tank Farm to begin the week of July 5, 2010. Each sump will be cleaned out with a Vacuum Truck, visually inspected, and hydrostatically tested to insure integrity.

If any representatives from the OCD would like to participate, please contact me so that safety orientation training can be scheduled for incoming personnel.

If you need additional information, please contact me at (505) 632-4161.

Sincerely,

Cindy Hurtado

Cindy Hurtado
Environmental Coordinator
Bloomfield Refinery

Cc: Randy Schmaltz – Environmental Manager – Bloomfield Refinery

Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
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
May 27, 2004

WELL API NO. 30-045-29002-00	
5. Indicate Type of Lease STATE ☐ FEE X☐	
6. State Oil & Gas Lease No. N/A	
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 ☐ OtherX (Disposal)	7. Lease Name or Unit Agreement Name Disposal 8. Well Number #001
2. Name of Operator Western Refining Southwest, Inc. – Bloomfeld Refinery	9. OGRID Number 037218
3. Address of Operator #50 Road 4990 Bloomfield, NM 87413	10. Pool name or Wildcat Blanco/Mesa Verde
4. Well Location Unit Letter__I_: 2442___feet from the___South_____ line and __1250_feet from the __East_____line Section 27 Township 29 Range 11 NMPM County San Juan	
11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*	
Pit or Below-grade Tank Application ☐ or Closure ☐ **Pit type_____Depth to Groundwater_____Distance from nearest fresh water well_____ Distance from nearest surface water_____** **Pit Liner Thickness: mil Below-Grade Tank: Volume _____bbls; Construction Material _____**	

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS.☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
OTHER: ☐		OTHER: MIT/BradenheadTest X☐	

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 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Bloomfield Refinery performed the annual High Pressure Shutdown Test, Bradenhead Test, and Mechanical Integrity Test on May 19, 2010. All tests were witnessed by Monica Kuehling of NMOCD-Aztec. The MIT held at 580 psi for 30 minutes.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. **I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.**

SIGNATURE Cindy Hurtado TITLE Environmental Coordinator DATE 5/19/2010

Type or print name Cindy Hurtado E-mail address: cindy.hurtado@wnr.com Telephone No. (505)632-4161

For State Use Only

APPROVED BY: TITLE Environmental Engineer DATE 5/20/2010

Conditions of Approval (if any):

NEW MEXICO ENERGY, MINERALS & NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC NM 87410
(505) 334-6178 FAX: (505) 334-6170
http://emnrd.state.nm.us/ocd/District III/3distric.htm

BRADENHEAD TEST REPORT

(submit 1 copy to above address)

Date of Test 5-19-10 Operator San Juan Refining Co API #30-0 45- 29002

Property Name Disposal Well No. 1 Location: Unit I Section 27 Township 29 Range 11

Well Status(Shut-In or Producing) Initial PSI: Tubing 918 Intermediate N/A Casing 164 Bradenhead 0

OPEN BRADENHEAD AND INTERMEDIATE TO ATMOSPHERE INDIVIDUALLY FOR 15 MINUTES EACH

PRESSURE

Testing	Bradenhead			INTERM	
	BH	Int	Csg	Int	Csg
TIME					
5 min					
10 min					
15 min					
20 min					
25 min					
30 min					

FLOW CHARACTERISTICS

	BRADENHEAD	INTERMEDIATE
Steady Flow		
Surges		
Down to Nothing	✓	
Nothing		
Gas		
Gas & Water		
Water		

If bradenhead flowed water, check all of the descriptions that apply below:

CLEAR_____ FRESH_____ SALTY_____ SULFUR_____ BLACK_____

5 MINUTE SHUT-IN PRESSURE BRADENHEAD 0 INTERMEDIATE N/A

REMARKS: Puff when opened.

By Cindy Hurtado

Environmental Coordinator
(Position)

Witness Monica Kuehling

E-mail address _____

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

MECHANICAL INTEGRITY TEST REPORT

(TA OR UIC)

Date of Test 5-19-10 Operator San Juan Refining Co. API # 30-0 45-29002

Property Name Disposal Well # 1 Location: Unit I Sec 27 Twn 29 Rge 11

Land Type:

- State_____
- Federal_____
- Private ✓
- Indian_____

Well Type:

- Water Injection_____
- Salt Water Disposal ✓
- Gas Injection_____
- Producing Oil/Gas_____
- Pressure obervation_____

Temporarily Abandoned Well (Y/N):_____ TA Expires:_____

Casing Pres. 0 Tbg. SI Pres._____ Max. Inj. Pres._____
Bradenhead Pres. 0 Tbg. Inj. Pres._____
Tubing Pres. 918
Int. Casing Pres. N/A

Pressured annulus up to 580 psi. for 30 mins. Test passed/failed (passed circled)

REMARKS:

Packer set at 3221
Top perf at 3276
Performed Kill Check Passed
Canview Kill setting on panel through Menu

By Cindy Hurtado (Operator Representative) Witness Monica Kuehling (NMOCD)

Environmental Coordinator
(Position)

Revised 02-11-02

Oil Conservation Division * 1000 Rio Brazos Road * Aztec, New Mexico 87410
Phone: (505) 334-6178 * Fax (505) 334-6170 * http://www.emnrd.state.nm.us

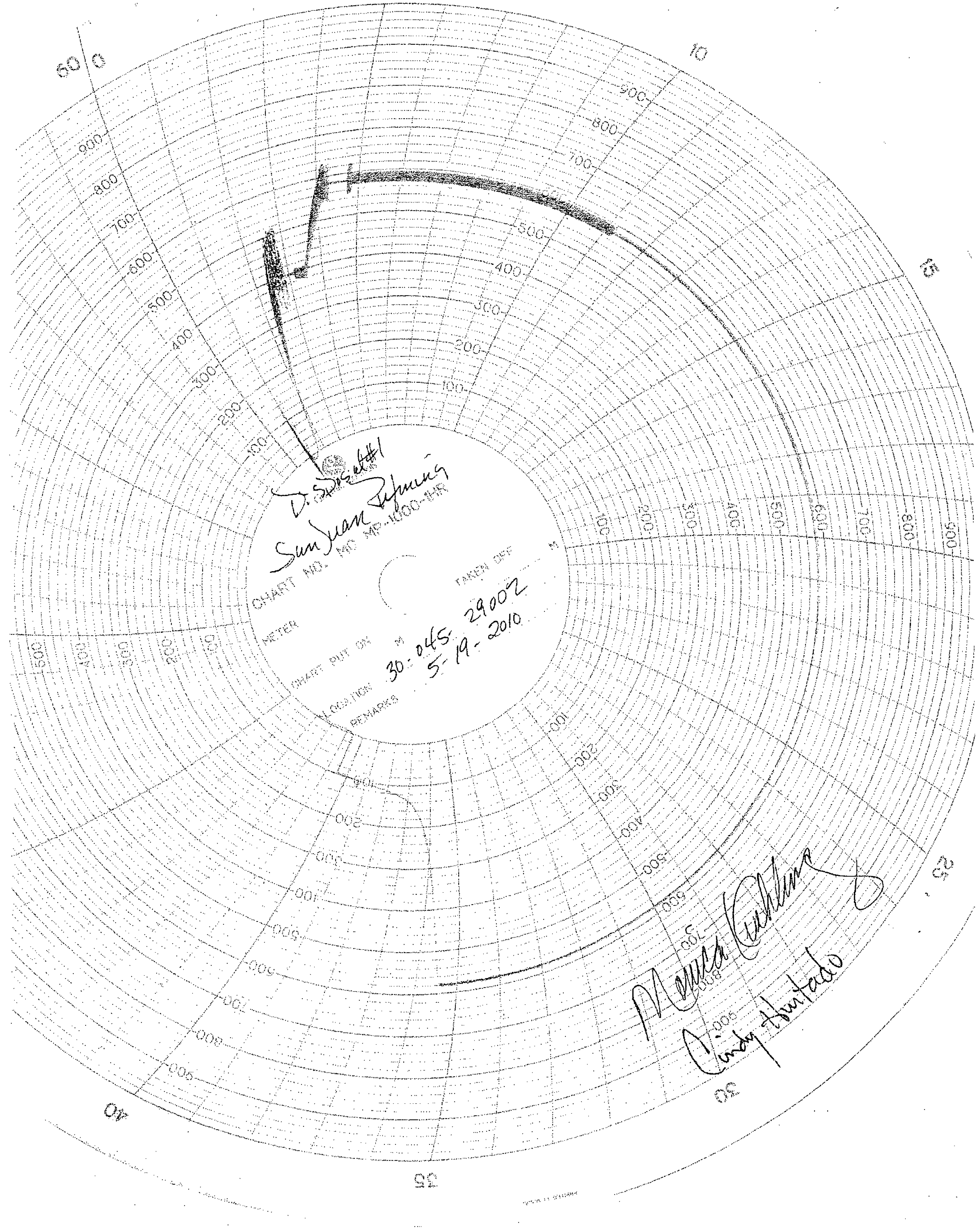


CHART NO. MC MP-1000-1HR
METER
CHART PUT ON
TAKEN OFF
LOCATION
REMARKS
San Juan Refining
30-045-29002
5-19-2010
Cindy Hurtado

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

MECHANICAL INTEGRITY TEST REPORT

(TA OR UIC)

Date of Test 9-24-09 Operator San Juan Refining API # 30-0 _____

Property Name SWD Well # 1 Location: Unit J Sec 27 Twn 29 Rge 11

Land Type:
State _____
Federal _____
Private /
Indian _____

Well Type:
Water Injection _____
Salt Water Disposal /
Gas Injection _____
Producing Oil/Gas _____
Pressure obervation _____

Temporarily Abandoned Well (Y/N): _____ TA Expires: _____

Casing Pres. 0 Tbg. SI Pres. _____ Max. Inj. Pres. _____
Bradenhead Pres. 0 Tbg. Inj. Pres. _____
Tubing Pres. 960
Int. Casing Pres. N/A

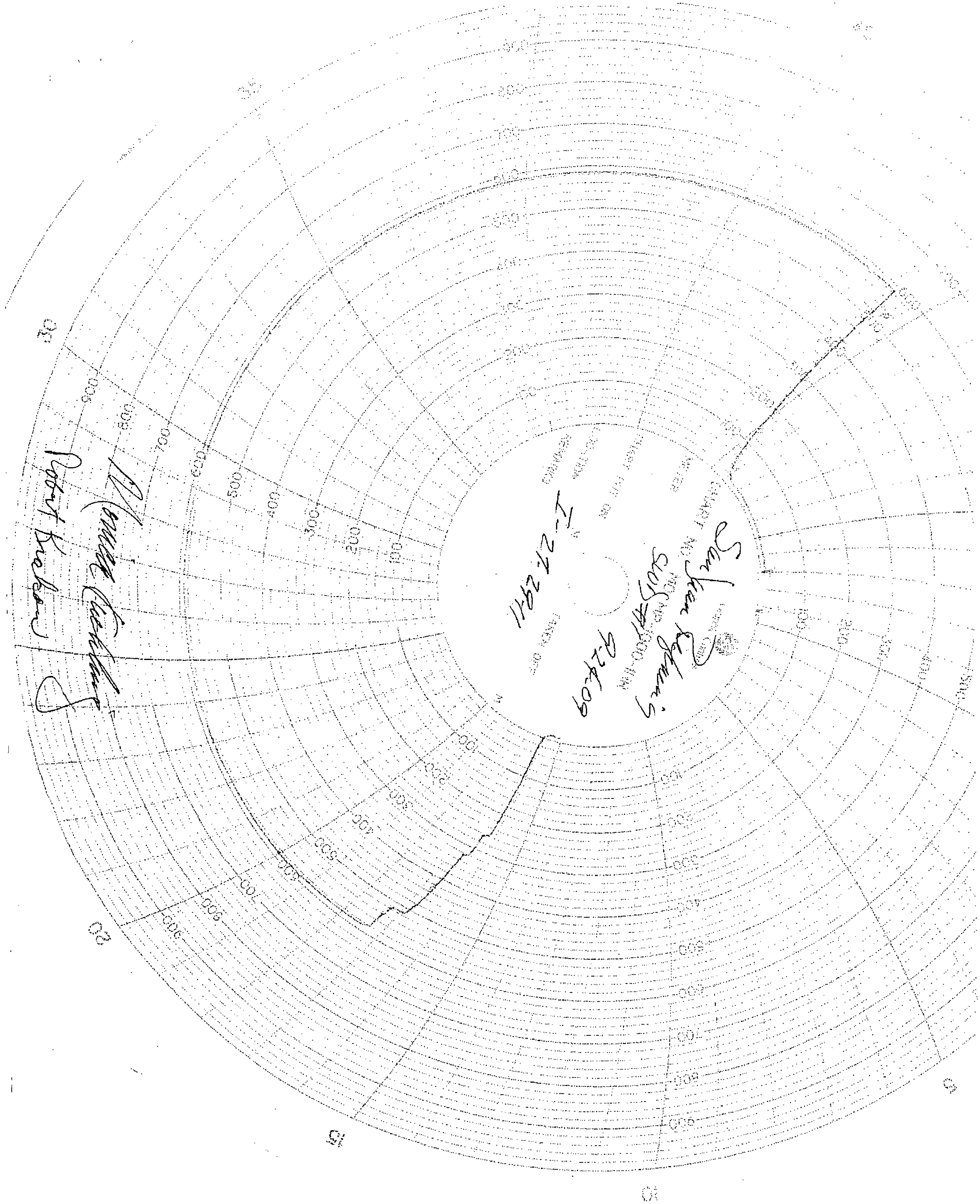
Pressured annulus up to 580 psi. for 30 mins. Test passed/failed

REMARKS:

By Robert Bracken (Operator Representative) Witness Monica Carlberg (NMOCD)

_____ (Position)

Revised 02-11-02



NEW MEXICO ENERGY, MINERALS & NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC NM 87410
(505) 334-6178 FAX: (505) 334-6170
http://emnrd.state.nm.us/ocd/District III/3district.htm

BRADENHEAD TEST REPORT

(submit 1 copy to above address)

Date of Test 9-24-09 Operator San Juan Prod. API #30-0 _____

Property Name SWD Well No. 1 Location: Unit K Section 27 Township 29 Range 11

Well Status(Shut-In or Producing) Initial PSI: Tubing 960 Intermediate N/A Casing 16 Bradenhead 0

OPEN BRADENHEAD AND INTERMEDIATE TO ATMOSPHERE INDIVIDUALLY FOR 15 MINUTES EACH

PRESSURE

Testing	Bradenhead			INTERM	
	BH	Int	Csg	Int	Csg
TIME					
5 min					
10 min					
15 min					
20 min					
25 min					
30 min					

FLOW CHARACTERISTICS

	BRADENHEAD	INTERMEDIATE
Steady Flow		
Surges		
Down to Nothing	✓	
Nothing		
Gas		
Gas & Water		
Water		

If bradenhead flowed water, check all of the descriptions that apply below:

CLEAR_____ FRESH_____ SALTY_____ SULFUR_____ BLACK_____

5 MINUTE SHUT-IN PRESSURE BRADENHEAD 0 INTERMEDIATE N/A

REMARKS: Puff when opened

By Robert Krakow Witness Monica Kuehling

_____
(Position)

E-mail address _____

Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
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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
May 27, 2004

	WELL API NO. 30-045-29002-00
	5. Indicate Type of Lease STATE ☐ FEE X☐
	6. State Oil & Gas Lease No. N/A
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 ☐ OtherX (Disposal)	7. Lease Name or Unit Agreement Name Disposal 8. Well Number #001
2. Name of Operator San Juan Refining Co/Western Refining Southwest, Inc. – Bloomfeld Refinery	9. OGRID Number 037218
3. Address of Operator #50 Road 4990 Bloomfield, NM 87413	10. Pool name or Wildcat Blanco/Mesa Verde
4. Well Location Unit Letter I : 2442 feet from the South line and 1250 feet from the East line Section 27 Township 29 Range 11 NMPM County San Juan	
	11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*
Pit or Below-grade Tank Application ☐ or Closure ☐ Pit type_____ Depth to Groundwater_____ Distance from nearest fresh water well_____ Distance from nearest surface water_____ Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____	

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
OTHER ☐		OTHER: : Radioactive Tracer Test/MIT/BadenheadTest ☐X	

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 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Western Refining Southwest, Inc. – Bloomfield Refinery performed a Radioactive Tracer test on September 23, 2009 on the Class I injection well referenced above. Monica Kuehling of NMOCD-Aztec witnessed all proceedings pertaining to this test. Two millicuries of Scandium (Sc 46) was injected downhole and flushed with 5000 gallons of water. A Gamma Ray correlation log was run from 3506' to the surface. Two passes (up and down) were logged. The logs indicate that most of the perforated intervals are taking fluid. There were spurious spikes above the packer which are usually associated with tubing collars. These spikes indicated that there was still some radioactive material hung up in the tubing.

Bloomfield Refinery performed the annual High Pressure Shutdown Test, Bradenhead Test, and Mechanical Integrity Test on September 24, 2009. All tests were witnessed by Monica Kuehling of NMOCD-Aztec. The MIT held at 580 psi for 30 minutes.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. **I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.**

SIGNATURE Cindy Hurtado TITLE Environmental Coordinator DATE 9/28/09

Type or print name Cindy Hurtado E-mail address: cindy.hurtado@wnr.com Telephone No. (505)632-4161

For State Use Only

APPROVED BY:_____ TITLE_____ DATE_____

Conditions of Approval (if any):

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD

Sent: Monday, July 14, 2008 4:37 PM

To: Chavez, Carl J, EMNRD

Cc: Price, Wayne, EMNRD; Sanchez, Daniel J., EMNRD; Jones, William V., EMNRD; Williams, Chris, EMNRD; Gum, Tim, EMNRD; Perrin, Charlie, EMNRD

Subject: UIC Class I Well MIT Status 2007 vs. 2008

Note to file for 2007 and 2008.

OCD district staff successfully witnessed MITs in 2007 and 2008 at the Class I Wells listed below.

****

The status of Class I MITs for 2007 is as follows:

1) San Juan Refining (UICL-9): Annual MIT performed on 10/17/07 (Annual MIT 578-560 psi over 30 min.)

2) Key Energy (UICL-5) MIT performed on 10/15/07 (Annual MIT 520-500 psi over 30 min.)

3) Navajo WDW#1 (UICL-8) MIT performed on 3/7/07 (5-Yr. MIT 750-750 psi over 30 min.)

4) Navajo WDW#2 (UICL-8) MIT performed on 3/7/07 (5- Yr. MIT 750-740 psi over 30 min.)

5) Navajo WDW#3 (UICL-8) MIT performed on 3/7/07 (5-Yr. MIT 500-490 psi over 30 min.)

It appears that five of the five Class I Wells completed either an annual or 5-Yr. MIT w/ bradenhead

****

Two MITs were witnessed by District Staff in 2008. One was tested after the end of the OCD reporting period of 6/30/2008. Navajo Refining Company Artesia, while completing the Fall-Off Tests at WDWs #1-3, did not complete MITs for the OCD

Reporting period ending 6/30/2008. Navajo has been contacted to arrange a date and time for the annual MITs, bradenheads, etc to be completed before the end of the EPA fiscal year reporting period ending September 30, 2008. In addition, an official Test Plan for the Fall-Off Testing was requested, since Navajo performed the Fall-Off Tests without an OCD approved Test Plan w/ schedule for OCD to witness the tests. Annual MITs should be performed in advance of running the Fall-Off Tests each year, since equipment is mobilized to satisfy the annual MIT and Fall-Off Test Schedule.

The status of Class I MITs for 2008 is as follows:

1) San Juan Refining (UICL-9): Annual MIT performed on 5/7/08 (Annual MIT 538-560 psi over 30 min. w/ Bradenhead- nothing noticed). San Juan County

2) Key Energy (UICL-5) MIT performed on 7/1/08 (Annual MIT 510-522 psi over 30 min.) San Juan County

3) Navajo WDW#1 (UICL-8) MIT performed on 4/1/08 (Fall-Off Test- no annual MIT during reporting period ending 6/30/08)) Eddy County

4) Navajo WDW#2 (UICL-8) MIT performed on 4/2/08 (Fall-Off Test- no annual MIT during reporting period ending 6/30/08) Eddy County

5) Navajo WDW#3 (UICL-8) MIT performed on 4/3/08 (Fall-Off Test- no annual MIT during reporting period ending 6/30/08)) Eddy County

6) Monument Disposal Well was converted back to a Class II SWD Well shortly after obtaining Class I Well Status. No longer a Class I Well. Lea County

Carl J. Chavez, CHMM

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Wednesday, April 16, 2008 12:10 PM
To: 'Cindy Hurtado'; Randy Schmaltz
Cc: Bob Krakow; Price, Wayne, EMNRD; Jones, William V., EMNRD
Subject: RE: Subsurface Technology Proposal

Cindy:

Re: Subsurface Proposal No. 71Z5241 R (Proposal)

Good afternoon. The week of June 9, 2008 works for me, since I plan to be present to witness the installation of gauges, etc., and will need to attend the safety meeting.

The proposal if fine; however, Western Refining Southwest- Bloomfield Refinery does not consider this to be the "Test Plan" (TP) required under the OCD UIC Class I Well Fall-Off Test Guidance (December 3, 2007) does it?

Please submit a TP (Section III) to the OCD that satisfies Sections V through IX of the Guidance referenced above for OCD approval.

Some preliminary questions based on a review of the Proposal include the following:

1) How offset wells in the same formation will be handled before and during the test?

2) Testing procedure section doesn't mention that a crown valve will be installed on well prior to the start of the injection portion of the test so well will not have to be shut-in to install pressure gauges. Pressure gauges must have resolution to 0.0002% of gauge full pressure range.

3) The shut down valve will be located in the pump room? Is the shut down valve referenced in Section 4 of the proposal the same as the shut-off valve in the test? OCD requires shut off valve at the well head to minimize wellbore storage and after flow. Instant shut off is required. Bottom hole shut-in is preferred to surface shut-in.

4) The Proposal seems to be shutting in the well for 3 days; however, OCD guidance recommends 7 days?

Just want to make sure a TP will be submitted for OCD approval? When can I expect to receive it? Once we have an approved TP, it should require minimal changes and could be used for future fall-off testing.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

-----Original Message-----
From: Cindy Hurtado [mailto:Cindy.Hurtado@wnr.com]
Sent: Tuesday, April 15, 2008 3:57 PM
To: Chavez, Carl J, EMNRD; Randy Schmaltz
Cc: Bob Krakow
Subject: Subsurface Technology Proposal

Good Afternoon Carl,

A hard copy of this letter and proposal will be in the mail tomorrow. If you have questions or concerns please contact me.

Thanks,

Cindy Hurtado
Environmental Coordinator
Bloomfield Refinery - Western Refining Southwest, Inc.
(505) 632-4161

Carl Chavez
New Mexico Oil Conservation Division
Environmental Bureau
1220 South St. Francis Dr
Santa Fe, NM 87505

Certified Mail: 7006 0810 0003 7020 6592

April 15, 2008

RE: Bloomfield Refinery – Western Refinery
Class I Non-Hazardous Injection Well
UICL-9

Mr. Chavez,

This notification is to satisfy your requirement to schedule a Fall-Off Test for Bloomfield Refinery's Class I Injection Well (UICL-9) in 2008. Bloomfield Refinery personnel in conjunction with personnel from Subsurface Technology, Inc. would like to conduct the test during the week of June 9, 2008.

Please find enclosed the test proposal provided by Subsurface Technology, Inc. of Houston, Texas. If you have questions or concerns please contact me at (505) 632-4161.

If any representatives from the OCD would like to participate, please contact me so that safety orientation training can be scheduled for incoming personnel.

Sincerely,

Cindy Hurtado
Environmental Coordinator
Bloomfield Refinery – Western Refining Southwest, Inc.

Cc: Randy Schmaltz – Bloomfield Refinery
Brandon Powell – NMOCD Aztec District Office

SUBSURFACE

PROPOSAL TO RUN PRESSURE FALLOFF AND ANNULUS PRESSURE TEST FOR A NONHAZARDOUS UIC CLASS I WASTE DISPOSAL WELL

WESTERN REFINING COMPANY
BLOOMFIELD, NEW MEXICO

Subsurface Proposal No. 71Z5241 R

April 2008

PREPARED BY:

SUBSURFACE TECHNOLOGY, INC
6925 Portwest, Suite 110
Houston, Texas 77024

TABLE OF CONTENTS

APPENDIX

1.0 INTRODUCTION

Subsurface Technology, Inc (Subsurface) is pleased to submit this proposal to Western Refining Company (Western) to perform annual well testing as required by the New Mexico Oil Conservation Division (OCD) for Underground Injection Control (UIC) compliance. The falloff test, annulus pressure test will be performed on Western's UIC nonhazardous Class I well in Bloomfield, NM, API No. 30-045-29002. The data will be analyzed and a report written, which will encompass a one mile area of review of offset wells, the analysis of any wells in the area of review that are producing or injecting into the permitted injection interval of the Western UIC Class I well, and a geological evaluation of the permitted interval.

The reference well is located in Section 26, Township 29 North, Range 11 West, on refinery property. This proposal includes scope of work, testing procedure, cost estimates, and procedure summary.

2.0 SUBSURFACE'S QUALIFICATIONS

Subsurface has a vast experience performing and preparing annual testing reports for Class I wells for state agencies nation wide. Subsurface also performed and prepared the 2006 well study for Giant Refining on reference well, which included a falloff test. The data that was obtained during the 2006 well study will assist Subsurface to perform and write a through annual falloff test that will be accepted by the OCD.

2.1 Company Background

Subsurface was founded in 1978 and is a professional consulting, engineering, and construction firm specializing in environmental-orientated engineering and management. The company has its corporate office in Houston, Texas, with regional offices in Baton Rouge, Louisiana and South Bend, Indiana. These offices provide specialized services in injection well technology, ground water investigations, salt cavern storage, insitu mining, and solid and hazardous material/waste management for a large group of industrially diverse clients. Subsurface has developed an impressive record of successfully completed

projects for clients throughout the United States, Canada, Mexico, China, and the United Kingdom.

The Subsurface staff is comprised of senior-level professionals who have worked for a variety of industrial, commercial, and governmental organizations. The staff includes hydrogeologist; geotechnical and environmental engineers; civil, mechanical, electrical, chemical, and petroleum engineers; geologist; hydrologists; chemist; biologists; designers; regulatory compliance specialists; and other technical specialists. Subsurface has assembled the largest and most experienced staff related to underground injection.

Subsurface's extensive experience in the Class I injection well field includes well permitting, installation, testing, subsurface mapping, formation evaluation, and the evaluation/delineation of complex geological strata. In addition, Subsurface provides specialized laboratory services to evaluate pertinent petrophysical and formation fluid properties of injection and confining zones.

2.2 Class I Well Pressure Falloff Testing/Annulus Pressure Testing and Mechanical Integrity Testing Experience

Subsurface's experience with falloff testing, annulus pressure testing, mechanical integrity testing, and annual report writing for state agencies is extensive. Subsurface has complied over one third of the total permit applications that have been written to Louisiana Department of Natural Resources (LDNR), to the Texas Commission on Environmental Quality (TCEQ), and to the New Mexico OCD for Class I Injection Wells. The senior team of Subsurface has been involved the development of regulations for LDNR, TCEQ, and OCD. As a result of Subsurface's work relationship with the state agencies enables Subsurface to minimize "Notices of Deficiencies" during the review process.

2.3 Selected Clients

A list of the clients that have recently used Subsurface's services to perform mechanical integrity testing and falloff testing in preparing annual reports to state agencies for Class I wells are as follows;

Navajo Refining	Vopak
Huntsman	Air Products
BP Products	Newpark Resources Inc.

3.0 Scope of Work

For State Requirements on Annual Testing
Well No. 1 at the Western Refinery

This scope of work will cover the OCD UIC Class-I Well Falloff Test Guidelines, December 3, 2007. The falloff testing will be done with downhole tandem memory pressure gauges. The annulus pressure test (APT) will be done with plant recording and pumping equipment.

All required logs will be provided by Western Refining (cement bond logs, electric logs, porosity logs). Western Refining will provide the formation fluid data if available, injection fluid data, and one year of injection history (rate and pressures) prior to the falloff test. The historical rate and pressure data are needed to analyze flow regimes at the end of the falloff test.

Subsurface Construction, Inc. will provide the well site supervision, slickline, pressure gauges, area of review documentation, geologic documentation. Subsurface will perform the analysis of the falloff data, analysis of the wells in the one mile area of review, a geological interpretation of the geological environment of the injection interval, and if necessary a relevant structure map and area of review map.

The project will require five days to complete the field data acquisition and an additional 50 hours of analysis. The five days will also include travel time.

4.0 Testing Procedure for Well #1 at the Western Refinery

1. Plant to establish a stabilized injection rate (80 gallons per minute) for a period of three days with plant pumps.
2. Move in and rig up (MIRU) a slickline unit and run in hole (RIH) with a gauge ring and tag bottom to determine the top of any fill.
3. Pull out of the hole (POOH) with gauge ring and RIH with tandem memory gauges to 3250 feet.
4. Continue injection into the well for one hour to allow the tandem memory gauges to stabilize.
5. Shut down injection and isolate the well by closing wing valve in pump room.
6. Monitor the bottom-hole pressure falloff for three days.
7. After three days, POOH with surface memory tool, making five minute gradient stops at 3250 ft, 3000 ft, 2000 ft, 1000 ft.
8. Rig down slick line unit.
9. Perform APT using plant recording and pumping equipment.
10. Return well to Western Refining.

Note: One year of prior injection data (include rates, wellhead pressures, and fluid density) on a month to month interval will be required to do the falloff analysis. The injection data on daily intervals will be needed two months prior to falloff date and if available hourly data one week prior to falloff date.

Well Data

	WDW – 1
Tubing	2.875", 7.55 lb/ft, Fluoroline Cement Lined, 3221'
Packer	5.5"x 2.875", Guiberson Tools, Uni-6, ID 1.87", 3221'
Perforations	Top of the Cliffhouse at 3276' 3276' – 3408', 4SPF 0.5 EHD Top of the Menefee at 3400' 3435' – 3460', 4SPF 0.5 EHD
Protection Casing	5.5", 15.5 lb/ft, 3600'
Cement Top Protection Casing	Surface
PBTD / TD	RBP at 3520', Fill Tagged on 4/20/06 at 3325' & cleaned out
Formation	Cliffhouse / Menefee

WESTERN REFINING DISPOSAL WELL #1

NW, SW SECTION 26, T29N, R11W

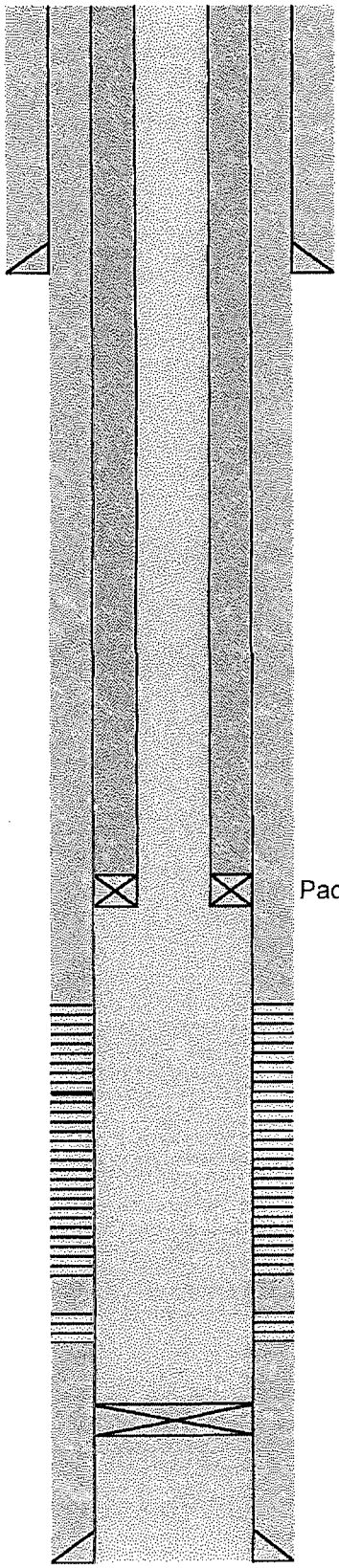
API NO.: 30-045-29002

SUBSURFACE — HOUSTON, TX; SOUTH BEND, IN; BATON ROUGE, LA

APPENDIX A

DISPOSAL WELL #1 WELL SCHEMATIC
Western Refining Inc.
Bloomfield, NM

Date:	4/26/2006	Approved By:	rls	Job No.:	70F5830
Drawn By:	rls	Checked By:		Scale:	N/A



8-5/8", 48#/ft, Surface Casing @ 830'
TOC: Surface
Hole Size: 11.0"

Tubing: 2-7/8", Acid Resistant Fluoroline Cement Lined
Wt of Tubing: 6.5 #/ft
Wt of Tubing Lined: 7.55 #/ft
Tubing ID: 2.128"
Tubing Drift ID: 2.000"
Minimum ID @ Packer: ~1.87" estimated

Packer: Unknown Packer Type @ 3221'
Could be a Guiberson or similar model Uni-6

Perforations: 3276' - 3408' 4JSPF 0.5 EHD
Top of the Cliff House Formation: 3276'

Fill was cleaned out of well on 4/20/06
Fill was orginally tagged at 3325'

Perforations: 3435' - 3460' 4JSPF 0.5 EHD
Top of the Menefee Formation: 3400'

RBP: 3520'

5-1/2", 15.5#/ft, Production Casing @3600'
TOC: Surface
Hole Size: 7-7/8"

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Wednesday, February 20, 2008 2:40 PM
To: 'Randy Schmaltz'
Cc: Perrin, Charlie, EMNRD; Price, Wayne, EMNRD; Jones, William V., EMNRD
Subject: UIC Class I Well Annual Fall-Off Test & MIT
Attachments: Sample UIC Class I Discharge Plan.doc

Mr. Schmaltz:

Re:

UICI No.	Amd #	Applicant	Facility	Expires	Permit Status	API#
9	0	WESTERN REFINING SOUTHWEST, INC.	GIANT BLOOMFIELD CLASS I	11/04/2008	A	**30-045-2900**

I am writing to schedule your annual EPA Fall-Off Test for the above UIC Class I Well. OCD Fall-Off Test Guidance is available on the OCD Website under "Publications" at http://www.emnrd.state.nm.us/ocd/documents/UICGuidance.pdf. At the conclusion or in advance of the Fall-Off Test, the annual MIT or EPA 5-Yr. MIT must be performed.

To learn more about OCD expectations related to the EPA Fall-Off test, please refer to the attached Sample UIC Class I Fall-Off Test" document and search for "Fall-Off" to learn more about OCD requirements for summarizing and reporting the test.

Please provide me with a tentative date that I may work to confirm so the OCD may be present to witness the tests. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3491
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: http://www.emnrd.state.nm.us/ocd/index.htm
(Pollution Prevention Guidance is under "Publications")

GIANT
EXPLORATION & PRODUCTION CO.

2200 Bloomfield Highway
Farmington, New Mexico
87499-2810

P.O. Box 2810
Farmington, New Mexico
87499-2810

505-326-3325
505-327-7987 Fax

May 8, 1996

Mr. Ernest Cardona
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

Re: Mechanical Integrity Test
Northeast Hogback Unit #37
Sec. 10, T30N, R16W
San Juan County, New Mexico

Dear Mr. Cardona:

Enclosed please find a copy of the test chart for the Mechanical Integrity Test performed on the above referenced well. This test was performed and witnessed by you on April 30, 1996.

If you have any questions or need further information, please contact me at (505)326-3325.

Sincerely,

Diane G. Jaramillo
Production\Regulatory Manager

DGJ/dmt

Enclosure

ENERGY, MINERALS and NATURAL RESOURCES DIVISION
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

1000 R
AZTEC, NM

MECHANICAL INTEGRITY TEST REPORT
(TA or UIC)

Date of Test 4-30-96 Operator Giant E&P

Lease Name N.E. Hogback Well # 97 Location: Unit P Sec 10 Twn 30N Rge 16

Land Type: State ___ Federal X Private ___ Indian X

Well Type: Water Injection ___ Salt Water Disposal ___ Gas Injection ___ Producing Oil/Gas ___ Pressure Observation ___

Temporarily Abandoned Well (Y/N): No TA Expires: N.A

Casing Pres. 0
Bradenhead Pres. 0
Tubing Pres. 415#
Int. Casing Pres. NA

Tbg. SI Pres. NA
Tbg. Inj. Pres. NA

Max. Inj. Pres. ___

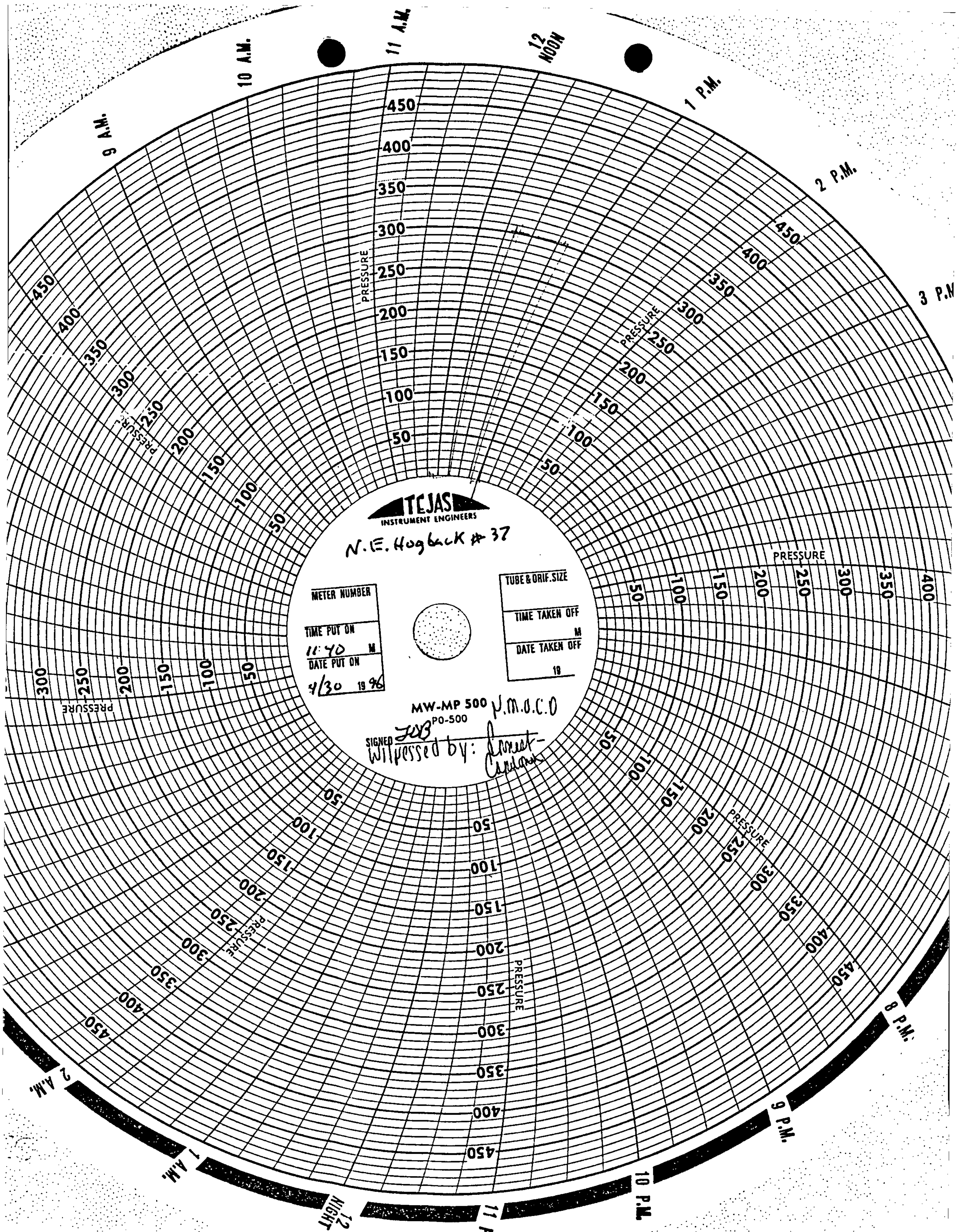
Pressured annulus up to 302 psi. for 15 mins. Test passed/failed. (passed circled)

REMARKS:
Pressured csg/tbg annulus to 302# for 15 mins, pressure didn't drop, held 302#
Said well passed M.I.T

By Larry Bingham
(Operator Representative)
Area Superintendent
(Position)

Witness [illegible] (NMOCD)

Send Copy To Greg McIntosh w/ Giant


TEJAS
INSTRUMENT ENGINEERS
N.E. Hogback #37
METER NUMBER
TIME PUT ON
11:40 M
DATE PUT ON
4/30 1996
TUBE & ORIF. SIZE
TIME TAKEN OFF
M
DATE TAKEN OFF
19
MW-MP 500
PO-500
U.M.O.C.O
SIGNED
Witnessed by:
PRESSURE
9 A.M.
10 A.M.
11 A.M.
12 NOON
1 P.M.
2 P.M.
3 P.M.
8 P.M.
9 P.M.
10 P.M.
12 NIGHT
1 A.M.
2 A.M.

STATE OF NEW MEXICO

ENERGY, MINERALS and NATURAL RESOURCES DIVISION

OIL CONSERVATION DIVISION

AZTEC DISTRICT OFFICE

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

1000 RIO BRAZOS R
AZTEC, NEW MEXICO
(505) 334

MECHANICAL INTEGRITY TEST REPORT

(TA or UIC) API # 30-045-29002

Date of Test 6-22-2000 Operator Bloomfield Refining Co.

Lease Name Disposal Well # 1 Location: Unit I Sec 27 Twn 29 Rge 11

Land Type: State ___ Federal ___ Private X Indian ___

Well Type: Water Injection X Salt Water Disposal ___ Gas Injection ___ Producing Oil/Gas ___ Pressure Observation ___

Temporarily Abandoned Well (Y/N): N TA Expires: ___

Casing Pres. ___ Tbg. SI Pres. ___ Max. Inj. Pres. ___

Bradenhead Pres. ___ Tbg. Inj. Pres. ___

Tubing Pres. ___

Int. Casing Pres. ___

Pressured annulus up to 418 psi. for 30 mins. Test passed/failed.

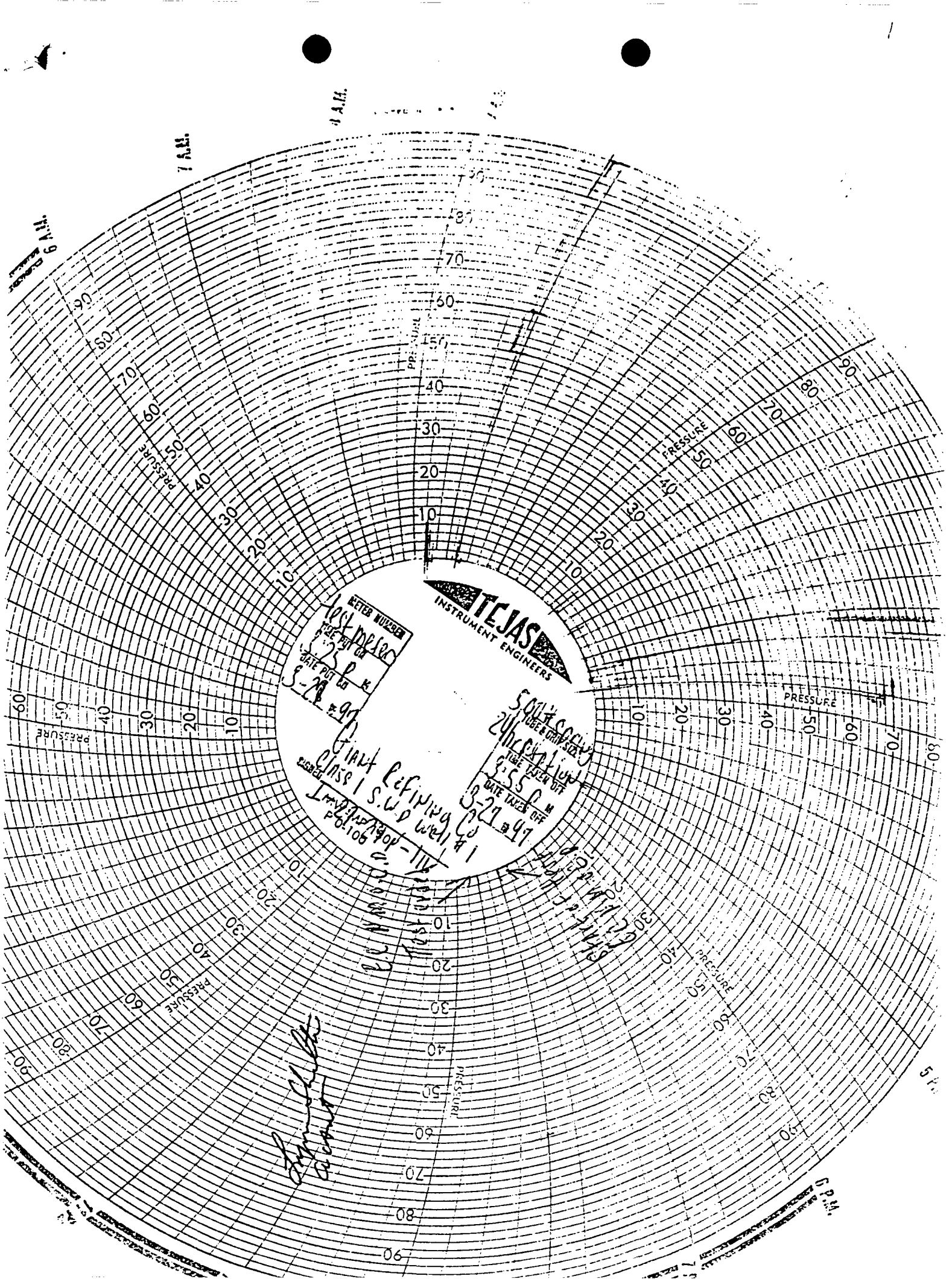
REMARKS: Pressured annulus to 418 psig for 30 min — 0 psi pressure drop. - Plant discharge pumps were down for repair - Could not test hipressure shut down switch.

JUN 2000
RECEIVED
OIL CON. DIV
DIST. 3

By Bay Ad (Operator Representative)

Environmental Manager (Position)

Witness Bruce Martin (NMOCD)


TEJAS
INSTRUMENT ENGINEERS
METER NUMBER
TUBE PUT ON
DATE PUT ON
TUBE & ORIFICE SIZE
TIME TAKEN OFF
DATE TAKEN OFF
PRESSURE
7 A.M.
9 A.M.
5 P.M.

Wayne Price

NEW MEXICO ENERGY, MINERALS & NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC NM 87410
(505) 334-6178 FAX: (505) 334-6170
http://emnrd.state.nm.us/ocd/District III/3dfstric.htm

MECHANICAL INTEGRITY TEST REPORT
(TA or UIC)

Date of Test 6-18-99 Operator Giant Explor & Prod API # 30-045-29002

Property Name Giant Refining Well # 1 Location: Unit F Sec 27 Twn 29 Rge 11

Land Type:
State ____
Federal X
Private ____
Indian ____

Well Type:
Water Injection ____
Salt Water Disposal X
Gas Injection ____
Producing Oil/Gas ____
Pressure observation ____

Temporarily Abandoned Well (Y/N): N TA Expires: ____

Casing Pres. ____
Bradenhead Pres. 0
Tubing Pres. ____
Int. Casing Pres. ____

Tbg. SI Pres. ____
Tbg. Inj. Pres. 1010

Max. Inj. Pres. 1150

RECEIVED
DEC 07 1999
Environmental Bureau
Oil Conservation Division

Pressured annulus up to 358 psi. for 30 mins. Test passed/failed

REMARKS:
T1 = 9:45 p1 = 358 psi T2 = 10:15 am P2 = 370 psi.
Tested Hi pressure Shut down. Set pt @ 1050 tested OK.

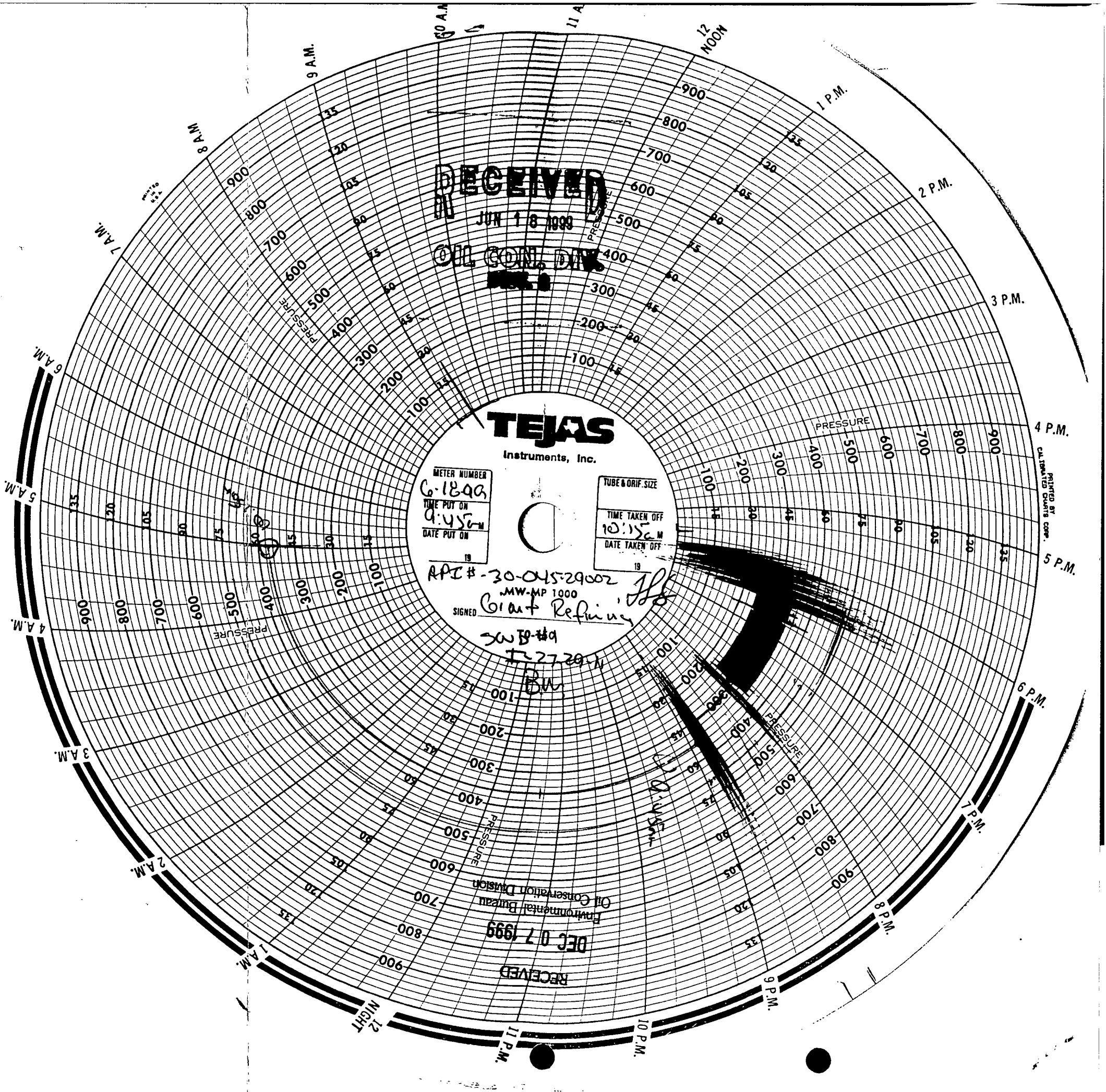
RECEIVED
JUN 18 1999
OIL CON. DIV.
DIST. 3

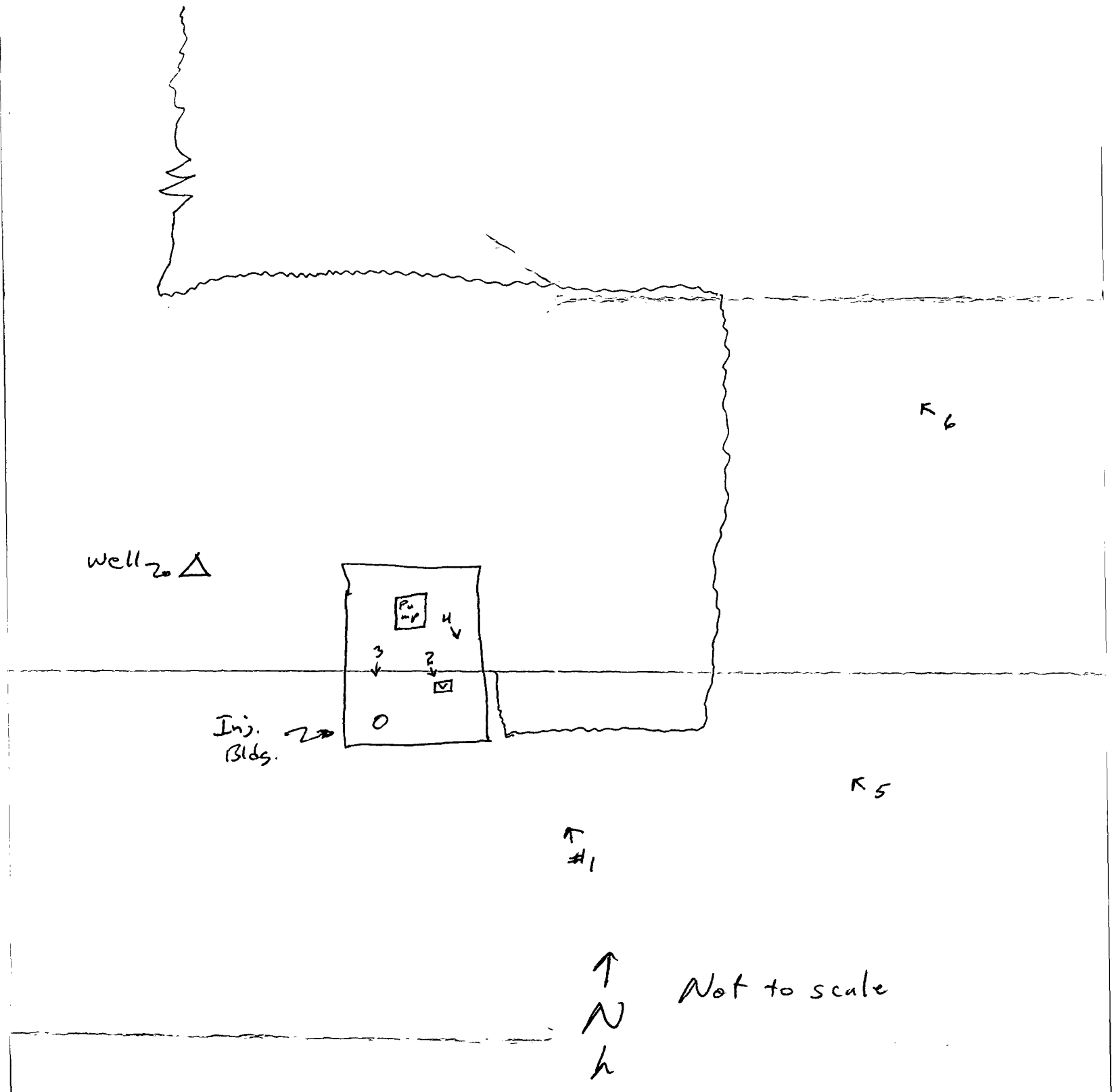
By Jason L Clark
(Operator Representative)

Witness Bruce Martin
(NMOCD)

ENVIRONMENTAL MANAGER
(Position)

REVISED 11-17-98


TEJAS
Instruments, Inc.
METER NUMBER
6-1299
TIME PUT ON
9:45 AM
DATE PUT ON
19
TUBE & ORIF. SIZE
TIME TAKEN OFF
10:15 AM
DATE TAKEN OFF
19
API #-30-045-29002
MW-MP 1000
SIGNED Giant Refining
RECEIVED
JUN 18 1999
OIL CON. DIV.
DIST. 3
RECEIVED
DEC 07 1999
Environmental Bureau
Oil Conservation Division
PRESSURE
PRINTED BY
CALIBRATED CHARTS CORP.


Well 2
Pump
4
3
2
1
Inj. Bldg.
K6
K5
#1
Not to scale
N

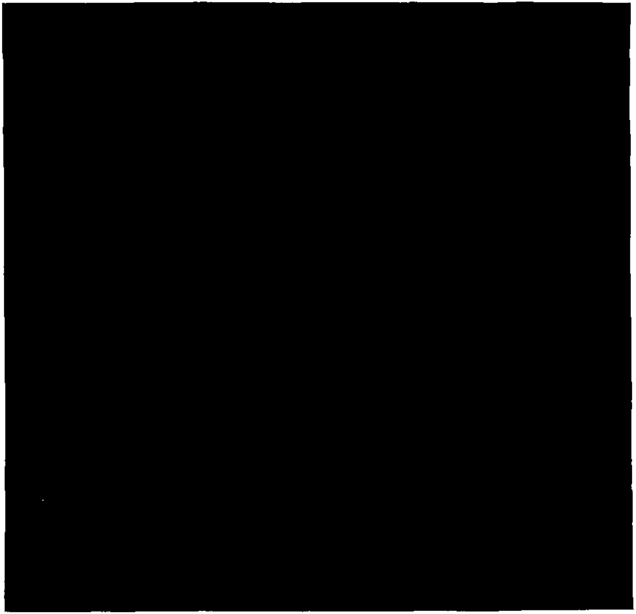
7/2/91 East side of inj plant
looking north

7/2/96 Leaking Jway valve @ Giant Ref
injection station

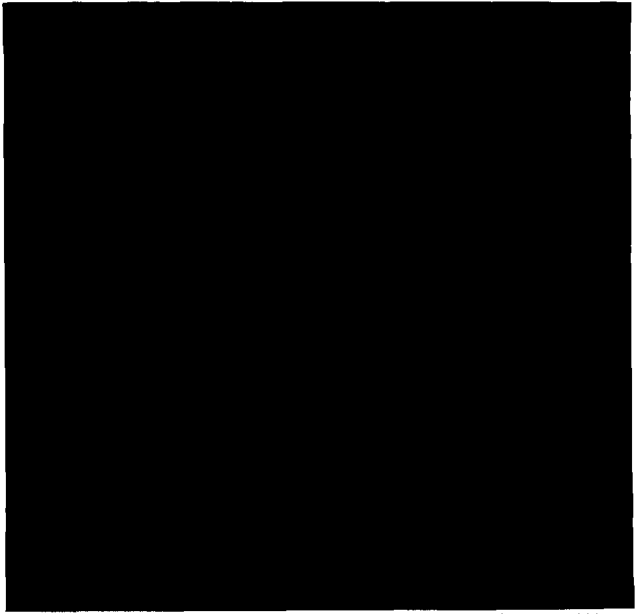
#2

Corrosion chem drum 5/2/96

#3



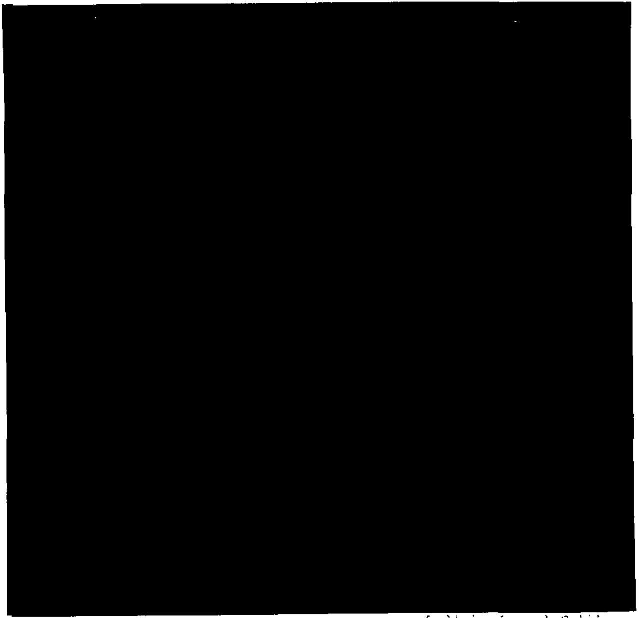
7/2/96 Small tank installed this date in our presence #4



POLAROID

7/2/96 East of inj plant looking NW

#5



7/2/96 North of inj. plant
looking NW

#6

GIMT- CLASS I
6-4-96

11

GRANT - CLASS I
6-9-96

GIANT - CLASS I 17 18

64-96

GRANT - CLASS I
6-4-96

18 19

OCD ENVIRONMENTAL BUREAU

SITE INSPECTION SHEET

DATE: 12/15/99 Time: 11 AM

Type of Facility: Refinery ☒ Gas Plant ☐ Compressor St. ☐ Brine St. ☐ OilField Service Co. ☐
Surface Waste Mgt. Facility ☐ E&P Site ☐ Crude Oil Pump Station ☐
Other ☒ CLASS I INJECTION WELL

Discharge Plan: No ☐ Yes ☑ DP# GW-130

FACILITY NAME: GIANT BLOOMFIELD CLASS I DISPOSAL WELL

PHYSICAL LOCATION:

Legal: QRT NE QRT SE Sec 27 TS 29N R 11W County SAN JOAN NM

OWNER/OPERATOR (NAME) GIANT REFINING CO.

Contact Person: DAVE PAULICH Tele:# 505-722-3833

MAILING ADDRESS: P.O. BOX 159 BLOOMFIELD State NM ZIP 87413

Owner/Operator Rep's: SAB

OCD INSPECTORS: W PRICE, C PERRIN, D FOUST NMED-HRMB D. COBRAIN

1. **Drum Storage:** All drums containing materials other than fresh water must be stored on an impermeable pad with curbing. All empty drums will be stored on their sides with the bungs in and lined up on a horizontal plane. Chemicals in other containers such as sacks or buckets will also be stored on an impermeable pad and curb type containment.

OK

2. **Process Areas:** All process and maintenance areas which show evidence that leaks and spills are reaching the ground surface must be either paved and curbed or have some type of spill collection device incorporated into the design.

OK

3. **Above Ground Tanks:** All above ground tanks which contain fluids other than fresh water must be bermed to contain a volume of one-third more than the total volume of the largest tank or of all interconnected tanks. All new tanks or existing tanks that undergo a major modification, as determined by the Division, must be placed within an impermeable bermed enclosure.

OK

4. **Above Ground Saddle Tanks:** Above ground saddle tanks must have impermeable pad and curb type containment unless they contain fresh water or fluids that are gases at atmospheric temperature and pressure.

DIESEL TANK BY SOUTH EVAPORATION POND NEED CONTAINMENT. GIANT INDICATED THIS TANK IS TEMPORARY.

5. **Labeling:** All tanks, drums and containers will be clearly labeled to identify their contents and other emergency notification information.

OK

6. **Below Grade Tanks/Sumps:** All below grade tanks, sumps, and pits must be approved by the OCD prior to installation or upon modification and must incorporate secondary containment and leak-detection into the design. All pre-existing sumps and below-grade tanks must demonstrate integrity on an annual basis. Integrity tests include pressure testing to 3 pounds per square inch above normal operating pressure and/or visual inspection of cleaned out tanks and/or sumps, or other OCD approved methods. The OCD will be notified at least 72 hours prior to all testing.

OK - DP REQUIREMENT

7. **Underground Process/Wastewater Lines:** All underground process/wastewater pipelines must be tested to demonstrate their mechanical integrity at present and then every 5 years thereafter, or prior to discharge plan renewal. The permittee may propose various methods for testing such as pressure testing to 3 pounds per square inch above normal operating pressure or other means acceptable to the OCD. The OCD will be notified at least 72 hours prior to all testing.

OK - DP REQUIREMENT

8. **Onsite/Offsite Waste Disposal and Storage Practices:** Are all wastes properly characterized and disposed of correctly? Does the facility have an EPA hazardous waste number? ✓ **Yes** _____ **No**

ARE ALL WASTE CHARACTERIZED AND DISPOSED OF PROPERLY? YES ☑ **NO** ☐ **IF NO DETAIL BELOW.**

9. **Class V Wells:** Leach fields and other wastewater disposal systems at OCD regulated facilities which inject non-hazardous fluid into or above an underground source of drinking water are considered Class V injection wells under the EPA UIC program. All Class V wells that inject non-hazardous industrial wastes or a mixture of industrial wastes and domestic wastes will be closed unless it can be demonstrated that groundwater will not be impacted in the reasonably foreseeable future. Closure of Class V wells must be in accordance with a plan approved by the Division's Santa Fe Office. The OCD allows industry to submit closure plans which are protective of human health, the environment and groundwater as defined by the WQCC, and are cost effective. Class V wells that inject domestic waste only must be permitted by the New Mexico Environment Department.

ANY CLASS V WELLS NO ☑ YES ☐ IF YES DESCRIBE BELOW ! Undetermined ☐

10. **Housekeeping:** All systems designed for spill collection/prevention will be inspected weekly and after each storm event to ensure proper operation and to prevent overtopping or system failure. A record of inspections will be retained on site for a period of five years.

GOOD !

11. **Spill Reporting:** All spills/releases will be reported pursuant to OCD Rule 116 and WQCC 1203 to the proper OCD District Office.

OK !

12. **Does the facility have any other potential environmental concerns/issues?**

NONE OBSERVED !

13. **Does the facility have any other environmental permits - i.e. SPCC, Stormwater Plan, etc.?**

—

14. **ANY WATER WELLS ON SITE ?** NO ☐ YES ☐ **IF YES, HOW IS IT BEING USED ?**

—

Miscellaneous Comments:

CLASS I WELL ANNULUS PRESSURE MAINTAINED 700 psig - OK
MONITORING EQUIPMENT WORKING - YES - OK

Number of Photos taken at this site: 13 - ATTACHED
attachments-

Pictures By: Wayne Price NMOCD
Dec 15, 1999- Giant Bloomfield
Class I Inj. Well (GW-130) inspection.

#1 API Separator ponds

#4 Refinery evaporation (south) pond

#2 API south pond

#5 Same as above-Looking east.

#3 API Separator

#6 North evaporation pond

Pictures By: Wayne Price NMOCD
Dec 15, 1999- Giant Bloomfield
Class I Inj. Well (GW-130) inspection.

#7 Refinery - looking west

#10 Sign

#8 Class I Inj. Well and Tank

#11 Annulas Pressure gage & high-limit control device.

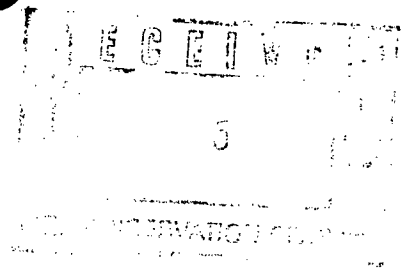
#9 Injection Well

#12 Injection pressure chart

Pictures By: Wayne Price NMOCD
Dec 15, 1999- Giant Bloomfield
Class I Inj. Well (GW-130) inspection.

Giant Refinery- Looking Southwest

GIANT
REFINING COMPANY



March 2, 2001

Mr. Wayne Price
Environmental Bureau
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

RE: Mechanical Integrity Test, Quarterly Injection well Analytical 2000

Dear Mr. Price:

Enclosed, please find the Mechanical Integrity Test for the disposal dated June 22, 2000 as required. Also attached are the quarterly analytical results for the injection well, the 2nd quarter was not performed.

After researching the permit for the injection well I did find the requirement that I send to the OCD the analytical and the mechanical integrity test when completed. In the future I will forward this information to you and apologize if this has caused you any inconvenience.

Sincerely:

Barry Holman
Environmental Manager
San Juan Refining Company - Bloomfield

PHONE
505-632-8013
FAX
505-632-3911

50 ROAD 4990
P.O. BOX 159
BLOOMFIELD
NEW MEXICO
87413

STATE OF NEW MEXICO

ENERGY, MINERALS and NATURAL RESOURCES DIVISION

OIL CONSERVATION DIVISION

AZTEC DISTRICT OFFICE

DRUG FREE

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

1000 RIO BRAZOS R
AZTEC, NEW MEXICO 8
(505) 334

MECHANICAL INTEGRITY TEST REPORT

(TA or UIC) API #30-045-29002

Date of Test 6-22-2000 Operator Bloomfield Refining Co.

Lease Name Disposal Well # 1 Location: Unit I Sec 27 Twn 29 Rge 11

Land Type: State ___ Federal ___ Private X Indian ___

Well Type: Water Injection X Salt Water Disposal ___ Gas Injection ___ Producing Oil/Gas ___ Pressure Observation ___

Temporarily Abandoned Well (Y/N): N TA Expires: ___

Casing Pres. ___ Tbg. SI Pres. ___ Max. Inj. Pres. ___

Bradenhead Pres. ___ Tbg. Inj. Pres. ___

Tubing Pres. ___

Int. Casing Pres. ___

Pressured annulus up to 418 psi. for 30 mins. Test passed/failed.

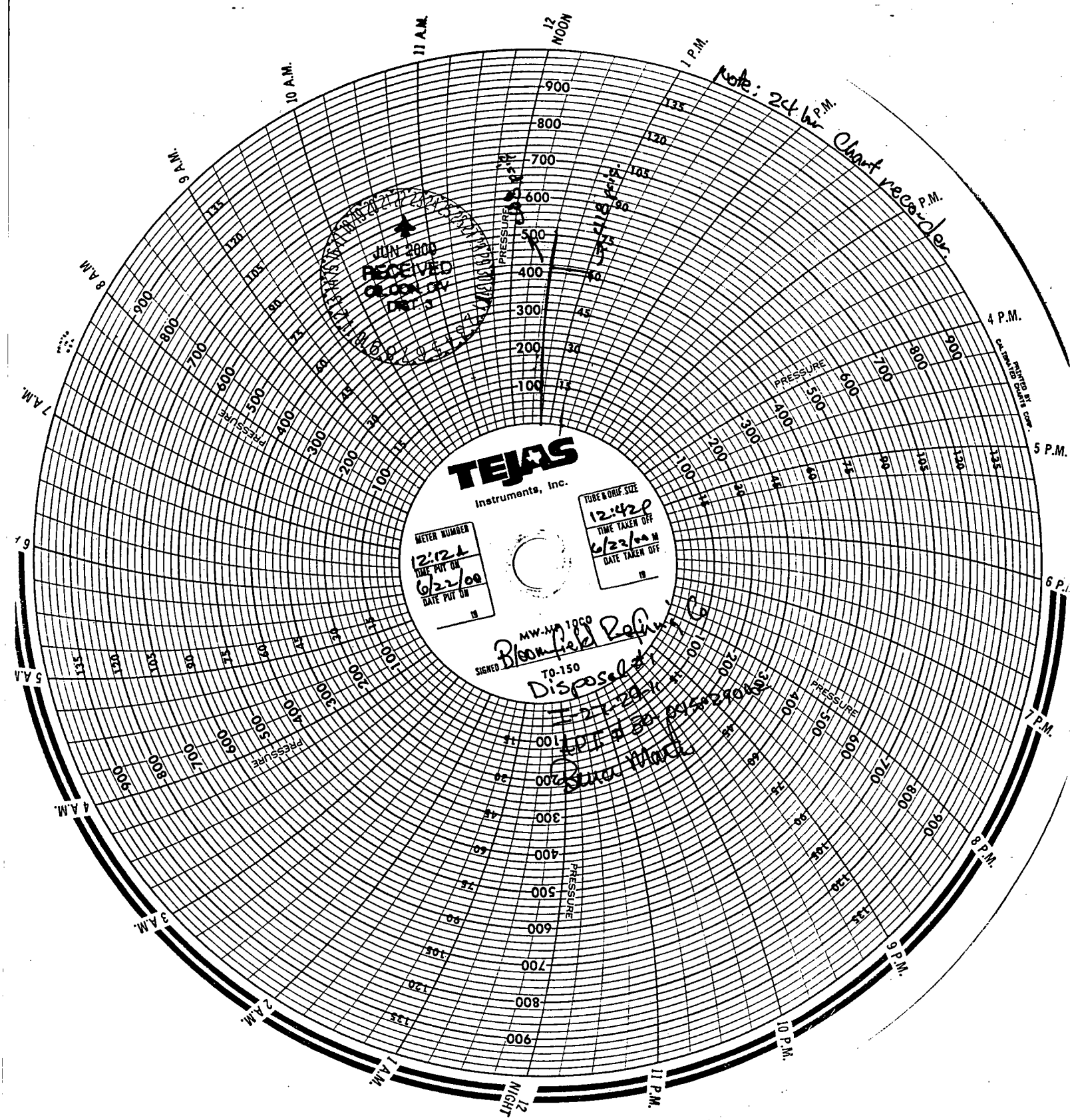
REMARKS: Pressured annulus to 418 psig for 30 min - 0 psi pressure drop. - Plant discharge pumps were down for repair - Could not test hipressure shut down switch.

JUN 2000
RECEIVED
OIL CON. DIV.
DIST. 3

By Bay Ad (Operator Representative)

Environmental Manager (Position)

Witness Bruce Martin (NMOCD)


Note: 24 hr Chart recorder.
TEJAS
Instruments, Inc.
METER NUMBER
12:12A
TIME PUT ON
6/22/00
DATE PUT ON
19
TUBE & ORIF. SIZE
12:42P
TIME TAKEN OFF
6/23/00 M
DATE TAKEN OFF
19
MW-MP 10CO
SIGNED Bloomfield Refining Co
TO-150
Disposal at
JUN 2000
RECEIVED
OIL CON. DIV.
DIST. 3
PRESSURE
TEMP
12 NOON
1 P.M.
2 P.M.
3 P.M.
4 P.M.
5 P.M.
6 P.M.
7 P.M.
8 P.M.
9 P.M.
10 P.M.
11 P.M.
12 NIGHT
1 A.M.
2 A.M.
3 A.M.
4 A.M.
5 A.M.
6 A.M.
7 A.M.
8 A.M.
9 A.M.
10 A.M.
11 A.M.

GIANT
REFINING COMPANY

October 16, 2001

Mr. Wayne Price
Environmental Bureau
1220 So. St. Francis Dr.
Santa Fe, New Mexico 87505

Re: Class I Injection Well Mechanical Integrity Test Report

Dear Mr. Price:

Attached please find a copy of the Mechanical Integrity Test Report on the Class I Injection Well at San Juan Refining Company (Bloomfield).

If you have questions or need more information, please contact me at (505) 632-4168.

Sincerely,

Barry Holman
Environmental Manager
San Juan Refining Company (Bloomfield)

PHONE
505-632-8013
FAX
505-632-3911

50 ROAD 4990
P.O. BOX 159
BLOOMFIELD
NEW MEXICO
87413

Grant - Wayne Price

NEW MEXICO ENERGY, MINERALS & NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC NM 87410
(505) 334-6178 FAX: (505) 334-6170
http://emnrd.state.nm.us/ocd/District III/3district.htm

MECHANICAL INTEGRITY TEST REPORT
(TA or UIC)

Date of Test 8-15-2001 Operator Bloomfield Refining Co API # 30-0 45-29002

Property Name Disposal Well # 1 Location: Unit I Sec 27 Twn 29 Rge 11

Land Type:
State ____
Federal ____
Private X
Indian ____

Well Type: Class 1 X
Water Injection ____
Salt Water Disposal ____
Gas Injection ____
Producing Oil/Gas ____
Pressure observation ____

Temporarily Abandoned Well (Y/N): N TA Expires: —

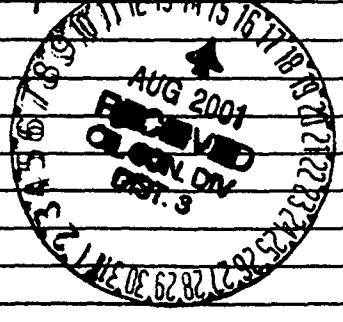
Casing Pres. ____
Bradenhead Pres. 0
Tubing Pres. ____
Int. Casing Pres. ____

Tbg. SI Pres. ____
Tbg. Inj. Pres. 920

Max. Inj. Pres. 1150

Pressured annulus up to 380 psi. for 30 mins. Test (passed)/failed

REMARKS: Pressure dropped ~2 psi. — Injection pump was shut down during test.

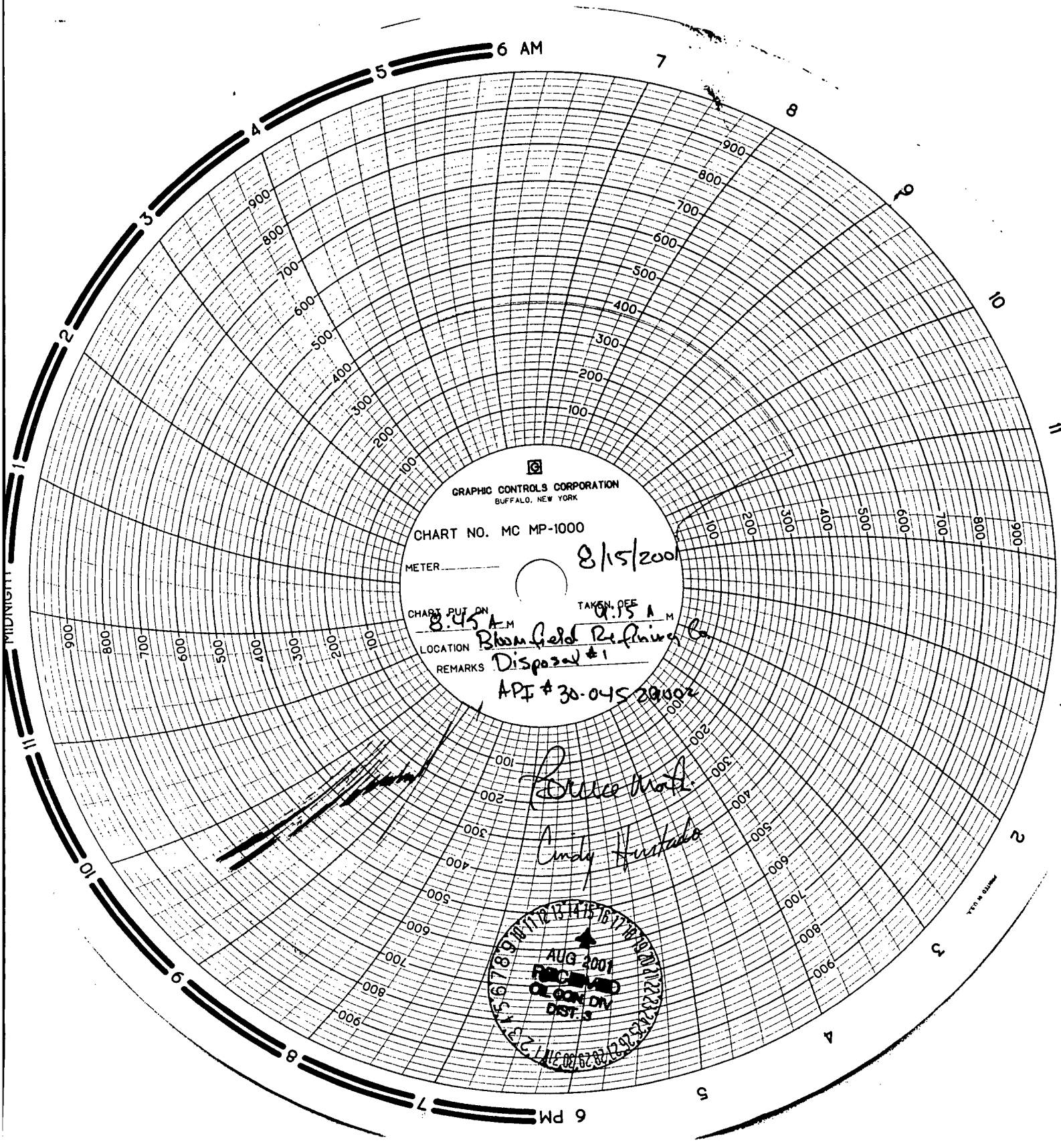


By Cindy Hurtado
(Operator Representative)

Witness Bruce Martin
(NMOCD)

(Position)

REVISED 11-17-98


6 AM
NOON
6 PM
MIDNIGHT
GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK
CHART NO. MC MP-1000
METER
8/15/2001
CHART PUT ON 8:45 A M
TAKEN OFF 9:15 A M
LOCATION Bloomfield Refining Co.
REMARKS Disposal #1
API # 30-045-28402
Patricia Martinez
Cindy Hurtado
AUG 2001
RECEIVED
OIL CON. DIV.
DIST. 3

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

RECEIVED

Wayne Price

SEP 1 0 2003

OIL CONSERVATION DIVISION

MECHANICAL INTEGRITY TEST REPORT

(~~TA OR~~ UIC)

Date of Test 9/2/03 Operator SJ Refining Co. API # 30-045-29002

Property Name Disposal Well # 1 Location: Unit I Sec 27 Twn 29 Rge 11

Land Type:
State ____
Federal ____
Private X
Indian ____

Well Type:
Water Injection ____
Salt Water Disposal X
Gas Injection ____
Producing Oil/Gas ____
Pressure obervation ____

Temporarily Abandoned Well (Y/N): N TA Expires: —

Casing Pres. ____ Tbg. SI Pres. ____ Max. Inj. Pres. ____
Bradenhead Pres. 0 Tbg. Inj. Pres. 937
Tubing Pres. ____
Int. Casing Pres. ____

Pressured annulus up to 360 psi. for 30 mins. Test passed/~~failed~~

REMARKS: No pressure drop.

SEP 2003 RECEIVED OIL CONS. DIV. DIST. 3

By Cindy Hurtado (Operator Representative)

Witness Bruce Martin (NMOCD)

Environmental Assistant (Position)

Revised 02-11-02

Graphic Controls
CHART NO. MC MP-1000-1HR
METER
9/2/03
CHART PUT ON 11:50 A. M
TAKEN OFF 12:20 P. M
LOCATION SJ Refining Co.
REMARKS Disposal #1
API #30-045-29002
SEP 2003
RECEIVED
OIL CONS. DIV.
DIST. 3
Cindy Hurtado
9-02-03
PRINTED IN U.S.A.