

**BW - 4**

**MECHANICAL  
INTEGRITY TEST  
(MITs)**

**DATE: \_\_\_\_\_**

Submit 1 Copy To Appropriate District Office  
 District I - (575) 393-6161  
 1625 N. French Dr., Hobbs, NM 88240  
 District II - (575) 748-1283  
 811 S. First St., Artesia, NM 88210  
 District III - (505) 334-6178  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 District IV - (505) 476-3460  
 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
 Energy, Minerals and Natural Resources

Form C-103  
 Revised July 18, 2013

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

WELL API NO. 30-025-26883
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. 25-26883
7. Lease Name or Unit Agreement Name Eidson Brine Station, BW-004
8. Well Number 1
9. OGRID Number 130851
10. Pool name or Wildcat
11. Elevation (Show whether DR, RKB, RT, GR, etc.)

**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 Brine Well

2. Name of Operator  
Wasserhund, Inc.

3. Address of Operator  
P.O. Box 2140, Lovington, NM 88260

4. Well Location  
 Unit Letter M : 567.4 feet from the South line and 161.7 feet from the West line  
 Section 31 Township 16S Range 35E NMPM County Lea

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

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

See Attached Chart

2015 DEC -2 A 9:21  
 PRODUCTION

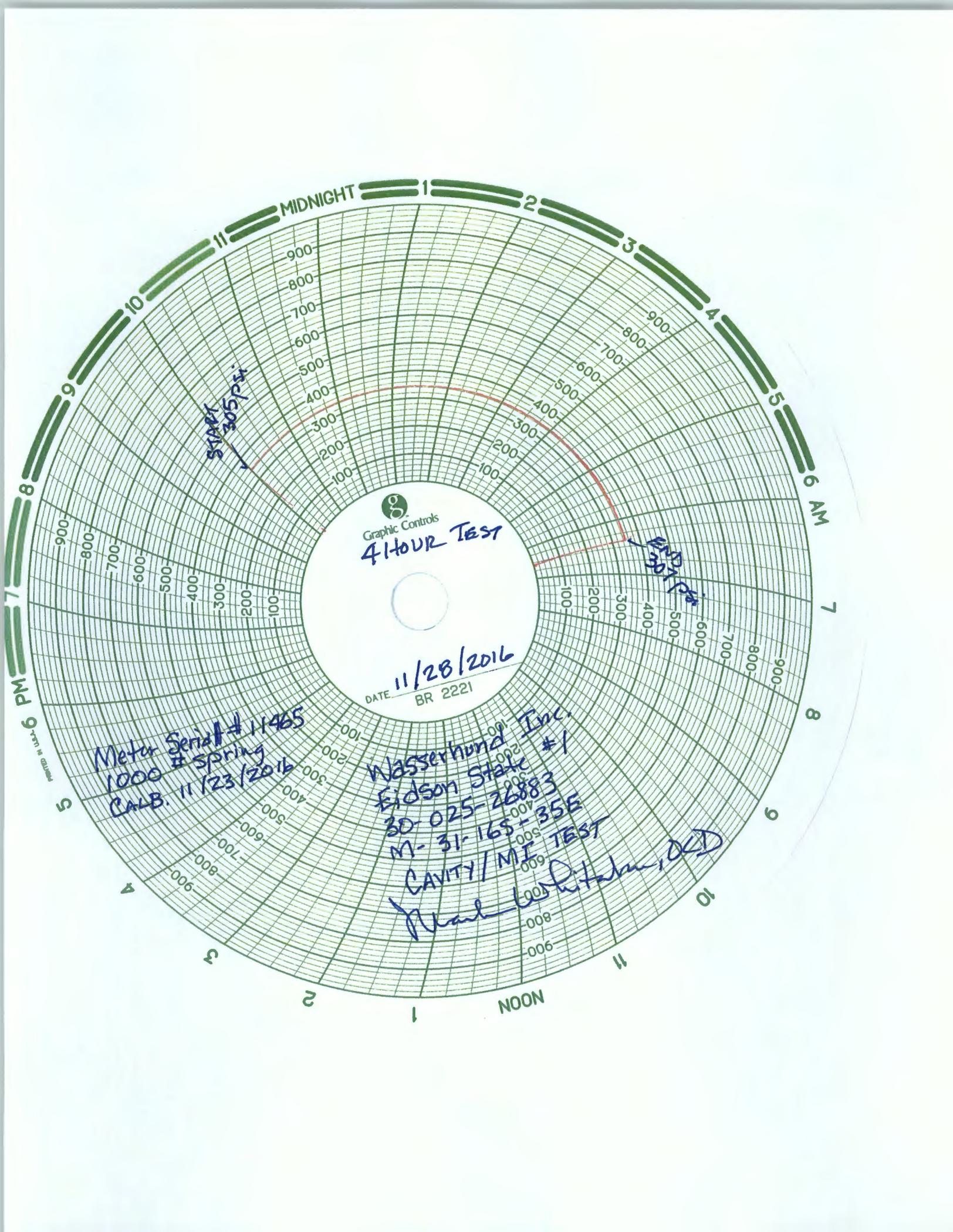
Spud Date:

Rig Release Date:

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

SIGNATURE Jon Gandy TITLE Secretary/Treasurer DATE 11/29/16  
 Type or print name Jon Gandy E-mail address: jonrgandy@aol.com PHONE: 575-396-0522  
**For State Use Only**

APPROVED BY: Carl J. Cheney TITLE \_\_\_\_\_ DATE 12/6/16  
 Conditions of Approval (if any): \_\_\_\_\_



Graphic Controls  
4 Hour Test

DATE 11/28/2016  
BR 2221

Meter Serial # 11465  
1000 # Spring  
CALB. 11/23/2016

Wasserhund Inc.  
Edson State #1  
30-025-26883  
M-31-165-35E  
CAVITY/MT TEST

Mark [unclear]

START 305 psi

END 307 psi

6 PM

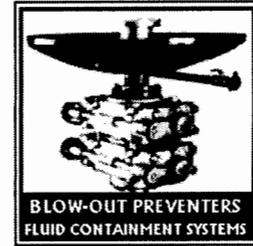
6 AM

NOON

MIDNIGHT

# D & L Meters & Instrument Service, Inc.

Lovington, NM 88260  
P.O. Box 1621  
Office: (575) 396-3715  
Fax: (575) 396-5812



**Date:** Wednesday, November 23, 2016

**Invoice #** \_\_\_\_\_

## Certification of Pressure Recorder Test:

**Company:** Gandy  
**Unit:** Gandy #4  
**Model:** 8" PMC  
**Pressure Rating:** 1,000#  
**Serial #:** 11218

*This Pressure Recorder was tested at midrange for accuracy and verified within +5% and -5% for 1,000# pressure element.*



\_\_\_\_\_  
Issac Luna, Technician

## Chavez, Carl J, EMNRD

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**From:** Chavez, Carl J, EMNRD  
**Sent:** Wednesday, October 19, 2016 4:26 PM  
**To:** 'Larry Gandy'  
**Cc:** Griswold, Jim, EMNRD; Brown, Maxey G, EMNRD; Whitaker, Mark A, EMNRD; Sanchez, Daniel J., EMNRD  
**Subject:** RE: Wasserhund Brine Wells MIT Status (BW-4 & BW-22) Last MIT Date: 10/18/2011  
**Attachments:** EPA 5-Yr Casing MIT 10-12-2016 CJC.pdf; UIC Class III Cavern MIT Guidance 10-12-16CJC..pdf

Larry:

Good afternoon. The New Mexico Oil Conservation Division (OCD) has reviewed its administrative records for the above subject brine wells, and notice that your brine wells must be tested on or before November 30, 2016.

Please contact Mr. Mark A. Whitaker (see contact information below) to schedule either your Casing MIT or Cavern MIT (see attached procedures). The choice is yours.

District 1  
1625 N. French Drive  
Hobbs, New Mexico 88240  
OFFICE: (575) 393-6161 FAX: (575) 393-0720  
EMERGENCY NUMBER - MOBILE: (575) 370-3186  
Business Hours:  
7:00 AM-12:00 PM and 1:00 - 4:00 PM  
Monday through Friday

[Mark A. Whitaker](#) - Petroleum Engineering Specialist

Phone extension: 120

Mobile: (575) 399-3202

- Field Inspections, Plug and Abandonment, Orphan Well Plugging, P&A Site Release

Please contact me if you have questions. Thank you.

**UIC Program**  
**Brine Well EPA 5-Yr. MIT Guidance**  
(30-minute hydrostatic well casing MIT closed to formation)

- 1) A work over rig must remove all tubing from the hole.
- 2) A packer or plug must be set within 20 feet of the casing shoe depth and piping must be filled, and pressured up from 300 to 500 psi. The casing/tubing annulus must be loaded with inert fluid at least 24 hours prior to testing.
- 2) Have manpower and equipment available for pressure test. Wellhead shall be prepared for test and all valves and gauges should be in good working order.
- 3) Pumps, tanks, external lines etc. must be isolated from the wellhead during test.
- 4) A continuous recording pressure device with a 1 or 4-hour clock shall be installed on the casing annulus. The pressure range shall not be greater than 500 psig. The operator must provide proof that the pressure-recording device has been calibrated within the past 6 months.
- 5) A minimum of one pressure gauge shall be installed on the casing/tubing annulus.
- 6) OCD must witness the beginning of test (putting chart on) and ending of test (removing chart). **At the end of test operator may be required to bleed-off well pressure to demonstrate recorder and gauge response into an adequately sized containment vessel(s) for this purpose and to verify that there were no obstructions in the well during the test. Effluent from this vessel must be discharged back into the well at the completion of the test.**
- 7) The Operator shall supply the following information on the pressure chart:
  - A. Company Name, Well Name, API #, Legal Location.

- B. Test Procedure (1) Casing + Formation (2) Casing Test Only (3) Both (4) Other
  - C. Testing Media: Water, Gas, Oil, Etc.
  - D. Date, time started and ending.
  - E. Name (printed) and signature of company representative and OCD Inspector
- 8) **TEST ACCEPTANCE:** The OCD will use the following criteria in determining if a well has passed the Mechanical Integrity Test:
- A. **Passes** if Zero Bleed-Off during the test.
  - B. **Passes** if Final Test Pressure is within  $\pm 10\%$  of Starting Pressure, if approved by the OCD inspector.
  - C. **Fails** if any Final Test Pressure is greater than  $\pm 10\%$  of Starting Pressure. Operators must investigate for leaks and demonstrate that mechanical integrity of the well(s) by ensuring there are no leaks in the casing, or packer, and injected/produced fluids are confined within the piping and injection zones. Wells shall not resume operations until approved by OCD.

**Note: OCD recognizes that different operations, well designs, formation characteristics and field conditions may cause variations in the above procedures. If operator wishes to make or anticipate changes, please notify the OCD for approval. All operators are responsible to notify OCD of any procedure that may cause harm to the well system or formation. Please be advised that OCD approval does not relieve any operator of liability should operations result in pollution of surface water, groundwater, or the environment.**

**Also note: This document is intended to provide technical guidance to operators on technical means to achieve compliance with the rules and regulations of the Oil Conservation Division and the Oil and Gas Act. The test procedures set forth are not regulations or policies and therefore other methods may exist to achieve compliance with the rules and regulations and the Oil and Gas Act.**

**NMOCD recommends that a licensed professional engineer or licensed geologist, or a licensed professional engineer or licensed geologist designee supervise all test procedures and associated field activity.**

DRAFT

**OCD UIC Program**  
**Draft Brine Well Cavern MIT Guidance** (4-hour hydrostatic well test open to the salt formation)

- 1) The cavern and all piping must be filled, pressured up and stabilized for a period of at least 24 hours prior to testing. If this test requires a packer then casing/tubing annulus must be loaded with inert fluid 24 hours prior to testing.
- 2) Have manpower and equipment available for pressure test. Wellhead shall be prepared for test and all valves and gauges should be in good working order.
- 3) Pumps, tanks, external lines etc. must be isolated from the wellhead during test.
- 4) A continuous recording pressure device with an **8 or 12-hour clock** shall be installed on the casing/tubing annulus. The pressure range shall not be greater than 500 psig. The operator must provide proof that the pressure-recording device has been calibrated within the past 6 months. **Note: Wells with packer installed: If this test requires both the casing/tubing annulus and cavern to be tested then two recording devices must be supplied or one recording device with two pins.**
- 5) A minimum of one pressure gauge shall be installed on the casing/tubing annulus.
- 6) OCD must witness the beginning of test (putting chart on) and ending of test (removing chart). **Ensure that fluids from the well are not spilled onto the ground.**
- 7) The Operator shall supply the following information on the pressure chart:
  - A. Company Name, Well Name, API #, Legal Location.
  - B. Test Procedure (1) Casing + Formation (2) Casing Test Only (3) Both (4) Other
  - C. Testing Media: Water, Gas, Oil, Etc.
  - D. Date, time started and ending.
  - E. Name (printed) and signature of company representative and OCD

Inspector

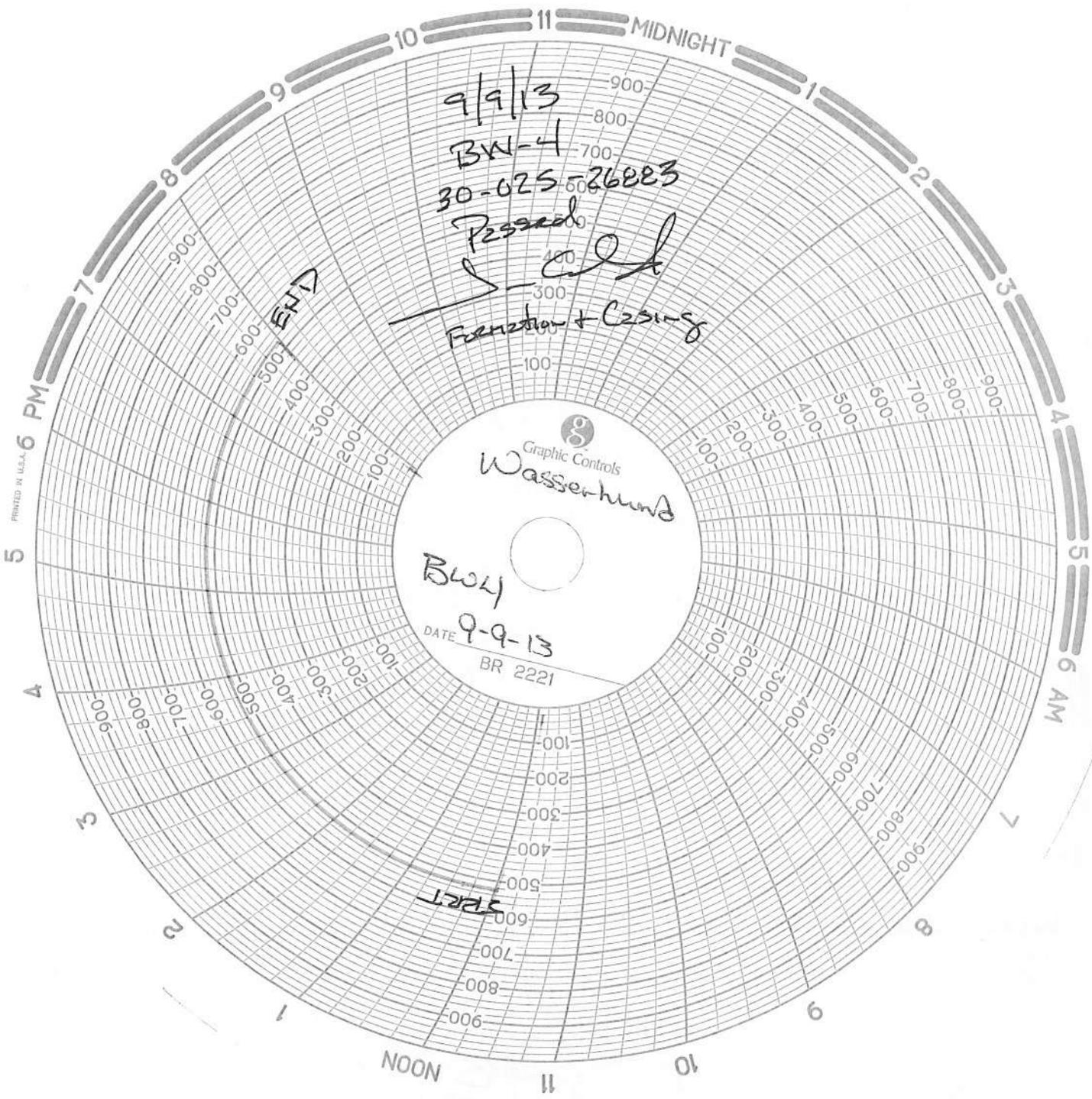
- 8) **TEST ACCEPTANCE:** The OCD will use the following criteria in determining if a well has passed the Mechanical Integrity Test:
- A. **Passes** if Zero Bleed-Off during the test.
  - B. **Passes** if Final Test Pressure is within  $\pm 1\%$  of Starting Pressure, if approved by the OCD inspector.
  - C. **Fails** if any Final Test Pressure is greater than  $\pm 1\%$  of Starting Pressure. Operators must investigate for leaks and demonstrate that mechanical integrity of the well(s) by ensuring there are no leaks in the tubing, casing, or packer, and injected/produced fluids are confined within the piping and injection zones. Wells shall not resume operations until approved by OCD. **Caution is urged to reduce pressure appropriately as a function of depth to the salt cavern to prevent fracturing during testing.**

**Note: OCD recognizes that different operations, well designs, formation characteristics and field conditions may cause variations in the above procedures. If operator wishes to make or anticipate changes please notify the OCD for approval. All operators are responsible to notify OCD of any procedure that may cause harm to the well system or formation. Please be advised that OCD approval does not relieve any operator of liability should operations result in pollution of surface water, groundwater, or the environment.**

**Also note: This document is intended to provide technical guidance to operators on technical means to achieve compliance with the rules and regulations of the Oil Conservation Division and the Oil and Gas Act. The test procedures set forth are not regulations or policies and therefore other methods may exist to achieve compliance with the rules and regulations and the Oil and Gas Act.**

**OCD recommends that a licensed professional engineer or licensed geologist, or a licensed professional engineer or licensed geologist designee supervise all test procedures and associated field activity.**

PRINTED IN U.S.A. 6 PM



9/9/13  
 BW-4  
 30-025-26223

Passed  
*[Signature]*  
 Friction + Casing

Graphic Controls  
 Wasserhund

BW4  
 DATE 9-9-13  
 BR 2221

START

END

**D & L Meters & Instrument Service, Inc.**

Lovington, NM 88260  
P.O. Box 1621  
Office: (575) 396-3715  
Fax: (575) 396-5812



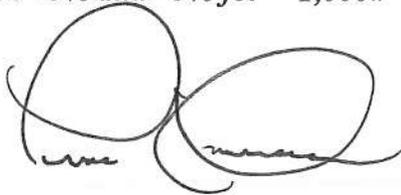
Friday, September 06, 2013

Invoice # 100177

**Certification of Pressure Recorder Test:**

**Company:** Gandy  
**Unit:** 2  
**Model:** 8" Chart recorder  
**Pressure Rating:** 1,000#  
**Serial #:**

*This Pressure Recorder was tested at midrange for accuracy and verified within +5% and -5% for 1,000# pressure element.*



\_\_\_\_\_  
Issac Luna

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

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b> (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-025-26883
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other Brine Well		5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
2. Name of Operator Wasserhund, Inc.		6. State Oil & Gas Lease No. 25-26883
3. Address of Operator P.O. Box 2140, Lovington, NM 88260		7. Lease Name or Unit Agreement Name Eidson Brine Station, BW-004
4. Well Location Unit Letter <u>M</u> : <u>567.4</u> feet from the <u>South</u> line and <u>161.7</u> feet from the <u>West</u> line Section <u>31</u> Township <u>16s</u> Range <u>35e</u> NMPM County <u>Lea</u>		8. Well Number <u>1</u>
		9. OGRID Number 130851
		10. Pool name or Wildcat
11. Elevation (Show whether DR, RKB, RT, GR, etc.)		

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

<b>NOTICE OF INTENTION TO:</b> PERFORM REMEDIAL WORK <input checked="" 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"/>		<b>SUBSEQUENT REPORT OF:</b> 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: <u>Integrity test</u> <input 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.

Please see attached:  
 Chart  
 Well Bore Diagram  
 Last time pulled packer test - 10/06/08

Spud Date:  Rig Release Date:

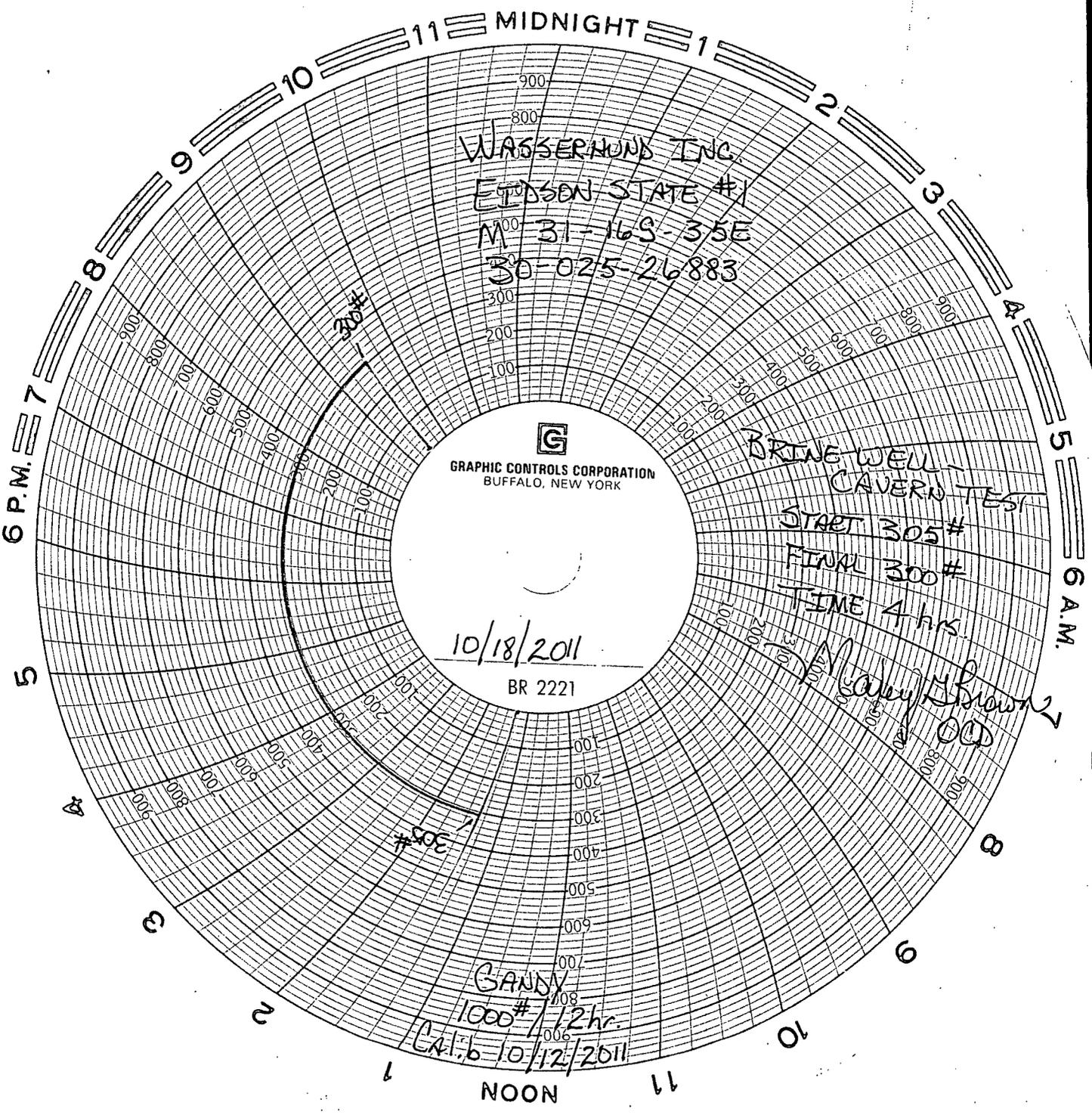
I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Larry Gandy TITLE Secretary/Treasurer DATE 11/04/11

Type or print name Larry Gandy E-mail address: lgandy@gandycorporation.com PHONE: 575-396-0522

**For State Use Only**

APPROVED BY: \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
 Conditions of Approval (if any): \_\_\_\_\_



WASSERHUND INC.  
EDISON STATE #1  
M 31-16S-35E  
30-025-26883

**G**  
GRAPHIC CONTROLS CORPORATION  
BUFFALO, NEW YORK

10/18/2011  
BR 2221

BRINE WELL  
CAVERN TEST  
START 305#  
FINAL 300#  
TIME 4 hrs

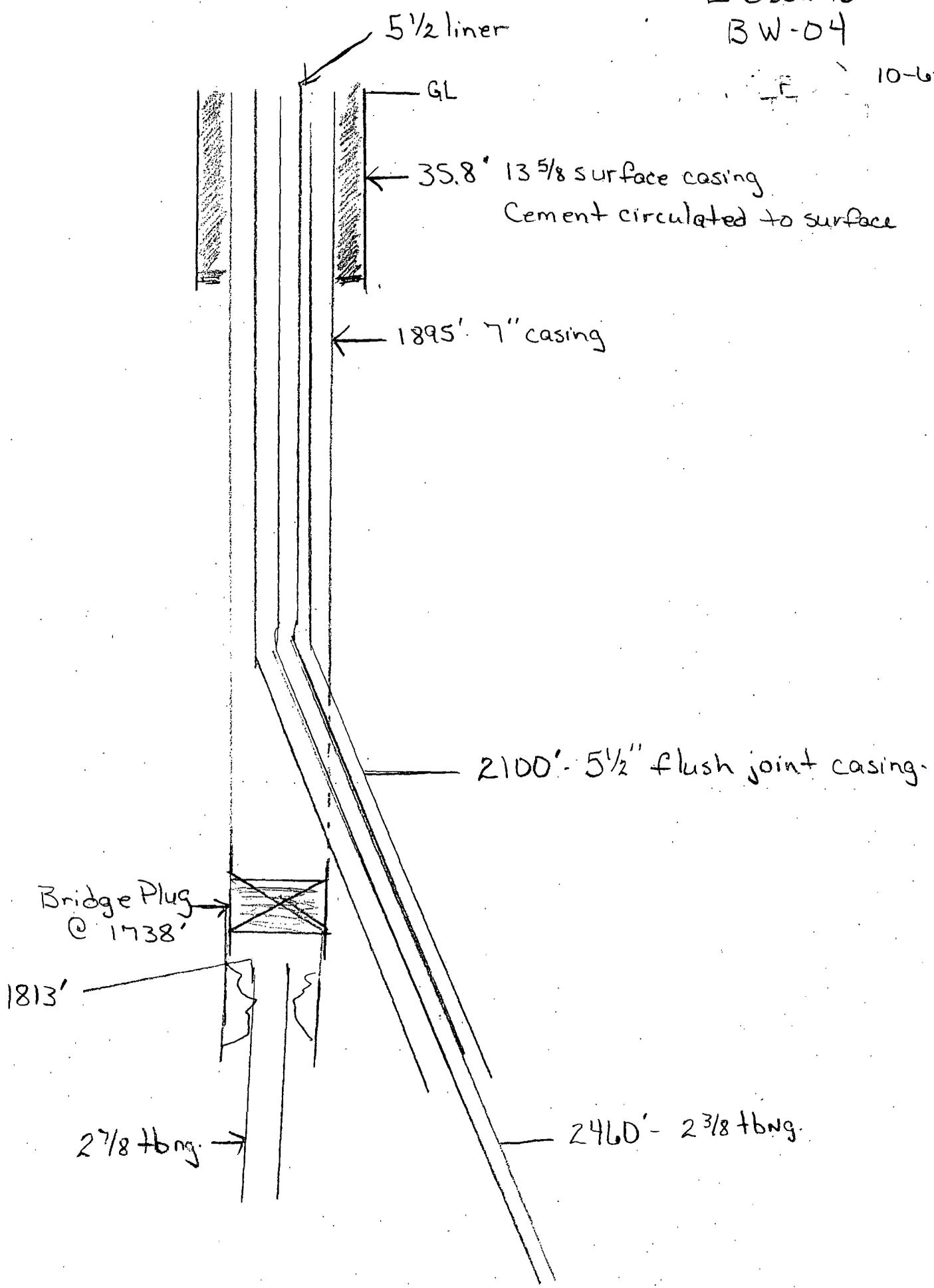
*M. Kelly / Brown*  
OO

#30E

GANNY  
1000# / 12 hr.  
CAT: 6 10/12/2011

Gandy Corporation  
Edison Brine Stat.  
BW-04

10-6-08



## Griswold, Jim, EMNRD

---

**From:** Donny Collins [dcollins@gandycorporation.com]  
**Sent:** Thursday, December 23, 2010 11:53 AM  
**To:** Griswold, Jim, EMNRD  
**Subject:** Brine Well test Results  
**Attachments:** EidsonBrine bw004.pdf, QualityBrine bw002.pdf

Here are the results witnessed by Maxey Brown from Hobbs OCD Office

Gandy Corporation

Quality Brine(tatum Brine) BW-002, API # 30-25-28162  
Eidson Brine(Wasserhund Brine) BW-004, API # 30-025-26883

Donny Collins  
[dcollins@gandycorporation.com](mailto:dcollins@gandycorporation.com)



Friday, December 17, 2010

**Certification of Pressure Recorder Test:**

**MODEL: PMC 8" Ser: 11218 # Unit # Gandy # 4**

This Pressure Recorder was tested at midrange for accuracy and verified within +5% and -5% for a dual pen recorder with 1,000 # pressure elements.



Jesse Arenivas, Technician

## Chavez, Carl J, EMNRD

---

**From:** Chavez, Carl J, EMNRD  
**Sent:** Friday, April 23, 2010 6:56 AM  
**To:** 'Alvarado, David'; 'lyn.sockwell@basicenergyservices.com'; 'James Millett'; Clay Wilson; 'Patterson, Bob'; 'gandy2@leaco.net'; 'Gary Schubert'; 'Dan Gibson'  
**Cc:** VonGonten, Glenn, EMNRD; Griswold, Jim, EMNRD  
**Subject:** New Mexico UIC Class III Brine Well MIT Scheduling with Completion by September 30, 2010

Gentlemen:

Re:

Basic Energy Services: BW-002 & BW-025  
Gandy Corporation: BW-004 & BW-022  
Key Energy Services, LLC: BW-028  
Mesquite: BW-027 (MITs on 2-Well System Completed this Season) & BW-030  
Salty Dog: BW-008  
HRC: BW-031

Good morning. It is that time of year again to remind operators that their MITs for this season must be completed by 9/30/2010. The list of operator names w/ associated brine wells are provided above and as in the past, the OCD attempts to schedule MITs logistically on the same day and in a route with start times that is most efficient in the field.

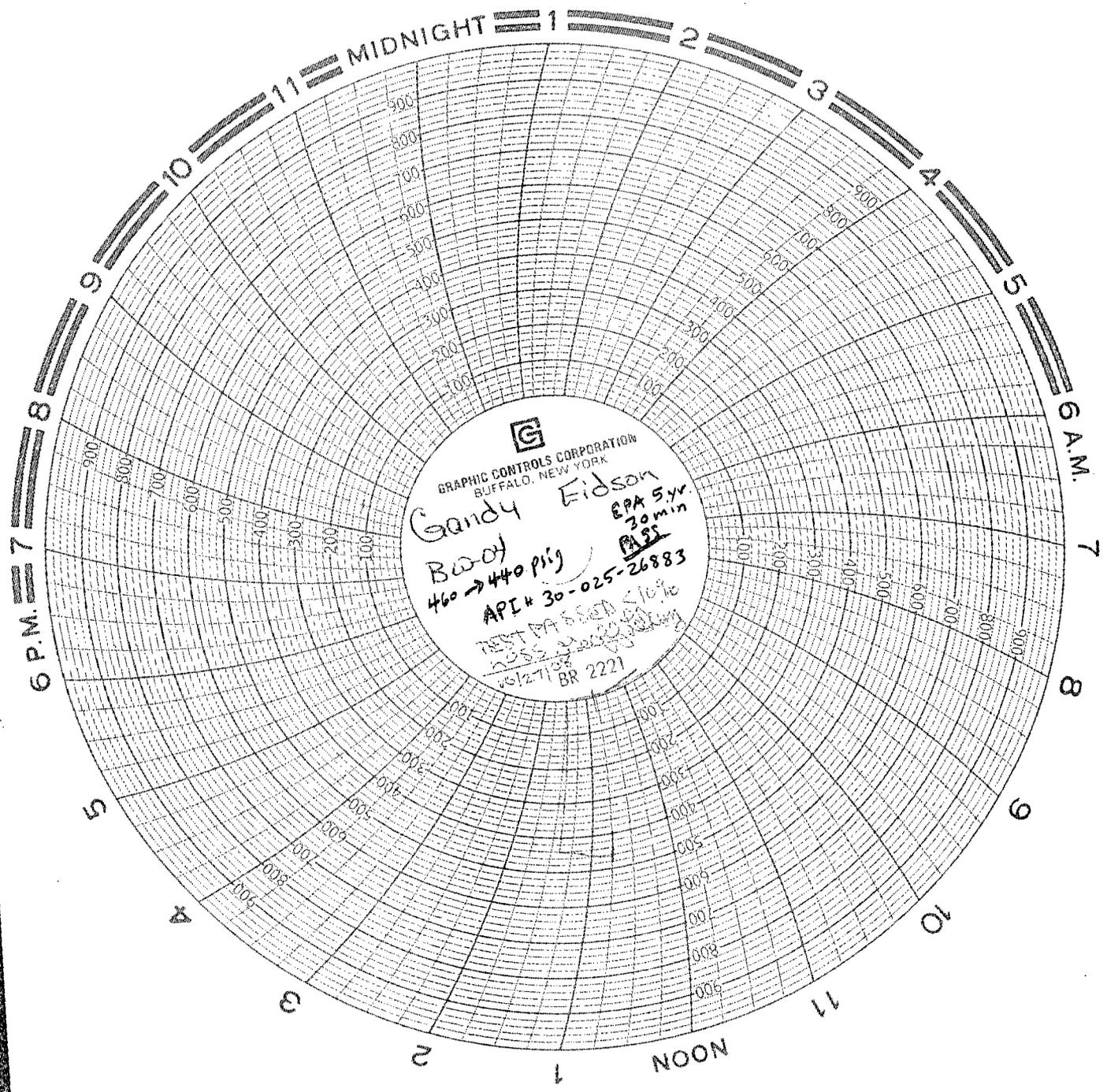
Operators are aware of the annual formation MIT (4-hr @ 300 psig or less depending on historical pressure and TD of well) and every 5-yrs. or after well workover. EPA MIT (30 min. @ 500 psig). Operators need to review well MIT records to inform OCD-EB of the type of MIT it will run this year and inform OCD-EB of any issues or concerns associated with this season's MIT.

You may access your well information on OCD Online either by API# and/or Permit Number at <http://ocdimage.emnrd.state.nm.us/imaging/AEOrderCriteria.aspx> and <http://www.emnrd.state.nm.us/OCD/OCDPermitting/Data/Wells.aspx>. For information on New Mexico's UIC Program and training information, please go to: <http://www.emnrd.state.nm.us/ocd/Publications.htm>.

Please contact Jim Griswold at (505) 476-343465 on or before May 7, 2010 to schedule your preferred MIT date and time. Jim will work to finalize the witness schedule with each of you. Thank you in advance for your cooperation.

Copy: Brine Well Files BWs- 2, 4, 8, 22, 25, 27, 28, 30 & 31

Carl J. Chavez, CHMM  
UIC Program Quality Assurance & Quality Control Officer  
New Mexico Energy, Minerals & Natural Resources Dept.  
Oil Conservation Division, Environmental Bureau  
1220 South St. Francis Dr., Santa Fe, New Mexico 87505  
Office: (505) 476-3490  
Fax: (505) 476-3462  
E-mail: [CarlJ.Chavez@state.nm.us](mailto:CarlJ.Chavez@state.nm.us)  
Website: <http://www.emnrd.state.nm.us/ocd/index.htm>  
(Pollution Prevention Guidance is under "Publications")



## Chavez, Carl J, EMNRD

---

**From:** Chavez, Carl J, EMNRD  
**Sent:** Thursday, July 02, 2009 11:53 AM  
**To:** 'seay04@leaco.net'; 'David Pyeatt'; 'garymschubert@aol.com'  
**Cc:** Griswold, Jim, EMNRD; VonGonten, Glenn, EMNRD  
**Subject:** 2009 MIT Scheduling Request

Gentlemen:

OCD records show that your brine wells have not been MIT'd this season. The OCD needs the owner/operator to contact the OCD to schedule an MIT before the end of the EPA Federal Fiscal Year or by COB on 9/30/2009.

Brine Wells Needing an MIT this season are as follows:

BW-4 EPA 30 min. MIT w/ tubing pulled out of casing w/ packer or plug set near casing shoe (from 300 – 500 psig)

BW-22 EPA 30 min. MIT w/ tubing pulled out of casing w/ packer or plug set near casing shoe (from 300 – 500 psig)

BW-30 Fm. MIT 4-Hr. (similar pressure as last formation MIT)

BW-31 EPA 30 Min. MIT w/ tubing pulled out of casing w/ packer or plug set near casing shoe (from 300 – 500 psig)

*If you have completed an MIT this season, but did not send in the chart and calibration information, please let me know ASAP.*

Please contact me within 5 working days to tentatively schedule a date and time for the test in order for the OCD to identify a couple of days where we can witness all of the MITs. The month of August would probably allow enough time for scheduling, etc. and to beat the 9/30/09 deadline.

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) 476-3490  
Fax: (505) 476-3462  
E-mail: [CarlJ.Chavez@state.nm.us](mailto:CarlJ.Chavez@state.nm.us)  
Website: <http://www.emnrd.state.nm.us/ocd/index.htm>  
(Pollution Prevention Guidance is under "Publications")

## Active Brine Well Facilities

- **BW-2** Basic Energy/P&S Eunice #1 (API 30-025-26884)

Began production in July 1980.

Depth to top-of-salt 1320 ft bgs. Casing shoe @ 1440 ft bgs. Tubing depth 1718 ft bgs.

Last sonar log completed February 2009. Interval imaged 1440 to 1666 ft bgs. Log indicates only 21,000 bbls of cavern volume despite historic production of 6.8 Mbbls. Cavern should be ~1Mbbls.

Permit renewal date: 1/6/2014

- **BW-4** Gandy Corporation/Eidson State #1 (API 30-025-26883)

Began production in August 1980.

Depth to top-of-salt 1865 ft bgs. Casing shoe @ 1895 ft bgs. Tubing depth 2461 ft bgs.

Last sonar log completed October 2008. Interval imaged 1909 to 1944 ft bgs. Log indicates only 11 bbls of cavern volume despite historic production of 5.28 Mbbls. Cavern should be ~800,000 bbls.

Permit renewal date: 6/11/2011

- **BW-8** PAB Services/Brine Supply #1 (API 30-025-26307)

Began production in May 1979.

Depth to top-of-salt 2000 ft bgs. Casing shoe @ 1871 ft bgs. Tubing depth 2552 ft bgs.

Last sonar log completed February 2009. Interval imaged 1871 to 1903 ft bgs. Log indicates only 720 bbls of cavern volume despite historic production of perhaps 12 Mbbls. Cavern should be 1.8 Mbbls.

Permit renewal application currently under review.

- **BW-22** Gandy Corporation/Watson #1 (API 30-025-28162)

Began production in April 1983.

Depth to top-of-salt 2290 ft bgs. Casing shoe @ 2249 ft bgs. Tubing depth 2870 ft bgs.

Last sonar log completed August 2008. Interval imaged 2200 to 2220 ft bgs. Log indicates only 11,289 bbls of cavern volume despite historic production of perhaps 18 Mbbls. Cavern should be 2.7 Mbbls.

Permit renewal date: 3/11/2012

- **BW-25** Basic Energy/Salado #2 (API 30-025-32394)

Began production in September 1993.

Depth to top-of-salt 1220 ft bgs. Casing shoe @ 1220 ft bgs. Tubing depth 1385 ft bgs.

No sonar log run. Historic production of perhaps 1.7 Mbbls, indicating cavern volume of 25,500 bbls.

Permit renewal application currently under review.

- **BW-27** Mesquite SWD/Dunaway #1 and #2 (APIs 30-015-28083 and 28084)

Began production in January 1995.

Depth to top-of-salt 1060 ft bgs. Casing shoe @ 1064 ft bgs. Tubing depth 1024 ft bgs.

Last sonar log attempted December 2008 but failed to get any data due to configuration of casing and tubing.

Permit renewal date: 9/21/2009

- **BW-28** Key Energy/State Brine Well #1 (API 30-025-33547)

Began production in October 1996.

Depth to top-of-salt 1390 ft bgs. Casing shoe @ 1390 ft bgs. Tubing depth 2074 ft bgs.

Sonar log completed 5/20/09. Report not yet provided. Estimated production of perhaps 4 Mbbls. indicating cavern volume of 600,000 bbls.

Permit renewal date: 7/18/2011

- **BW-30** Liquid Resource/Hobbs State #10 (API 30-025-35915)

Began production in July 2002.

Depth to top-of-salt 1645 ft bgs. Casing shoe @ 1633 ft bgs. Tubing depth 1930 ft bgs.

OCD did not require them to run sonar due to shortness of operational life. Estimated brine production of 1.4 Mbbls, indicating cavern may be 207,000 bbls.

Permit renewal date: 5/29/2012

- **BW-31** HRC/HRC Schubert 7 #1 (API 30-025-36781)

Began production in October 2006.

Depth to top-of-salt 1800 ft bgs. Casing shoe @ 1865 ft bgs. Tubing depth 2300 ft bgs.

No sonar log run. Estimated production of only 560,000 bbls and thus cavern only 84,000 bbls.

Permit renewal date: 6/22/2011

**Chavez, Carl J, EMNRD**


---

**From:** Chavez, Carl J, EMNRD  
**Sent:** Friday, October 03, 2008 11:25 AM  
**To:** 'Larry Gandy'  
**Cc:** Price, Wayne, EMNRD; Leking, Geoffrey R, EMNRD  
**Subject:** RE: Wasserhund Brine Well Status (BW-4)

Larry:

For the time being, you seem to have a good approach. For the MIT, please set the packer within at least 20 feet of the problem zone on the production string. A new well diagram needs to be submitted with your final C-103 as discussed in the field in August 2008. Thank you Sir.

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](mailto:CarlJ.Chavez@state.nm.us)  
 Website: <http://www.emnrd.state.nm.us/ocd/index.htm>  
 (Pollution Prevention Guidance is under "Publications")

---

**From:** Larry Gandy [mailto:gandy2@leaco.net]  
**Sent:** Friday, October 03, 2008 10:53 AM  
**To:** Chavez, Carl J, EMNRD  
**Cc:** Price, Wayne, EMNRD  
**Subject:** Re: Wasserhund Brine Well Status (BW-4)

Hi Carl,  
 What we are going to try is RIH w/ wash pipe get over our tubing get out the bottom of the casing and cut off tubing, if this does not work we will RIH w/ a mill and mill out the tubing and perform the sonar. Our question to you is, will the MIT we performed at 1798' be sufficient for this well? This depth is certainly protective of our ground water. I will be out of the office Monday and Tuesday so if you could call me on the phone I would appreciate it, 575-399-5720.

Thanks,

Larry

----- Original Message -----

**From:** Chavez, Carl J, EMNRD  
**To:** Larry Gandy  
**Sent:** Wednesday, September 10, 2008 2:19 PM  
**Subject:** RE: Wasserhund Brine Well Status (BW-4)

Ok. Thanks Larry.

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

10/3/2008

Fax: (505) 476-3462  
E-mail: [CarlJ.Chavez@state.nm.us](mailto:CarlJ.Chavez@state.nm.us)  
Website: <http://www.emnrd.state.nm.us/ocd/index.htm>  
(Pollution Prevention Guidance is under "Publications")

---

**From:** Larry Gandy [mailto:gandy2@leaco.net]  
**Sent:** Wednesday, September 10, 2008 2:00 PM  
**To:** Chavez, Carl J, EMNRD  
**Cc:** Price, Wayne, EMNRD; Leking, Geoffrey R, EMNRD  
**Subject:** Re: Wasserhund Brine Well Status (BW-4)

Hi Carl,

We are still looking into other options for Wasserhund BW-04, the casing is colapsed and the tubing is stuck at approx. 1813' , bottom of casing is at 1895', we have the same concerns as the OCD, expect a new proposal within the next 2 weeks.

Thanks,

----- Original Message -----

**From:** Chavez, Carl J, EMNRD  
**To:** [Larry Gandy](mailto:Larry Gandy)  
**Cc:** [Price, Wayne, EMNRD](mailto:Price, Wayne, EMNRD) ; [Leking, Geoffrey R, EMNRD](mailto:Leking, Geoffrey R, EMNRD)  
**Sent:** Wednesday, September 10, 2008 9:10 AM  
**Subject:** Wasserhund Brine Well Status (BW-4)

Larry:

Good morning. I spoke with Wayne Price the other day and he requested a status report on the condition of BW-4? Apparently, you were proposing a well deviation and NMOCD had some concerns about it, i.e., future well testing, i.e., sonar, etc. I recall that tubing was stuck in the casing on 8/21/2008.

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](mailto:CarlJ.Chavez@state.nm.us)  
Website: <http://www.emnrd.state.nm.us/ocd/index.htm>  
(Pollution Prevention Guidance is under "Publications")

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No virus found in this incoming message.

Checked by AVG.

Version: 7.5.524 / Virus Database: 270.6.19/1664 - Release Date: 9/10/2008 6:00 AM

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This inbound email has been scanned by the MessageLabs Email Security System.

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No virus found in this incoming message.

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Version: 7.5.524 / Virus Database: 270.6.19/1664 - Release Date: 9/10/2008 6:00 AM

---

This inbound email has been scanned by the MessageLabs Email Security System.

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**Chavez, Carl J, EMNRD**

---

**From:** Chavez, Carl J, EMNRD  
**Sent:** Tuesday, September 12, 2006 4:12 PM  
**To:** 'gandy2@leaco.net'  
**Subject:** BW-004 Copy of Calibration Sheet from 8/18/2006 Pressure Test

Larry:

Could you please mail me a copy of the calibration sheet for the BW-004 pressure test (August 18, 2006) and our file. 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](mailto:CarlJ.Chavez@state.nm.us)  
Website: <http://www.emnrd.state.nm.us/ocd/>  
(Pollution Prevention Guidance is under "Publications")

**Chavez, Carl J, EMNRD**

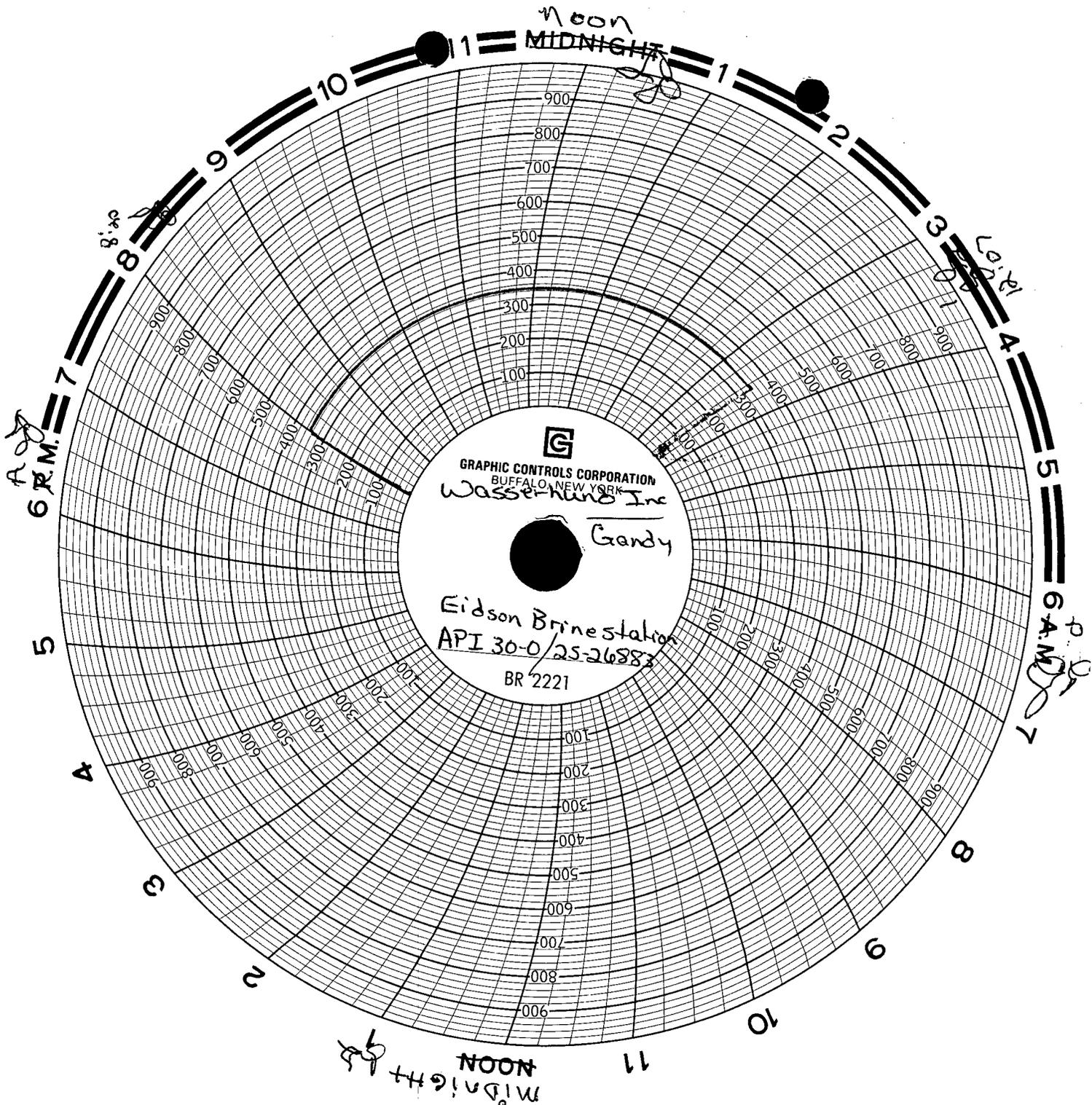
---

**From:** Chavez, Carl J, EMNRD  
**Sent:** Tuesday, August 22, 2006 1:26 PM  
**To:** 'gandy2@leaco.net'  
**Cc:** Price, Wayne, EMNRD  
**Subject:** BW-4 Pressure Test Chart 8-18-06

Larry:

Please find attached the chart from the test Friday morning, August 18, 2006 for the above well. The well passed the pressure test at 350 psi for at least four hours. Please send me the scanned calibration letter for the test meter or instrument used to record pressure for our file. 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](mailto:CarlJ.Chavez@state.nm.us)  
Website: <http://www.emnrd.state.nm.us/ocd/>  
(Pollution Prevention Guidance is under "Publications")



NOON

MIDNIGHT

A.D.  
6 P.M.

P.M.  
6 A.M.

GRAPHIC CONTROLS CORPORATION  
BUFFALO, NEW YORK  
Wasserman Inc

Gandy

Eidson Brine Station  
API 30-0/25-26883  
BR 2221

8:00

NOON  
MIDNIGHT

**Chavez, Carl J, EMNRD**

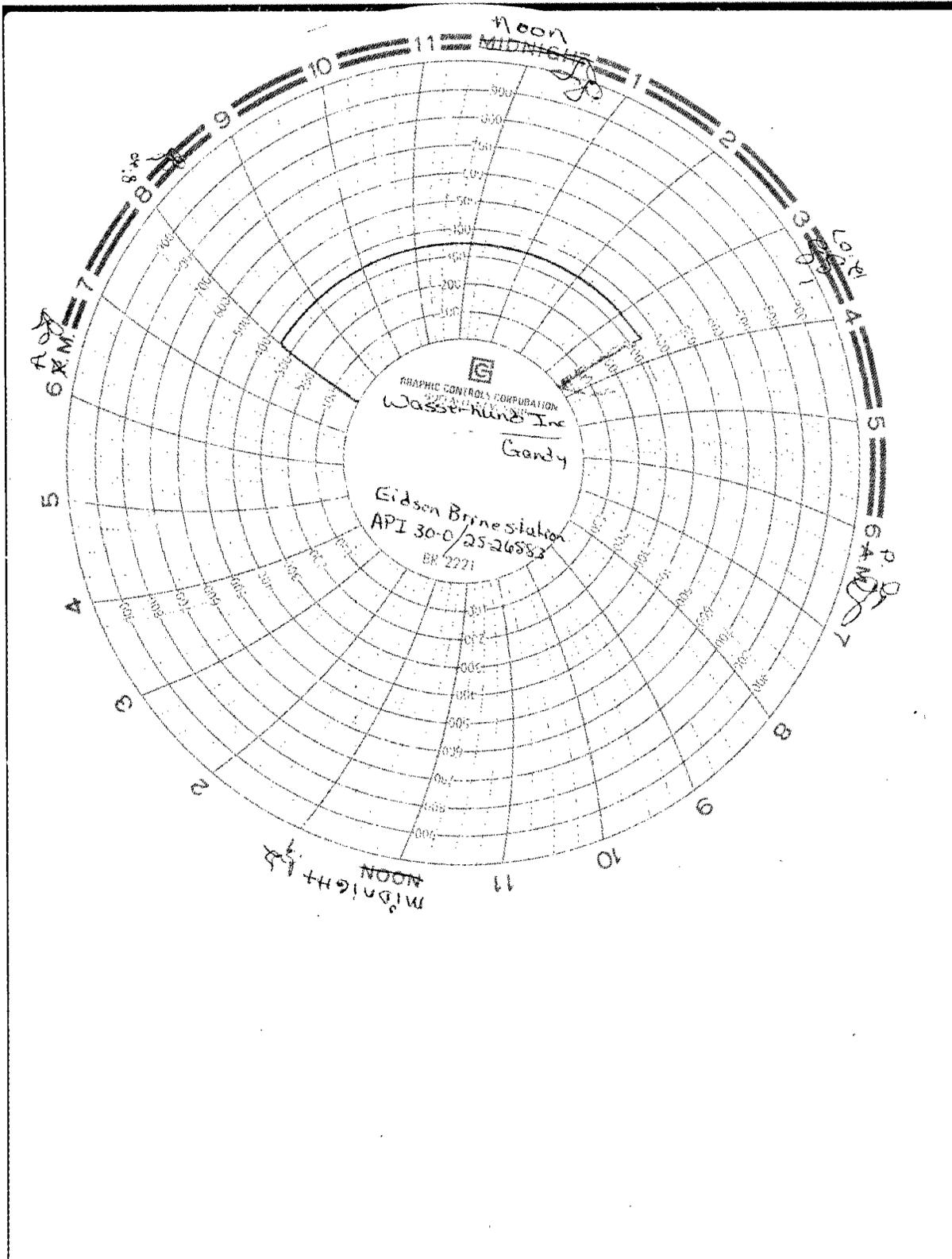
---

**From:** Chavez, Carl J, EMNRD  
**Sent:** Tuesday, August 22, 2006 1:26 PM  
**To:** 'gandy2@leaco.net'  
**Cc:** Price, Wayne, EMNRD  
**Subject:** BW-4 Pressure Test Chart 8-18-06

Larry:

Please find attached the chart from the test Friday morning, August 18, 2006 for the above well. The well passed the pressure test at 350 psi for at least four hours. Please send me the scanned calibration letter for the test meter or instrument used to record pressure for our file. 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  
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Website: <http://www.emnrd.state.nm.us/ocd/>  
(Pollution Prevention Guidance is under "Publications")



## Price, Wayne

---

**From:** Price, Wayne  
**Sent:** Monday, March 14, 2005 2:06 PM  
**To:** Larry Gandy (E-mail)  
**Cc:** Robinson, Johnny; Williams, Chris  
**Subject:** Brine Well BW-04 Wasserhund MIT TEST API # 30-025-26883-00-00

Dear Larry:

Pursuant to our telephone conversation today please pressure test the BW-04 Brine well by March 31, 2005. Please make arrangements with the OCD District office so they may witness the test. The test shall be a Hydrostatic test to include the casing annulars and cavern (i.e. normal open to formation test). I looked in the file and the last test was ran at about 410 psig. The minimum is 300 psig. This test shall be for 4 hours with no appreciable pressure drop. The OCD field Rep. in that area is Johnnie Robinson cell # 505-370-3176 or office 505-393-6161 ext 106. The field rep will record a field trip MIT for that well and please make sure he gets a copy of the chart so the District can scan and put into the electronic well file. I have included our latest guidance for testing brine wells.



Test Guidance  
document amended.

Sincerely:

Wayne Price  
New Mexico Oil Conservation Division  
1220 S. Saint Francis Drive  
Santa Fe, NM 87505  
505-476-3487  
fax: 505-476-3462  
E-mail: WPRICE@state.nm.us



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**GARY E. JOHNSON**  
Governor  
**Jennifer A. Salisbury**  
Cabinet Secretary

**Lori Wrotenbery**  
Director  
**Oil Conservation Division**

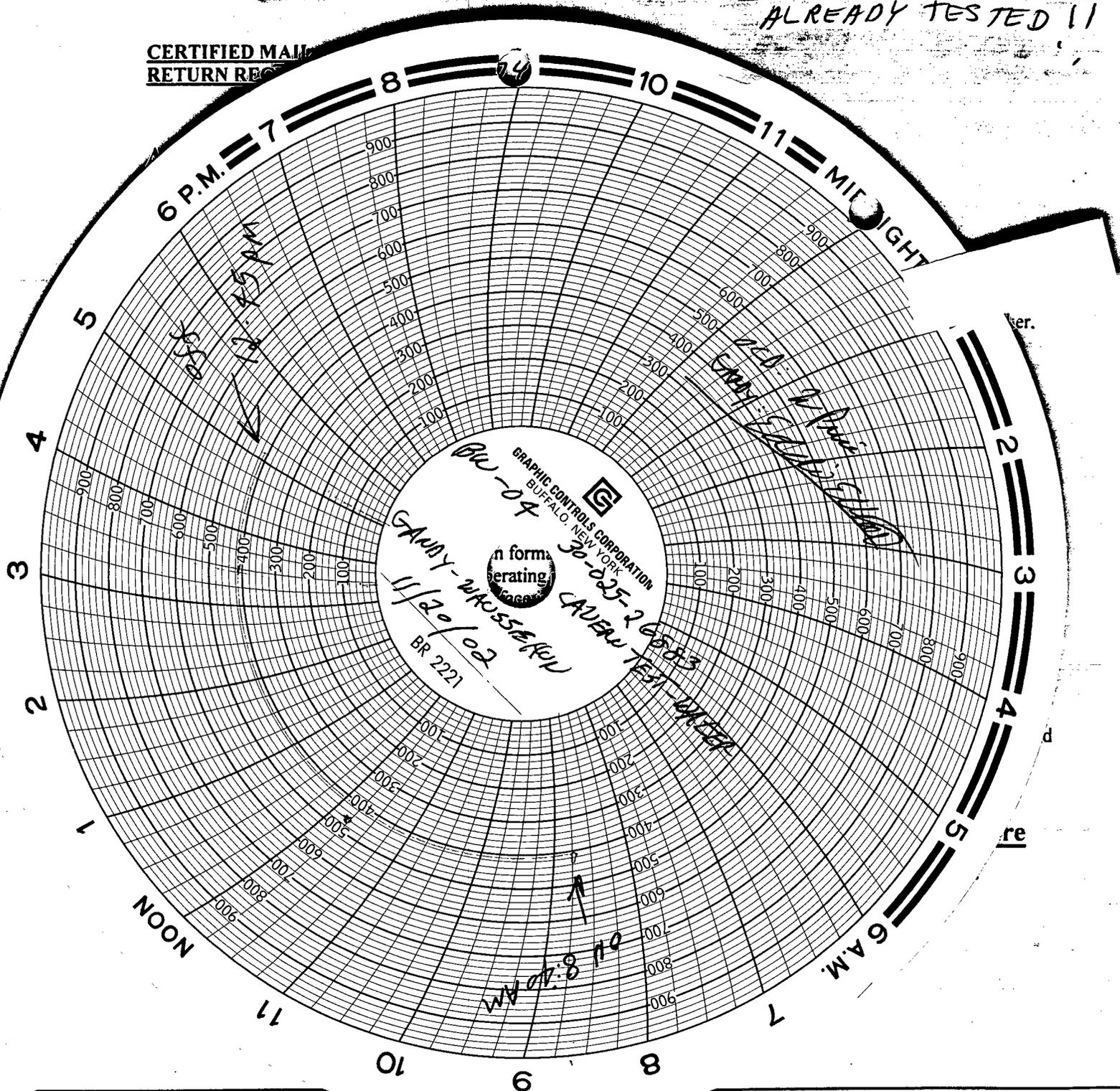
October 20, 2001

GANDY  
BW-04222

NO TEST REQUIRED

ALREADY TESTED !!

**CERTIFIED MAIL**  
**RETURN RECEIPT**





# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON  
Governor  
Jennifer A. Salisbury  
Cabinet Secretary

Lori Wrotenbery  
Director  
Oil Conservation Division

October 20, 2001

GANDY  
BW-04222

NO TEST REQUIRED

ALREADY TESTED !!

CERTIFIED MAIL  
RETURN RECEIPT NO. 5357 7485

## Attention: Brine Well Operators

Re: Mechanical Integrity Testing of Brine Supply Wells

The Underground Injection Control Program of the Federal Safe Drinking Water Act requires that operators demonstrate mechanical integrity of all injection wells by ensuring there are no leaks in the tubing, casing, or packer, and injected/produced fluids are confined within the piping and injection zones.

The Oil Conservation Division (OCD) requires operators of brine supply wells to perform the following mechanical integrity test:

1. At least once every five years isolate the cavern formation from the casing/tubing annuals and hydrostatic fluid pressure test the casing at 300 psig for 30 minutes. New brine wells and wells being worked over will have to be tested in this manner before operations begin.
2. Annually perform an open hole cavern formation pressure test by pressuring up the formation with fluids to one and one-half times the normal operating pressure or 300 psig whichever is greater for four hours. However, no operator may exceed surface injection or test pressures that may cause formation fracturing or system failures. Systems requiring test pressures less than 300 psig or methods that use testing media other than fluids, i.e. gas, must be approved by OCD prior to testing. Brine supply wells operating with isolation packers will have to pressure test both the cavern formation and casing/tubing annuals.

Please find enclosed an "OCD Brine Well Test Schedule November 2001" and "Brine Well Test Procedure Guidance Document" for this November 26 through November 30, 2001. Please have your well ready for testing on the date and time you are scheduled. Please refer to the Well Test Schedule attached for the Type of Test you are scheduled to perform. You must receive prior OCD approval to alter the scheduled time or type of test.

**What's New!! Please note that operators are required to have their pressure recording devices calibrated to 500 psig and 8-hour clock. See Guidance Document attached.**

Brine Well Operators  
Oct 20, 2001  
Page 2

**What's New!! All operators will provide to the OCD the maximum test pressure that will not cause formation fracturing or system failures.**

Operators will be responsible for providing equipment and shall bear all costs incurred. All tests must be witnessed by the New Mexico Oil Conservation Division. Operators failing to abide by the procedures, type of test, and time schedules listed herein may be required to shut-in their systems until OCD has an opportunity to approve and witness testing.

If you require any further information or assistance please do not hesitate to write or call me at 505-476-3487 or E-mail WPRICE@state.nm.us.

Sincerely Yours,



Wayne Price- Senior Envr. Engr..  
Environnemental Bureau

cc: OCD District Offices

Attachments- 1. OCD Brine Well Test Schedule November 2001  
2. Brine Well Testing Procedure Guidance Document

## Brine Well Testing Procedure Guidance Document

- 1) The cavern and all piping must be filled, pressured up and stabilized for a period of at least 24 hours prior to testing. If this test requires a packer then casing/tubing annulus must be loaded with inert fluid 24 hours prior to testing.
- 2) Have manpower and equipment available for pressure test. Wellhead shall be prepared for test and all valves and gauges should be in good working order.
- 3) Pumps, tanks, external lines etc. must be isolated from the wellhead during test.
- 4) A continuous recording pressure device with an 8-hour clock (min) shall be installed on the casing/tubing annulus. The pressure range shall not be greater than 500 psig. The operator must provide proof that the pressure-recording device has been calibrated within the past 6 months. **Note: Wells with packer installed: If this test requires both the casing/tubing annulus and cavern to be tested then two recording devices must be supplied or one recording device with two pins.**
- 5) A minimum of one pressure gauge shall be installed on the casing/tubing annulus.
- 6) OCD must witness the beginning of test (putting chart on) and ending of test (removing chart). At the end of test operator may be required to bleed-off well pressure to demonstrate recorder and gauge response.
- 7) The Operator will supply the following information on the pressure chart:
  - A. Company Name, Well Name, API #, Legal Location.
  - B. Test Procedure (1) Casing + Formation (2) Casing Test Only (3) Both (4) Other
  - C. Testing Media: Water, Gas, Oil, Etc.
  - D. Date, time started and ending.
  - E. Name (printed) and signature of company representative and OCD Inspector
- 8) **TEST ACCEPTANCE:** The OCD will use the following criteria in determining if a well has passed the Mechanical Integrity Test:
  - A. **Passes** if Zero Bleed-Off during the test.
  - B. **Passes** if Final Test Pressure is within  $\pm 1\%$  of Starting Pressure, if approved by the OCD inspector.
  - C. **Fails** if any Final Test Pressure is greater than  $\pm 1\%$  of Starting Pressure. Operators must investigate for leaks and demonstrate that mechanical integrity of the well(s) by ensuring there are no leaks in the tubing, casing, or packer, and injected/produced fluids are confined within the piping and injection zones. Wells shall not resume operations until approved by OCD.

**Note:** OCD recognizes that different operations, well designs, formation characteristics and field conditions may cause variations in the above procedures. If operator wishes to make or anticipate changes please notify the OCD for approval. All operators are responsible to notify OCD of any procedure that may cause harm to the well system or formation. Please be advised that OCD approval does not relieve any operator of liability should operations result in pollution of surface water, groundwater, or the environment.

OCD BRINE WELL TESTING SCHEDULE 2001

OCD Contact Wayne Price cell 505-660-1087

Company	DP#	Facility Name	Date of Test	Start	Stop	Type of Test(s) Required	Contact Person	Telephone	FAX #/cell
Stearns Inc.	BW-013	Crossroads Area Crossroads	26-Nov-01	12 noon	4:00 PM	2 Pressure test cavern	L.A. Stearns	1-505-675-2358	1-505-675-2339
Marobch Brine Well Jims Water Ser.	BW-029 BW-005	Loco Hills Area M. Dodd "A" BW#1 SE of Artesia	27-Nov 27-Nov	9:00 AM 10:00 AM	1:00 PM 2:00 PM	2 Pressure test cavern • Pressure test cavern or casing * 1, 2 or 3	Doyle Davis Sammy Stoneman	748-5975 cell 1-505-748-1352	1-505-748-2523 1-505-748-3277
Key Energy Scurlock-Permian Zia Transportation Marathon Brine St	BW-018 BW-015	Hobbs Area Truckers #2 (Hobbs) Hobbs Station Sally Dog-Ark Jct Marathon Road	28-Nov-01 28-Nov-01 28-Nov-01 28-Nov-01	8:00 AM 9:00 AM 10:00 AM 11:30 AM	12 noon 1:00 PM 2:00 PM 3:30 PM	2 Pressure test cavern 2 Pressure test cavern 2 Pressure test cavern 1 Pressure Test Casing	Royce Crowell Richard Lentz Piler Bergstein CW Trainer	(505) 393-9171 505-392-8212 808-741-1080	505-910-4185 392-69888
P&S Brine Key Simms-McCasland Yale E. Key (Old Goldstar)	BW-002 BW-009A BW-028	Eunice Area Eunice Brine Station Eunice Brine Station Eunice Brine Station	28-Nov-01 28-Nov-01 28-Nov-01	8:00 AM 9:00 AM 10:00 AM	12 noon 1:00 PM 2:00 PM	2 Pressure test cavern 2 Pressure test cavern 2 Pressure test cavern	Dink Prather Royce Crowell Royce Crowell	505-394-2545 (505) 393-9171 1-505-394-2504	394-2428 505-910-4185 1-505-394-2560
I & W Key Energy-Carlsbad Scurlock/Permian	BW-08 BW-019 BW-027 & 27A	Carlsbad Area Carlsbad -Eugline Rowland Truckers Carlsbad Brine St.	30-Nov-01 30-Nov-01 30-Nov-01	8:00 AM 9:00 AM 10:00 AM	12 noon 1:00 PM 2:00 PM	2 Pressure test cavern 2 Pressure test cavern 2 Pressure test cavern	George Parchman John Hutcheson Richard Lentz	505-895-8663 1-505-895-2053 505-392-8212	895-8477 cell 390-1833 392-69888
Gandy Gandy Ray Westall	BW-04 BW-22 BW-21	Wells Already Tested in 2001 Wasserhund-Edison Tatum Brine St. Loco Hills Brine St.							
Chaparral SMD	BW-25	Wells Being Repaired- Salado Brine #2- Jai							
Notes:									
Type of Pressure Test:	1 Casing Test					Isolate cavern formation from the casing/tubing annulus and hydrostatic fluid pressure test the casing at 300 psig for 30 minutes.			
	2 Open Hole Cavern Pressure Test					Open hole cavern formation pressure test by pressuring up the formation with fluid to one and one-half times the normal operating pressure or 300 psig whichever is greater for four hours. Operators shall not exceed surface pressures that may cause formation fracturing or system failures. OCD prior to test shall approve test pressures below 300 psig and methods that use media other than fluids. Brine supply wells operating with packers will have to pressure both the cavern formation and casing/tubing annulus.			
	3 Others					Nitrogen-Brine Interface Test, Nitrogen Test, Etc.			



# OCD ENVIRONMENTAL BUREAU

## SITE INSPECTION SHEET

DATE: 12/13 Time: 8:20 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  \_\_\_\_\_

Discharge Plan: No  Yes  DP# BW-004

FACILITY NAME: WASSERHUND - (BUCKEYE) EINSON ST.

PHYSICAL LOCATION: ~ 5 mi N. BUCKEYE

Legal: QTR SW QTR SW Sec 31 TS 16 R 35.6 County LEA

OWNER/OPERATOR (NAME) WASSERHUND INC.

Contact Person: LARRY GAUDY Tele:# CELL 369-5721

MAILING

ADDRESS: \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_

Owner/Operator Rep's: SAB

OCD INSPECTORS: W PRICE

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.

NA

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.

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.

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

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.

POND LEAK DETECTOR - DRY PER LARRY GAUDY

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.

BRINE LINE FROM WELL TO POND

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.

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

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:

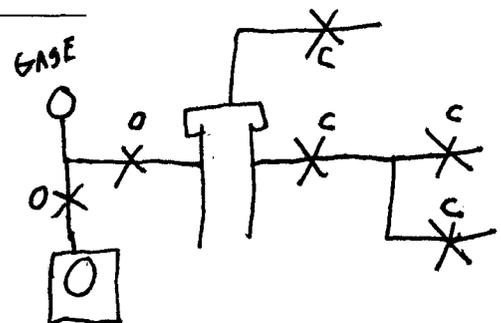
MIT - OPEN HOLE

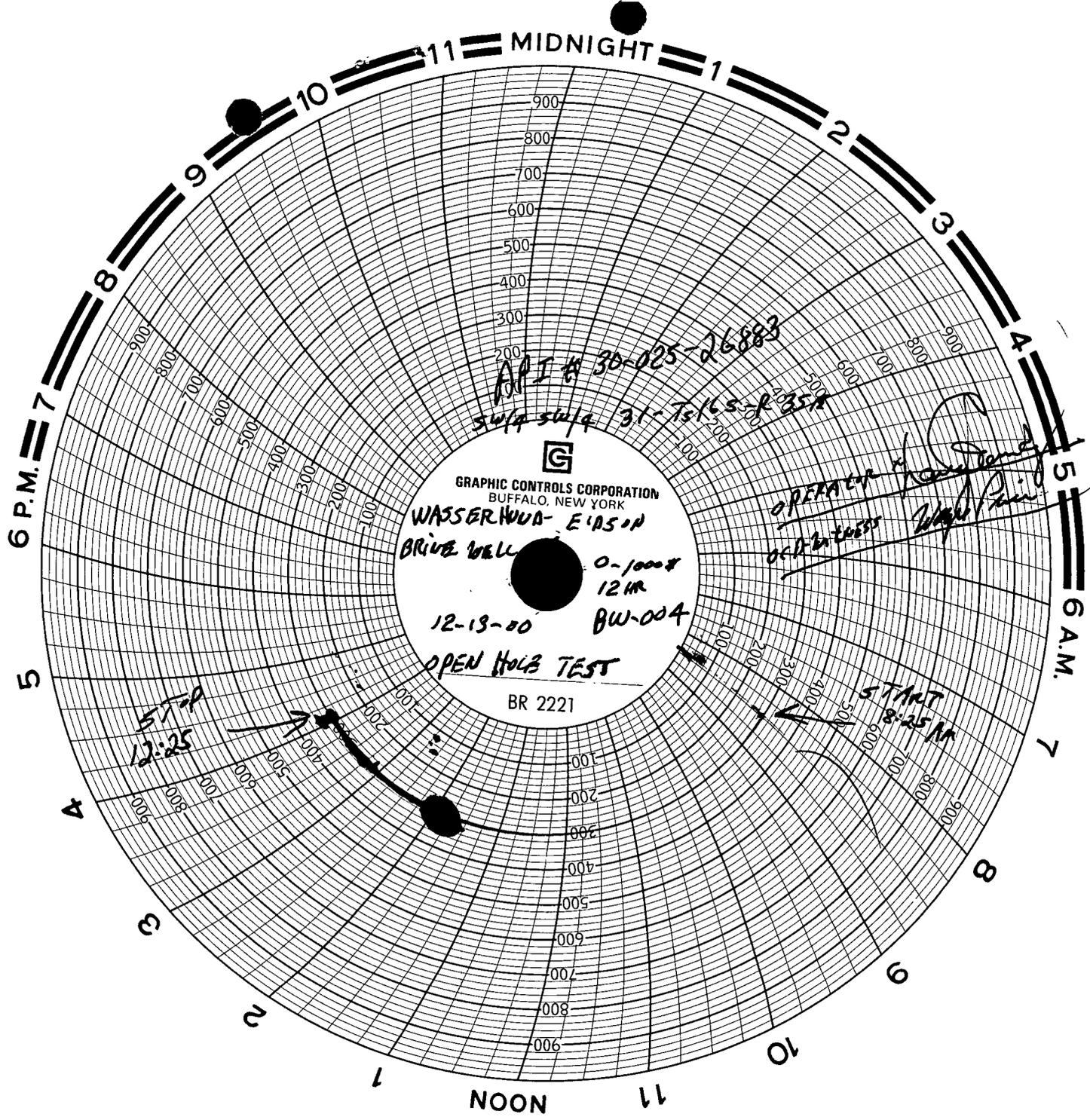
RECORDED 0-1000  
12 HR CLOCK

GAGE ON 8:25 AM 316 psc  
0-600 psig 12:25 PM 314 psc

Number of Photos taken at this site: \_\_\_\_\_  
attachments-

OCD Inspection Sheet  
Page \_\_\_ of \_\_\_





GRAPHIC CONTROLS CORPORATION  
BUFFALO, NEW YORK

WASSERHOUD-EIJSIN  
BRIVE WEL

0-10008  
12HR

12-13-80

BW-004

OPEN HOLE TEST

BR 2221

START  
12:25

START  
8:25 AM

OPERATOR [Signature]  
OCD Interest [Signature]

API # 30-025-26883

SWP SWP 31-75165-8358



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**GARY E. JOHNSON**  
Governor  
**Jennifer A. Salisbury**  
Cabinet Secretary

**Lori Wrotenbery**  
Director  
Oil Conservation Division

October 20, 2000

**CERTIFIED MAIL**

**RETURN RECEIPT NO.**

5051-4447

BW-004

GAMY-WASSER

**Attention: Brine Well Operators**

**Re: Mechanical Integrity Testing of Brine Supply Wells**

The Underground Injection Control Program of the Federal Safe Drinking Water Act requires that operators demonstrate mechanical integrity of all injection wells by ensuring there are no leaks in the tubing, casing, or packer, and injected/produced fluids are confined within the piping and injection zones.

The Oil Conservation Division (OCD) requires operators of brine supply wells to perform the following mechanical integrity tests:

1. At least once every five years isolate the cavern formation from the casing/tubing annuals and hydrostatic fluid pressure test the casing at 300 psig for 30 minutes. New brine wells and wells being worked over will have to be tested in this manner before operations begin.
2. Annually perform an open hole cavern formation pressure test by pressuring up the formation with fluid to one and one-half times the normal operating pressure or 300 psig whichever is greater for four hours. Operators shall not exceed surface pressures that may cause formation fracturing or system failures. OCD prior to test shall approve test pressures below 300 psig and methods that use media other than fluids. Brine supply wells operating with packers will have to pressure both the cavern formation and casing/tubing annuals.

Please find enclosed an "OCD Brine Well Test Schedule December 2000" and "Brine Well Test Procedure Guidance Document" for this December 8<sup>th</sup> through 18<sup>th</sup> 2000. Please have your well ready for testing on the date and time you are scheduled. Please refer to the Well Test Schedule attached for the type of test you are scheduled to perform. You must receive prior OCD approval to alter the scheduled time or type of test.

**Brine Well Operators**

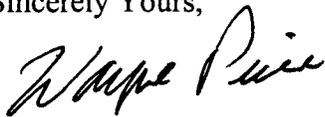
10/20/00

Page 2

Operators will be responsible for providing equipment and shall bear all costs incurred. All tests must be witnessed by the New Mexico Oil Conservation Division. Operators failing to abide by the procedures, type of test, and time schedules listed herein may be required to shut-in their systems until OCD has an opportunity to approve and witness testing.

If you require any further information or assistance please do not hesitate to write or call me at (505-827-7155).

Sincerely Yours,



Wayne Price-Pet. Engr. Spec.  
Environmental Bureau

cc: OCD District Offices

- Attachments-
1. OCD Brine Well Test Schedule December 2000.
  2. Brine Well Testing Procedure Guidance Document.

OCD BRINE WELL TEST SCHEDULE December of 2000

CELE MAIL

Company	DP#	Facility Name	Date of Test	Start	Stop	Type of Test(s) Required	Contact Person	Telephone	FAX #
Marbob Brine Well	BW-029	M. Dodd "A" BW#1	December 08, 2000	1:00 PM	5:00 PM	2 Pressure test cavern	Doyle Davis Raye Miller	748-5975 cell 1-505-746-2523 748-3303	4515
P&S Brine	BW-002	Eunice Eunice Water ST.	December 11, 2000	8 am	12 noon	2 Pressure test cavern	Paul Prather	1-505-394-2545	4454
Simms-McCasland	BW-009A	Eunice Brine Station	December 11, 2000	9:30 am	1:30 pm	2 Pressure test cavern	Bob Patterson	1-505-394-2581	4485
Salty Dog, Inc.	BW-008	Arkansas-Jct	December 11, 2000	11 am	3 pm	2 Pressure test cavern	Mr. Piller Bergstein Walter Brisco	1-806-741-1080	4478
Stearns Inc.	BW-013	Crossroads	December 12, 2000	8:00 AM	12 noon	2 Pressure test cavern	L.A. Stearns	1-505-675-2356	9508
Gandy Corp.	BW-022	Tatum Water St.	December 12, 2000	9:00 AM	1:00 PM	2 Pressure test cavern	Larry Gandy	1-505-398-4960	4497
Key Energy	BW-018	Truckers #2 (Hobbs)	December 12, 2000	10:30 AM	2:30 PM	2 Pressure test cavern	Pete Turner	1-505-397-4994	4423
l&W Trucking	BW-006 &6A	Carisbad Yard	December 13, 2000	8:00 AM	12 noon	2 Pressure test cavern	<b>EUGENE IRUY</b>	1-505-885-6663	5051
Loco Hills Brine	BW-021	Loco Hills	December 13, 2000	1:30 PM	5:30 PM	2 Pressure test cavern	<del>George Davenport</del> D. Maloney or R. Harris	1-505-677-2370	4409
Goldstar	BW-028	Eunice Brine Station	December 14, 2000	9:30 am	1:30 pm	2 Pressure test cavern	Royce Crowell	1-505-394-2504	4492
Quality Oil/Salado Brine/Artesia	BW-025	Salado Brine St. #2	December 14, 2000	11am	3 pm	2 Pressure test cavern	see P&S	1-505-394-2560	4454
Key Energy-Carisbad	BW-019	Rowland Truckers	December 15, 2000	8:00 AM	12 noon	2 Pressure test cavern	John Hutcheson	1-505-887-3011	4413
Scourlock/Permian	BW-027 &27A	Carisbad Brine St.	December 15, 2000	9:00 AM	1:00 PM	2 Pressure test cavern	Jim Ephraim	1-713-672-8092	5051
Jims Water Ser.	BW-005	SE of Artesia	December 15, 2000	10:30 AM	2:30 PM	2 Pressure test cavern	Sammy Stoneman	1-505-748-1352	4416
Scourlock-Permian	BW-012	Hobbs Station	December 18, 2000	8:00 AM	12 noon	2 Pressure test cavern	Richard Lentz	1-505-392-8212	5051
Gandy- WasserHau	BW-004	Buckeye St.	December 18, 2000	9:00 AM	1:00 PM	2 Pressure test cavern	Larry Gandy	1-505-398-4960	4447

Notes:

- 1 Casing Test  
isolate cavern formation from the casing/tubing annuals and hydrostatic fluid pressure test the casing at 300 psig for 30 minutes.
- 2 Open Hole Cavern Pressure Test  
Open hole cavern formation pressure test by pressuring up the formation with fluid to one and one-half times the normal operating pressure or 300 psig whichever is greater for four hours. Operators shall not exceed surface pressures that may cause formation fracturing or system failures. OCD prior to test shall approve test pressures below 300 psig and methods that use media other than fluids. Brine supply wells operating with packers will have to pressure both the cavern formation and casing/tubing annuals.
- 3 Others  
Nitrogen-Brine Interface Test, Nitrogen Test, Etc.

## Brine Well Testing Procedure Guidance Document

- 1) The cavern and all piping must be filled, pressured up and stabilized for a period of at least 24 hours prior to testing. If this test requires or utilizes a packer then the casing/tubing annulus must be loaded with inert fluid 24 hours prior to testing.
- 2) Have manpower and equipment available for pressure test. Well head shall be prepared for test and all valves and gauges should be in good working order.
- 3) Pressure devices i.e pumps, truck pumps, etc. must be isolated from the well head during test.
- 4) A continuous recording pressure chart with an 8 hour clock shall be installed on the casing/tubing annulus, as directed by the OCD, with a pressure range of not greater than 500 psig. The operator must provide proof that pressure recording device has a range of 0-500 psig and has been calibrated within the past 6 months. Wells, with isolation packers installed, which requires both the casing/tubing annulus and cavern to be tested will require two recording devices or one recording device with two pins. Operators may utilize other types of pressure recording devices, such as electronic data loggers, etc., if approved by OCD.
- 5) A minimum of one pressure gage shall be installed in the system as directed by OCD.
- 6) OCD must witness the beginning of test (putting chart on) and ending of test (removing chart). At the end of test operator may be required to bleed-off pressure to demonstrate recorder response.
- 7) The Operator will supply the following information on the pressure chart before starting test:
  1. Company name, discharge plan #, well name and number, legal location UL, section, township, range and county.
  2. Type of Test: Open Hole, Casing Test, or Both.
  3. Date, time test started, time stop.
  4. Chart and Recorder information. (can be attached)
  5. Normal operating surface and formation fracture pressure. (can be attached)
  6. **After Test Completed:**  
Name (printed) and signature of company representative and OCD inspector.

**Note: NMOCD recognizes that different operations, well constructions, well designs and field conditions may cause variations in the above procedures. Operator is responsible to notify OCD of any procedure that may cause harm to the well or formation. If operator wishes to make or anticipate changes you must notify the OCD for approval.**







NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

Tele: 1-505-396-3128 Called & Left Message:

October 19, 1999

Mr. J.E. Haseloff  
Wasserhund Incorporated  
10135 Love Street  
Lovington, New Mexico 88260

**Re: Mechanical Integrity Testing of Brine Supply Wells.**

This is a reminder that New Mexico Oil Conservation Division (NMOCD) will be witnessing mechanical integrity test for all brine supply wells during the time period between October 25 through November 2, 1999. A schedule was sent to each operator on September 11, 1999.

Please have your well ready for testing on the date and time you are scheduled. If there is some emergency which interferes with the scheduled date and time please call and notify NMOCD.

**Failure to notify NMOCD may result in your operations being suspended until testing is complete.**

If you require any further information or assistance please do not hesitate to write or call me at (505-827-7155) or notify Mr. Roger Anderson at (505-827-7152).

Sincerely Yours,

Wayne Price-Pet. Engr. Spec.  
Environmental Bureau



NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

September 11, 1999

**CERTIFIED MAIL**  
**RETURN RECEIPT NO. Z 357 870 152**

**Mr. J.E. Haseloff**  
**Wasserhund Incorporated**  
**10135 Love Street**  
**Lovington, New Mexico 88260**

Re: Mechanical Integrity Testing of Brine Supply Wells

Dear Mr. J.E. Haseloff:

The Underground Injection Control Program of the Federal Safe Drinking Water Act requires that operators demonstrate mechanical integrity of all injection wells by ensuring there are no leaks in the tubing, casing, or packer, and injected/produced fluids are confined within the piping and injection zones.

The Oil Conservation Division (OCD) requires operators of brine supply wells to perform the following mechanical integrity test:

1. At least once every five years isolate the cavern formation from the casing/tubing annulars and pressure test the casing at 300 psig for 30 minutes. New brine wells and wells being worked over will have to be tested in this manner before operations begin.
2. Annually perform an open hole cavern formation pressure test by pressuring up the formation one and one-half times the normal operating pressure (not to exceed formation fracture pressure) or 300 psig whichever is greater for four hours. Brine supply wells operating with packers will have to pressure both the cavern formation and casing/tubing annulars.

**Please find enclosed an OCD Brine Well Test Schedule and Test Procedure for this Fall October 25, 1999 through November 2, 1999. Please have your well ready for testing on the date and time you are schedule.** Operators will be responsible for providing equipment and shall bear all costs incurred. All test must be witnessed by the New Mexico Oil Conservation Division.

If you require any further information or assistance please do not hesitate to write or call me at (505-827-7155).

Sincerely Yours,

Wayne Price-Pet. Engr. Spec.  
Environmental Bureau

cc: OCD District Offices  
attachments- OCD Brine Well Test Schedule & Brine Well Testing Procedure Guidance Document

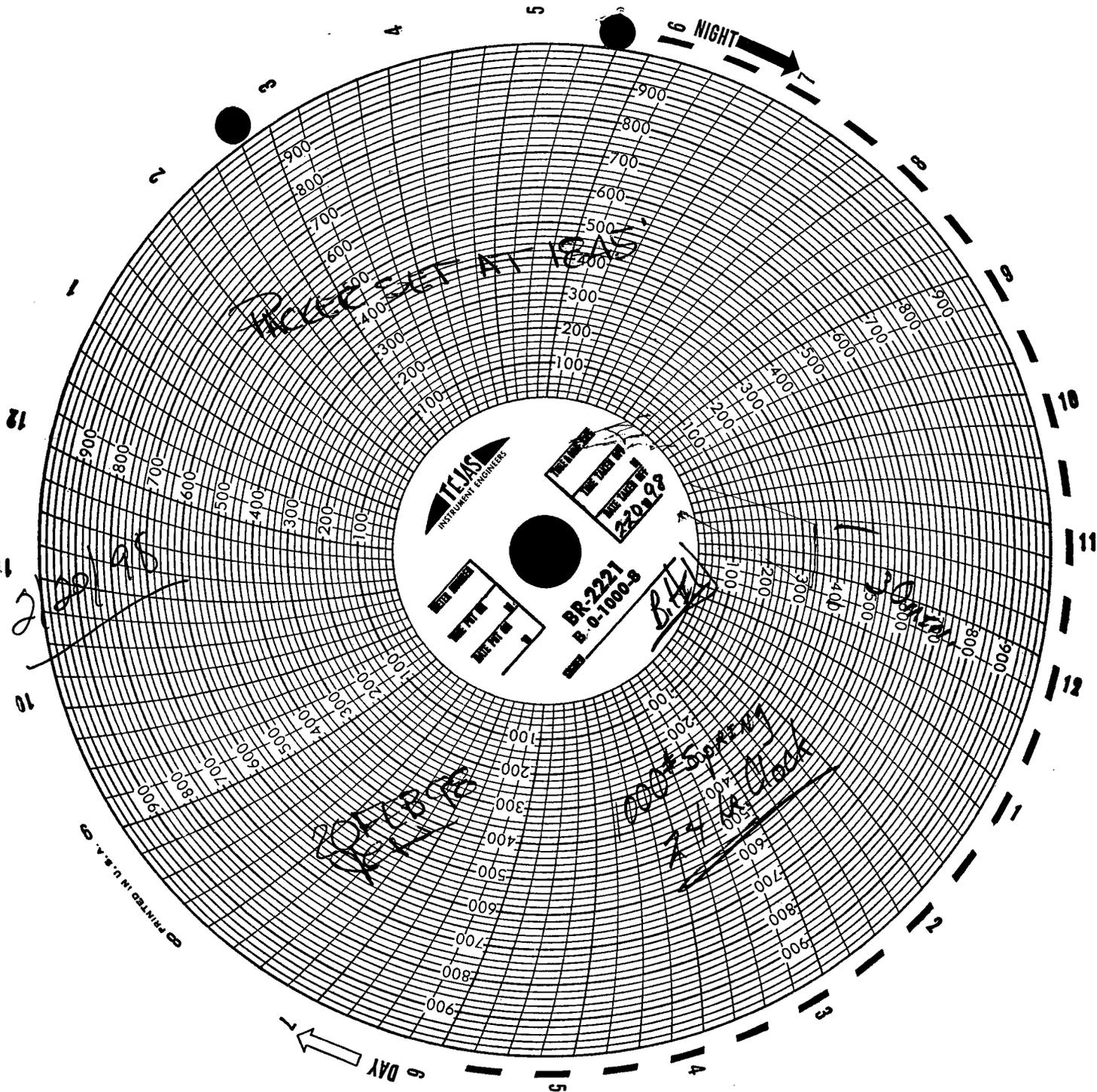
Company	DP#	Facility Name	Date of Test	Start	Stop	Type of Test(s) Required
P&S Brine	** BW-002	Eunice Eunice Water St.	October 25 1999	8 am	12 noon	Isolate cavern & pressure test casing + Cavern survey****
Simms-McCasland	** BW-009A	Eunice Brine Station	October 25 1999	9:30 am	1:30 pm	Isolate cavern & pressure test casing + Cavern survey****
Goldstar	BW-028	Eunice Brine Station	October 25 1999	11 am	3 pm	Pressure test cavern
Key Energy	** BW-018	Rowland Truckers #2	October 26 1999	8 am	12 noon	Pressure test cavern + Cavern survey****
Scurlock-Permian	** BW-012	Hobbs Station	October 26 1999	9:30 am	1:30 pm	Isolate cavern & pressure test casing + Cavern survey****
Sally Dog Inc.	** BW-008	Arkansas-Jct	October 26 1999	11 am	3 pm	Pressure test cavern + Cavern survey****
Quality Oil (Salado Brine Sales)	** BW-025	Salado Brine St. #2	October 27 1999	8 am	12 noon	Isolate cavern & pressure test casing + Cavern survey****
Conoco	** BW-001	Warren -McKee #3	October 27 1999	1:30 pm	5:30 pm	Isolate cavern & pressure test casing
Conoco	** BW-001	Warren -McKee #4	October 27 1999	1:30 pm	5:30 pm	Isolate cavern & pressure test casing
Quality Brine	BW-022	Tatum Water St.	October 28 1999	9 am	1 pm	Pressure test cavern
Kenneth Tank Service	BW-013	Crossroads	October 28 1999	11 am	3 pm	Pressure test cavern
WasserHau	BW-004	Buckeye	October 29 1999	9 am	1 pm	Pressure test cavern
Marathon Brine St.	BW-015	Marathon Road	October 29 1999	11 am	3 pm	Pressure test cavern
Loco Hills Brine	BW-021	Loco Hills	November 1 1999	9 am	1 pm	Pressure test cavern
Jims Water Ser.	BW-005	SE of Artesia	November 1 1999	11 am	3 pm	Pressure test cavern
R&W Trucking	BW-006 & 6A	Carlsbad Yard	November 2 1999	8 am	12 noon	Pressure test cavern
Key Energy-Carlsbad	BW-019	Rowland Truckers	November 2 1999	9:30 am	1:30 pm	Pressure test cavern
ScurlockPermian	** BW-027 & 27A	Carlsbad Brine St.	November 2 1999	11 am	3 pm	Isolate cavern & pressure test casing + Cavern survey****
Notes:						
** Discharge Plan up for renewal						
*** Cavern Surveys are Discharge Plan Requirements Companies have the option to perform now						
**** are at a later date approved by OCD.						



## Brine Well Testing Procedure Guidance Document

- 1) The cavern and all piping must be filled, pressured up and stabilized for a period of at least 24 hours prior to testing. If this test requires a packer then casing/tubing annulus must be loaded with inert fluid 24 hours prior to testing.
- 2) Have manpower and equipment available for pressure test. Well head shall be prepared for test and all valves and gauges should be in good working order.
- 3) Pressure devices i.e pumps, truck pumps, etc. must be isolated from the well head before and during test.
- 4) A continuous recording pressure chart with an 8 hour clock shall be installed on the casing/tubing annulus. The pressure range shall not be greater than 1,000 psig. The operator must provide proof that the recording device has been calibrated within the past 6 months. **Note: Wells with packer installed: If this test requires both the casing/tubing annulus and cavern to be tested then two recording devices must be supplied or one recording device with two pins.**
- 5) A minimum of one pressure gage shall be installed in the system.
- 6) OCD must witness the beginning of test (putting chart on) and ending of test (removing chart). At the end of test operator shall bleed-off pressure by 10% to demonstrate recorder response.
- 7) The following information shall be place on the chart:
  1. Date, time test started, time stop.
  2. Company name, Discharge Plan #, well name and number, legal location UL, section, township, range and county.
  3. Type of Test; Open hole, Casing Test, or Both.
  4. Printed name and signature of company representative and OCD representative.

**Note: NMOCD recognizes that different operations, well constructions and field conditions may cause variations in the above procedures. If operator wishes to make or anticipate changes please notify the OCD for approval.**



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Submit 3 Copies  
to Appropriate  
District Office

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-103  
Revised 1-1-89

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88240

OIL CONSERVATION DIVISION  
2040 Pacheco St.  
Santa Fe, NM 87505

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

WELL API NO.

5. Indicate Type of Lease  
STATE  FEE

6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A  
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT"  
(FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name  
Edison Brine Station  
BW-004

1. Type of Well:  
OIL WELL  GAS WELL  OTHER Brine well

8. Well No. 1

2. Name of Operator  
Wasserhand Inc.

9. Pool name or Wildcat

3. Address of Operator  
P.O. Box 249 Lovington N.M. 88260

4. Well Location  
Unit Letter M : 567.4 Feet From The South Line and 161.7 Feet From The West Line

Section 31 Township 16 Range 35 NMPM Lea County

10. Elevation (Show whether DF, RKB, RT, GR, etc.)

11. 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.       PLUG AND ABANDONMENT   
PULL OR ALTER CASING       OTHER:       CASING TEST AND CEMENT JOB   
OTHER:       OTHER: Casing test - change out tubing

12. 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.

1) Pull old production tubing.  
2) Run in hole with scraper, and clean casing.  
3) Run in hole set pkr. at 1845' pressure test casing to 340 for 30 min casing test witnessed by Mr. Hill w/SCD, also chart included.  
4) Run new 2 7/8 DSS Tubing to 2453 put back on production.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.  
SIGNATURE Eddie W. [Signature] TITLE Agent DATE 3/4/98  
TYPE OR PRINT NAME \_\_\_\_\_ TELEPHONE NO. \_\_\_\_\_

(This space for State Use)  
APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:



NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

November 24, 1997

Mr. J.E. Haseloff  
Wasserhund Incorporated  
10135 Love Street  
Lovington, New Mexico 88260

RE: Mechanical Integrity Testing of Brine Supply Wells

Dear Mr. J.E. Haseloff:

Enclosed is a copy of the mechanical integrity test conducted on your brine well. Please retain this copy for your records.

As a condition of discharge plan approval, all brine facilities are required to submit a quarterly report listing, by month, the volumes of fluids injected and produced. The reports received by the New Mexico Oil Conservation Division (OCD) have not been by month. Please corrected the next quarterly report to reflect monthly figures.

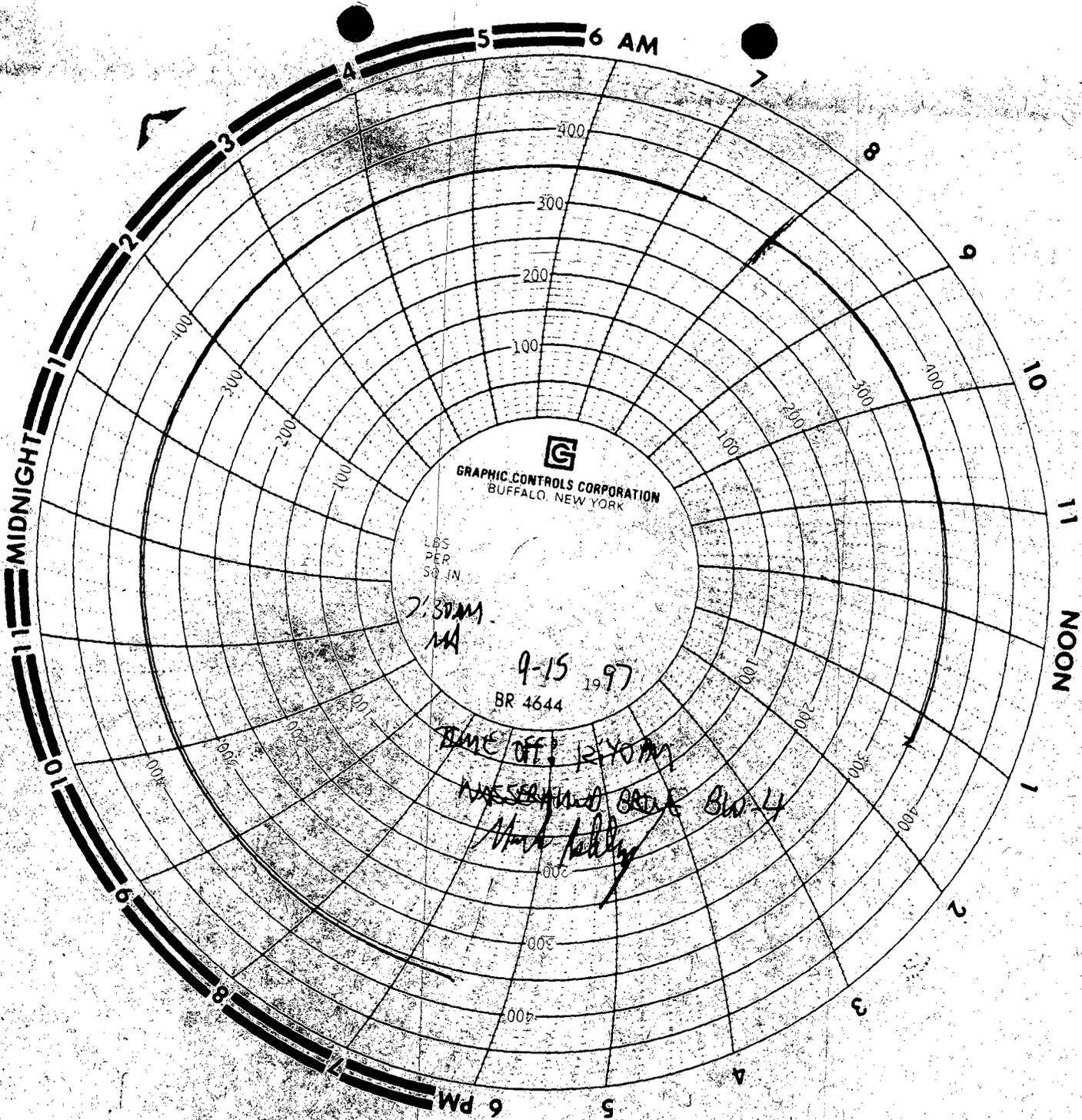
On behalf of the OCD, I would like to thank you for your time and cooperation during the testing. If you have any questions, please contact me at (505) 827-7155.

Sincerely,

A handwritten signature in cursive script that reads "Mark Ashley".

Mark Ashley  
Geologist

Attachment

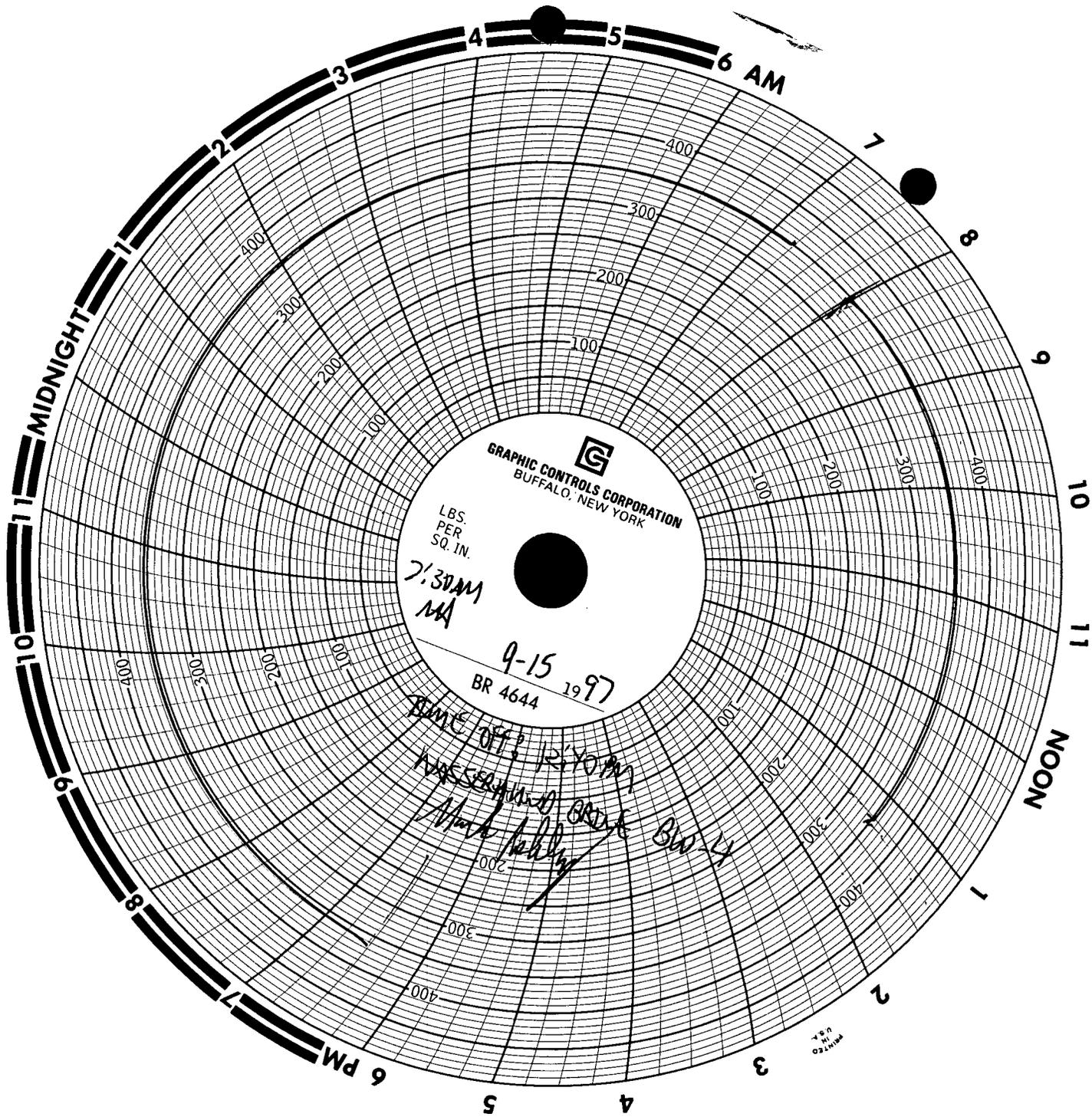


GRAPHIC CONTROLS CORPORATION  
BUFFALO, NEW YORK

7.37 AM  
MA

9-15 1997  
BR 4644

TIME OFF: 12:30 PM  
WASSERMAN BRONX Blvd 4  
Mark Kelly





**NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT**

OIL CONSERVATION DIVISION  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

August 12, 1997

**Certified Mail**

**Return Receipt No. P-288-258-943**

Mr. J. E. Haseloff  
Wasserhund Incorporated  
10135 Love Street  
Lovington, New Mexico 88260

**RE: Mechanical Integrity Testing of Brine Supply Wells  
Annual Test  
Eidson Brine Station BW-004  
Lea County, New Mexico**

Dear Mr. Haseloff:

The Underground Injection Control Program of the Federal Safe Drinking Water Act requires that operators demonstrate mechanical integrity of all injection wells by ensuring that there are no leaks in the tubing, casing, or packer, and that the injected fluid is confined within the injection zone through proper cementing.

All brine wells that operate without a packer will be required to have an annual open hole pressure test equal to 1.5 times the normal operating pressure or 300 psi, whichever is greater, for four hours with a maximum of 10 percent bleed-off allowed. Every five years or at the time of discharge plan renewals they will be required to have an open hole pressure test equal to 1.5 times the normal operating pressure or 300 psi, whichever is greater, for four hours with zero bleed-off.

All brine wells that operate with a packer will be required to have an annual casing/tubing annulus pressure test equal to 300 psi for 30 minutes.

Operators will be responsible for providing equipment and shall bear all costs incurred. The date and time of all tests will be scheduled and witnessed by the New Mexico Oil Conservation Division.

Please have your well ready for testing on September 15, 1997 at 7:00 AM as outlined below.

For brine wells operating without a packer:

- 1) The cavern must be pressured up and stabilized for a period of at least 24 hours prior to testing.

Mr. J.E. Haseloff  
August 12, 1997  
Page 2

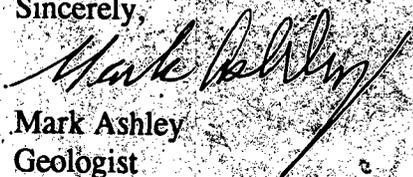
- 2) The system shall be tested to 1.5 times the normal operating pressure or 300 psi, whichever is greater, for a period of four hours. A maximum of 10 percent bleed-off will be allowed for annual tests. Testing conducted every five years or at the time of discharge plan renewal will have zero bleed-off.
- 3) A continuous recording pressure chart with an 8 hour clock shall be installed on the casing/tubing annulus. The pressure range shall not be greater than 1,000 psi.
- 4) Have well head prepared for test. All valves should be in good working order.
- 5) All gauges shall be in good working order.
- 6) Have manpower and equipment available for pressure test.

For brine wells operating with a packer:

- 1) Have the casing/tubing annulus and tubing loaded with inert fluid prior to testing.
- 2) The casing/tubing annulus shall be tested to 300 psi for 30 minutes.
- 3) A continuous recording pressure chart with an 8 hour clock shall be installed on the casing/tubing annulus. The pressure range shall not be greater than 1,000 psi.
- 4) Have well head prepared for test. All valves should be in good working order.
- 5) All gauges shall be in good working order.
- 6) Have manpower and equipment available for pressure test.

If you have any questions regarding this matter, please feel free to contact me at (505) 827-7155.

Sincerely,

  
Mark Ashley  
Geologist





NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

October 3, 1996

Mr. J.E. Haseloff  
Wasserhund Incorporated  
10135 Love Street  
Lovington, New Mexico 88260

RE: Mechanical Integrity Testing of Brine Supply Wells

Dear Mr. J.E. Haseloff:

Enclosed is a copy of the mechanical integrity test conducted on your brine well. Please retain this copy for your records.

On behalf of the New Mexico Oil Conservation Division, I would like to thank you for your time and cooperation during the testing. If you have any questions, please contact me at (505) 827-7155.

Sincerely,

Mark Ashley  
Geologist

Attachment



NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

August 16, 1996

**Certified Mail**

**Return Receipt No. P-288-258-825**

Mr. J. E. Haseloff  
Wasserhund Incorporated  
10135 Love Street  
Lovington, New Mexico 88260

**RE: Mechanical Integrity Testing of Brine Supply Wells  
Discharge Plan Renewal Test  
Eidson Brine Station BW-004  
Lea County, New Mexico**

Dear Mr. Haseloff:

The Underground Injection Control Program of the Federal Safe Drinking Water Act requires that operators demonstrate mechanical integrity of all injection wells by ensuring that there are no leaks in the tubing, casing, or packer, and that the injected fluid is confined within the injection zone through proper cementing.

All brine wells that operate without a packer will be required to have an annual open hole pressure test equal to 1.5 times the normal operating pressure or 300 psig, whichever is greater, for four hours with a maximum of 10 percent bleed-off allowed. Every five years or at the time of discharge plan renewals they will be required to have an open hole pressure test equal to 1.5 times the normal operating pressure or 300 psig, whichever is greater, for four hours with zero bleed-off.

All brine wells that operate with a packer will be required to have an annual casing/tubing annulus pressure test equal to 1.5 times the normal operating pressure or 300 psig, whichever is greater, for four hours.

Operators will be responsible for providing equipment and shall bear all costs incurred. The date and time of all tests will be scheduled and witnessed by the New Mexico Oil Conservation Division.

Please have your well ready for testing on September 18, 1996 at 9:00 AM as outlined below.

Mr. J.E. Haseloff  
August 16, 1996  
Page 2

For brine wells operating without a packer:

- 1) The cavern must be pressured up and stabilized for a period of at least 24 hours prior to testing.
- 2) The system shall be tested to 1.5 times the normal operating pressure or 300 psig, whichever is greater, for a period of four hours. A maximum of 10 percent bleed-off will be allowed for annual tests. Testing conducted every five years or at the time of discharge plan renewal will have zero bleed-off.
- 3) A continuous recording pressure chart with an 8 hour clock shall be installed on both the casing/tubing annulus and tubing. The pressure range shall not be greater than 1,000 psig.
- 4) Have well head prepared for test. All valves should be in good working order. All casing/tubing annulus and tubing valves shall be open.
- 5) All gauges shall be in good working order.
- 6) Have manpower and equipment available for pressure test.

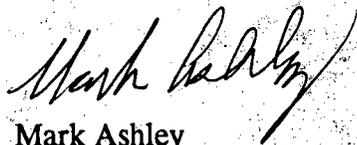
For brine wells operating with a packer:

- 1) Have the casing/tubing annulus and tubing loaded with inert fluid prior to testing.
- 2) The casing/tubing annulus shall be tested to 1.5 times the normal operating pressure or 300 psig, whichever is greater, for four hours.
- 3) A continuous recording pressure chart with an 8 hour clock shall be installed on the casing/tubing annulus. The pressure range shall not be greater than 1,000 psig.
- 4) Have well head prepared for test. All valves should be in good working order.
- 5) All gauges shall be in good working order.
- 6) Have manpower and equipment available for pressure test.

Mr. J.E. Haseloff  
August 16, 1996  
Page 3

If you have any questions regarding this matter, please feel free to contact me at (505) 827-7155.

Sincerely,



Mark Ashley  
Geologist

