BW - 17

PERMITS, RENEWALS, & MODS

CLOSED

UNICHEM
INTERNATIONAL

707 N. Leech, P.O. Box 1499 / Hobbs, NM 88240 / Ph. 505/393-7751, Fax 505/393-6754

March 9, 1993

Mr. William J. LeMay
NM Oil Conservation Division
State Land Office Building
P.O. Box 2088
Santa Fe, NM 87504

CERTIFIED MAIL P 661 764 512

Dear Mr. LeMay:

Please be advised that Unichem International is selling its Rowland Trucking Company subsidiary to Mr. Bob Calhoon, P.O. Box 340, Hobbs, NM 88241.

Attached is a certified letter and signed receipt notifying Mr. Calhoon of the transfer of the following discharge plans.

- Unichem International Inc., Trucker's #2 Brine Station Plan BW-18
- Unichem International Inc., Carlsbad Brine Station Plan BW-19
- Unichem International Inc., Eunice Brine Station Plan BW-16
- Unichem International Inc., Truckers #1 Brine Station DP #370- Well plugged 12/90

If you have any questions please do not hesitate to call or write.

Sincerely,

UNICHEM INTERNATIONAL INC.

Wayne Price
Staff Engineer

LWP:jd
cc: B. Clements
R. Brakey
M. Hughes
Environmental File

UNICHEM
INTERNATIONAL
707 N. Leech, P.O. Box 1499 / Hobbs, NM 88240 / Ph. 505/393-7751, Fax 505/393-6754

March 9, 1993

Mr. Bob Calhoon
Rowland Trucking Company Inc.
P.O. Box 340
Hobbs, NM 88241

CERTIFIED MAIL P 661 764 513

Dear Mr. Calhoon:

Pursuant to the State of New Mexico Water Quality Control Commission and to the Energy and Minerals Department Oil Conservation Division Rules and Regulations, Unichem International is required by law to notify you that we are transferring the following discharge permits to your company.

- Unichem International Inc., Trucker's #2 Brine Station Plan BW-18
- Unichem International Inc., Carlsbad Brine Station Plan BW-19
- Unichem International Inc., Eunice Brine Station Plan BW-16
- Unichem International Inc., Truckers #1 Brine Station DP #370- Well plugged 12/90

For your reference please find WQCC Part 3-111 (transfer of Discharge Plan) attached.

If you have any questions please do not hesitate to call or write.

Sincerely,

UNICHEM INTERNATIONAL INC.

Wayne Price

Wayne Price
Staff Engineer

LWP:jd
cc: B. Clements
R. Brakey
M. Hughes
Environmental File

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)*
2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:

Mr. Bob Calhoon
Rowland Trucking Company
P.O Box 340
Hobbs, NM 88240

4. Article Number
p 661 764 513

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee
X

6. Signature – Agent
X Mary Hughes

7. Date of Delivery
3/19/93

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form 3811, Apr. 1989 ★U.S.G.P.O. 1989-238-815 DOMESTIC RETURN RECEIPT

UNICHEM
INTERNATIONAL

Home Office 707 N. Leech, P.O. Box 1499 / Hobbs, NM 88240 / Ph. 505/393-7751, TWX 910/986-0010

October 10, 1988

VIA CERTIFIED MAIL: P 713 502 790

John Parker, Water Resource Specialist
Ground Water Section
State of New Mexico
Environmental Improvement Division
P.O. Box 968, Runnels Building
Santa Fe, NM 87504-0968

SUBJECT: PROGRESS REPORT - TRUCKERS #1 BRINE STATION

Dear Mr. Parker:

Unichem International has complied with the EID's recent request for a well workover and cement bond log for Truckers #1.

The workover was unsuccessful from the standpoint that we could not re-enter the hole due to downhole obstructions located at approximately 1,900 feet. This does not mean that the well is going to be abandoned or that it is obsolete; at this point, it is strictly a temporary abandonment until economic conditions warrant the well re-entry.

Enclosed is a sheet detailing the amount of money spent on the well to date in efforts to re-enter the hole, which equates to approximately $57,000. As indicated, the current state of the oilfield economy is forcing us to stop until better conditions warrant further re-entry efforts.

Also enclosed is the acoustic cement evaluation log and a letter from CRC Wireline Company. Briefly, the letter states that the bond log looks very good, and we are submitting the log as evidence for future permitting efforts. The full workover well log will be forwarded to your attention once it has been completed and received by our office.

The well has been capped and filled with a water-soluble corrosion inhibitor to prevent pipe corrosion in the interim period. We anticipate that well re-entry will occur within a one-year period.

Please do not hesitate to contact me if you have any questions.

Sincerely,

UNICHEM INTERNATIONAL INC.

Wayne Price
Staff Engineer

LWP:mms

Enclosures

cc: Kevin Lambert, New Mexico E.I.D.

Truckers #1

8-26-88 Moved and reset pump house and pump; removed well house.

9-06-88 Rigged up DA&S Well Service Co. and pulled 2 7/8" tubing. Pulled 70 joints and 20' of another joint. Left 3 joints and a piece plus a 4½" bit in the well.

Rigged up Petco reverse unit.

Rigged up to pull 5½" casing. Pulled up to 130,000 lbs. on casing with pulling unit. Casing would not come loose.

Rigged up Rotary Wire Line and shot well head to loosen slips. Did not loosen slips.

Called Ron's Welding to cut well head off. Started to cut well head off and 5½" casing dropped down hole with 80,000 lbs. pulled on it. 2,120' of 5½" 15 lb. casing should weigh 33,000 lbs.

9-07-88 Rigged up DA&S' casing jacks and picked up to 185,000 lbs. to get slips out of well. Sat back down. Cut well head and collar off 8 5/8" casing. Rewelded 8 5/8" collar on casing.

Rigged up Rotary Wire Line and ran 3 points in to 5½" casing to find out where the casing was stuck. Stuck at 1,918'. Tried to run chemical cutters and cut casing. Cutters would not go. Ran jet cutters and cut 5½" casing at 1,881'. Pulled on casing to 175,000 lbs.; did not get a complete cut. Went back into casing to 1,883' and made another cut. Had a complete cut. Rigged Rotary Wire Line down and removed casing jacks. (There was 47 joints and a piece.) There was 2,120' of 5½" casing in the well. Cut off and pulled 1,883' out of well. There was 4 bad joints plus the part of a joint.

Unloaded washover pipe and drill pipe and shut down.

9-08-88 Picked up klusterite mill and drill pipe; ran into well. Milled on 5½" casing to smooth off cut. Milled 1½' and pulled out of hole. Picked up wash pipe and shut down for the day.

9-09-88 Finished picking up collars and jars and went into hole. Started washing over 5½" casing at 1,914'. Washed and milled to 1,927'. 8' of the 13' was very slow milling. Pulled out of the hole. Left 1 joint of washover pipe (28') and a klusterite shoe 3½' in the well. Shut down for the day.

9-10-88 Rigged up CRC Wire Line and calipers to see what size pipe was in the well. Ran calipers from 1,850' up. Ran bond log to check cement to 8 5/8" casing from 1,850' up. Shut down for the day.

9-11-88 Shut down.

9-12-88 Went into hole with impression block. Showed 5½" casing leaning to one side. Rigged up Rotary Wire Line and ran chemical cutter; would not go into 5½" casing. Ran jet cutters; would not go into 5½" casing.

Ran 3½" collar locater; would not go into 5½" casing. Ran 1½" collar locater; would not go into 5½" casing. Rigged Rotary Wire Line down and went into hole with overshot and drill pipe. Latched onto 5½" casing. Rigged Rotary Wire Line back up and ran 3 shots or charges into well to loosen 5½" collar and back it off. Did not loosen. Then ran 3 point into well to check where the pipe was stuck. We were stuck below the collar. Pulled the 3 point out of the well and ran another charge into casing to back off collar. Collar was backed off. Pulled out of the hole with drill pipe. Overshot a piece of the 5½" casing and part of the washover pipe about 1' to 1½'. Shut down for the day.

9-13-88 Picked up spear and went in the hole with the drill collars and drill pipe. Could not catch the fish. Pulled out of the hole and went back with 6" mill. Started milling on 5½" casing at 1,884'. Milled about 3'. Pulled up into 8 5/8" casing and shut down for the day.

9-14-88 Started milling. Milled for a few minutes and everything dropped 10'. Pulled out of the hole and went back in with a spear. Unable to spear washover pipe. Pulled out of the hole and ran overshot and tried to get over 5½" casing. Could not get over 5½" casing. Pulled out of hole and ran spear in well and could not get into 5½" casing. Pulled back out of hole and shut down for the day.

9-15-88 Picked up 7 3/4" mill and went into hole and started milling. Milled 7' of hard to semi-hard milling. Pulled out of the hole and picked up impression block and went back into the hole. Pulled impression block out of well; showed to be on rock. Shut down for the day. Hauled off 700 bbls. of fluid.

9-16-88 Rigged up Rotary Wire Line and ran calipers to see where the end of the 8 5/8" casing was. It was at 1,887'. Then went in the hole with a 7 5/8" bit and drilled 4½' to iron. Pulled out of the hole and went back into the hole with a 7 3/4" mill. Milled 14". Pulled up into the 8 5/8" casing and shut down till Monday. Hauled off 1,050 bbls. of fluid.

9-18-88 Shut down.

9-19-88 Fueled up pulling unit with diesel. Diesel tank was emptied while shut down.

Went in hole with 7¼" tapered mill and started milling. Milled 3' and pulled out of hole to check the mill. The mill was wore on the outside and cut out on the inside. Shut down for the day. Hauled 715 bbls. of fluid off.

9-20-88 Layed down washover pipe and ran 5½" casing to 1,749'. Layed down drill pipe and drill collars. Layed down 10 joints of 2 7/8" tubing (305.84'). Then ran 1,821.79' of 2 7/8" tubing into well. Released all equipment.

Hauled 24 joints (746.33') of 2 7/8" tubing in. Doped threads and put on rack in yard. Also brought in 3 joints of bad 5½" casing.

D A + S	16,189.57
PeTco	27,542.04
Rotary wire line	4,776.20
Rowland + Eunice [illegible]	6,179.90
Ron's welding	221.29
Farmers	319.29
Winston Truck	18.17
wedge CRC inc	1,513.19
K + S Electric	420.74
	57,980.39

Wedge Energy Group

WEDGE CRC, Inc.

P.O. Box 1920
Hobbs, New Mexico 88240

September 12, 1988

Rowland Trucking
418 S. Grimes
Hobbs, New Mexico 88240

RE: Truckers #1 CBL log.

After a review of the Acoustic Cement Evaluation run on 9-10-88, I offer these opinions:

1. Excellent bonding is apparent between 106' and 422', this has an average bond index of 90%.
2. From 244' to 580' bonding is weak with a B.I. of approximately 30%. This indicates something (mud, cement, etc.) exists between these two points. I don't believe this could be squeezed.
3. From 580' to 1315', B.I. approximately 60%.
4. From 1315' to 1420', B.I. = 90%.
5. From 1420' to 1592', B.I. = 70%.
6. From 1592' to 1800', B.I. = 90%.

My opinion is that the cement bond is adequate to good to prevent zone communication.

If we may be of further assistance, do not hesitate to call.

Sincerely,

Jim Sizemore

Jim Sizemore
District Manager

NEW MEXICO
HEALTH AND ENVIRONMENT
DEPARTMENT

Post Office Box 968
Santa Fe, New Mexico 87504-0968

ENVIRONMENTAL IMPROVEMENT DIVISION

Michael J. Burkhart
Director

GARREY CARRUTHERS
Governor

CARLA L. MUTH
Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

July 19, 1988

James H. Brutton, President
Unichem International, Inc.
P.O. Box 1499
Hobbs, NM 88240

RE: Approval of DP-370 and DP-371

Dear Mr. Brutton:

Pursuant to the Settlement Agreement entered into by Unichem International, Inc. (Unichem) and the Environmental Improvement Division (EID) on February 24, 1988, as amended May 5, 1988, EID has reviewed all financial assurance materials submitted by Unichem, and hereby certifies that it has found these financial assurances to be adequate. This terminates Unichem's obligations under the Settlement Agreement.

The applications for renewal of discharge plans DP-370 and 371 for Trucker's #1 and Trucker's #2 respectively in Lea County, New Mexico are hereby approved. The approved discharge plan renewals consist of the materials dated September 17, and 22, 1987; December 22, 1987; March 17, 1988; May 5, 1988, May 17, 1988; June 6, 1988; June 29, 1988; June 30, 1988; and July 7, 1988, plus the information and materials submitted as part of the original discharge plan approved December 18, 1982.

The discharge plan renewal applications were submitted pursuant to Section 3-106 of the New Mexico Water Quality Control Commission Regulations. It is approved pursuant to Section 3-109. Please note Subsections 3-109.E. and 3-109.F., which provide for possible future amendment of the plan. Please be advised that the approval of this plan does not relieve you of liability should your operation result in actual pollution of surface or ground waters which may be actionable under other laws and/or regulations.

Monitoring and reporting shall be as specified in the discharge plan and supplements thereto. These requirements are summarized on the attached sheets. Any inadvertent omissions from this summary of a discharge plan monitoring or reporting requirement shall not relieve you of responsibility for compliance with that requirement.

Pursuant to Subsection 3-109.G.4., these plan renewals are for a period of five years. This approval will expire July 18, 1993, and you should submit an application for a new approval in ample time before that date.

On behalf of the staff of the Ground Water Section I wish to thank you for your cooperation during these discharge plan reviews.

Sincerely,

Michael Burkhart
Director

MB:JP:[redacted]

cc: Garrison McCaslin, EID District IV Manager, Roswell
Wayne Price, Unichem Staff Engineer
Gini Nelson, HED Office

BRINE STATION INSPECTION FORM

DATE Dec 02 1987 EID INSPECTOR Parker/Lambert
FACILITY Truckers #1 (Unichem) LOCATION 529 W o Hobbs
FACILITY REP ON SITE no COUNTY Lea

WELL OPERATION

WELL IS INJECTING: __ THROUGH ANNULUS X THROUGH TUBING
SOURCE OF FRESH WATER on-site water well
TRACE INJECTION/PRODUCTION LINES surface lines, fresh insulated - no leakage
WELL HEAD PRESSURE _____ PSIG PUMP PRESSURE not pumping PSIG
LEAKS AROUND WELL OR PUMP yes
need to inject through the annulus and up the tubing w/ brine

STORAGE AREA

N/A

FOR PONDS:
GENERAL LINER APPEARANCE _____
AMOUNT OF FREEBOARD _____
ANY SIGN OF OVERFLOW OR LEAKS _____
LEAK DETECTION SYSTEM __ FLUIDS __ DRY

FOR TANKS:
GENERAL APPEARANCE good (western brine tank needs new top)
LABLED PLAINLY X YES __ NO
BERMED TO PREVENT RUNOFF X YES __ NO
CHECK CONTENTS TO ASSURE PROPER FLUID/LABLE MATCH _____
NUMBER OF TANKS FOR BRINE 2 FRESH WATER 3 (1 inactive)

LOADING AREA

PROPERLY GRADED AND BERMED TO CONTAIN SPILLAGE	X YES	__ NO
ANY EVIDENCE OF RECENT SPILLAGE	X YES	__ NO
DOES FACILITY HAVE A SPILL COLLECTION SYSTEM	X YES	~~X NO~~
ANY EVIDENCE OF OIL SPILLING/DUMPING	__ YES	X NO

MONITORING WELLS

DEPTH _____ FT STATIC WATER LEVEL _____ FT BELOW CASING
SAMPLED THIS VISIT __ YES __ NO TEMP _____ Ec _____

COMMENTS Leaks around wellhead, injection procedure needs to be reversed.

UNICHEM
INTERNATIONAL

Home Office 707 N. Leech, P.O. Box 1499 / Hobbs, NM 88240 / Ph. 505/393-7751, TWX 910/986-0010

December 22, 1987 **VIA FEDERAL EXPRESS: Airbill #3287718803**

John Parker, Water Resource Specialist
Ground Water Section
State of New Mexico
Environmental Improvement Division
P.O. Box 968, Runnels Building
Santa Fe, NM 87504-0968

SUBJECT: Truckers #1 Brine Station - Hobbs, New Mexico
Discharge Plan Submittal #4

Dear Mr. Parker:

The information contained herein is provided in response to your verbal request of 21 December for clarification regarding Comment No. 7 as addressed in Unichem's Discharge Plan Submittal #3 of December 11, 1987.

Comment No. 7:

Unichem International needs to submit a plugging and abandonment plan for our review. This plan should also include decommissioning of surface facilities. Copies of the blanket plugging/surety bonds submitted for Truckers #1 and #2 (Exhibits 6 and 3 respectively) have been forwarded to our Legal Bureau for review. Please submit documentation that demonstrates the $50,000 sum of each bond is adequate to properly plug and abandon the brine wells (5-209.A.).

Clarification regarding Response of December 11, 1987:

Plugging and Abandonment Plan: A bridge plug will be set at the top of the salt formation and 200' of cement will be poured into the well casing, constituting a 200' plug to begin at the top of the salt formation (approximately 1,900' above sea level) and to extend upward approximately 200'.

Another bridge plug will be set approximately 50' below the Ogallala formation (approximately 3,650' above sea level), to extend upward to the surface of the

well casing. This plug will have a minimum depth of 200'. A P&A marker will then be set at the surface, which represents an approximate ground level elevation of 3,830' above sea level. Please note that the elevation measurements provided herein were obtained from the cross section geology map A - A' previously submitted in Exhibit #3-3 of Submittal #3.

Decommission of Surface Facilities: The surface facilities will be removed as outlined in the Detailed Estimate previously provided in our response to Comment No. 7, Submittal #3.

Documentation regarding Adequacy of Blanket Plugging/Surety Bond: Please note that the removal documentation provided in the Detailed Estimate referenced above also provides information demonstrating that the $50,000 Blanket Plugging/Surety Bond is adequate to cover the costs that would be incurred in the event that plugging and abandonment is required.

Unichem International is very interested in completing the process for obtaining a discharge plan permit for Truckers #1. Therefore, if any additional information for permitting is required, please contact me immediately so that we can take the necessary action to comply.

Sincerely,

UNICHEM INTERNATIONAL INC.

Wayne Price

Wayne Price
Staff Engineer

LWP:mms

NEW MEXICO
HEALTH AND ENVIRONMENT
DEPARTMENT

Post Office Box 968
Santa Fe, New Mexico 87504-0968

ENVIRONMENTAL IMPROVEMENT DIVISION

Michael J. Burkhart
Director

GARREY CARRUTHERS
Governor

LARRY GORDON
Secretary

CARLA L. MUTH
Deputy Secretary

November 2, 1987

Wayne Price
Unichem International
P.O. Box 1499
Hobbs, NM 88240

Dear Mr. Price:

The Environmental Improvement Division (EID) Ground Water Section has completed review of Unichem International's September 17 and 22, 1987 submittals for renewal of discharge plan numbers 370 and 371 respectively. The comments and additional information requested herein apply to both facilities unless designated otherwise. As correctly stated in your cover letters to the previously referenced submittals, the focus of our review for both brine well renewals is on conformance to Part V of the Water Quality Control Commission (WQCC) Regulations.

Comments and informational requests are itemized as follows (WQCC regulatory reference follows in parenthesis):

1. The Discharge Plan Signatory Requirement (Exhibit 11) lacks the certification: "I certify under penalty of law ..." which should precede signature. (5-101.H.2).

2. The number of water wells within the area of review, and the status of these wells is difficult to determine for the Truckers #1 Brine Station. There appears to be more than two wells listed in Exhibit 8, however the penciled-in legend at the top of the page states that the two wells are listed twice, even though the location for at least one of the wells listed is different. Please clarify (5-203.A).

3. In order to determine existence of possible conduits for fluid movement, an integral aspect of the Part V MIT requirements, Unichem International must commit to performing a cement bond log at some point during the five year renewal period (5-204.B.2 and 5-205.A.4.b.).

4. Unichem International needs to make a commitment to notify this office "prior to commencement of drilling, cementing and casing, well logging mechanical integrity tests and any other well workover ..." (5-205.A.5).

5. Please provide a comparison of fracture pressure for salt at injection interval (approximately 2,100 feet) with the down-hole pressure resulting from the maximum operating pressure (300 psi for Truckers #1, 450 psi for Truckers #2) (5-206.A.1.).

6. Please provide a letter of authorization for Wayne Price so as to comply with report signatory requirements (5-208.C.1.).

7. Unichem International needs to submit a plugging and abandonment plan for our review. This plan should also include decommissioning of surface facilities. Copies of the blanket plugging/surety bonds submitted for Truckers #1 and #2 (Exhibits 6 and 3 respectively) have been forwarded to our Legal Bureau for review. Please submit documentation that demonstrates the $50,000 sum of each bond is adequate to properly plug and abandon the brine wells (5-209.A.).

8. Maps submitted for Truckers #1 and #2 depicting area of review lack reference scale. Please submit maps including scales and with the ¼ mile area of review drawn in (5-210.B.2.).

9. Please provide maps showing vertical and horizontal limits of all ground water having less than 10,000 mg/l TDS (5-210.B.5.). Also, we need water quality information for water-bearing formations penetrated by brine well (3-106.C.3.).

10. Please provide generalized and specific maps and cross-sections depicting both the regional and site-specific geology (5-210.B.6 and 7).

11. Please provide a detailed contingency plan which at a minimum address: surface spills of brine and loss of mechanical integrity in the injection well (5.210.B.15).

12. The chemical analysis of samples taken from the Trucker #2 monitor sump (Exhibit 7) indicates an exceedance of the 3-103 standards for magnesium, chloride and TDS. Please explain what has caused the violation of the standards and what plans you have to prevent further contamination.

Should you have any questions, please feel free to contact Mr. Kevin Lambert (827-2902) or myself (827-0027).

Sincerely,

John W Parker

John Parker
Water Resource Specialist
Ground Water Section

JP:egr

cc: Garrison McCaslin, EID District IV Manager, Roswell
Roelf Ruffner, EID Field Office, Hobbs

3/87

REQUEST FOR LEGAL SERVICES

NAME OF CASE: Truckers #1 and #2, Unichem Int.

REQUEST MADE BY: John W Parker, WRS II, Groundwater Bureau
Name, Title, and Bureau

APPROVAL OF BUREAU CHIEF: [signature] 11/2/87
(Signature)

RECEIVED
NOV 3 1987
GENERAL COUNSEL

APPROVAL OF LEGAL LIAISON: _____
(Signature)

RECEIVED
NOV 04 1987
GROUND WATER/HAZARDOUS WASTE BUREAU

DATE OF REQUEST: 10/28/87

PERSON ATTORNEY SHOULD CONTACT: Requestor No. 0027

PRIORITY: _____ EMERGENCY (explain) _____
__X__ NORMAL
_____ LOW

DUE DATE (Deadline) A.S.A.P

NATURE OF REQUEST: see attatched
1. Are bonds made out to OCD okay?
2. Are attached specific bonds okay?

Please provide a memo or narrative description, and attach any other documentation explaining the assistance sought.

PLEASE FILL IN AS APPLICABLE:

SPECIAL INSTRUCTIONS: _____

To be completed by Deputy General Counsel

This matter has been referred to Gini Nelson on 11/3/87

with the following instructions see me about these

(Where applicable) This matter has been transferred to _____

on _____ with the following instructions _____

Internal #
260-87

[signature]
Deputy General Counsel

Date Completed _____

John Parker
Ground Water Bureau

NEW MEXICO
HEALTH AND ENVIRONMENT
DEPARTMENT

Post Office Box 968
Santa Fe, New Mexico 87504-0968

ENVIRONMENTAL IMPROVEMENT DIVISION

Michael J. Burkhart
Director

GARREY CARRUTHERS
Governor

LARRY GORDON
Secretary

CARLA L. MUTH
Deputy Secretary

MEMORANDUM

TO: Louis Rose, HED Office of General Counsel

FROM: John Parker, Ground Water Section

SUBJ: Review of Blanket Plugging Bonds for Brine Wells

DATE: October 30, 1987

The Ground Water Section's Underground Injection Control (UIC) program is working on discharge plan renewal for the first two of eight brine well facilities due to expire in 1987. All eight facilities were initially permitted by the Oil Conservation Division (OCD) and now must comply with the requirements of Part V of the WQCC regulations. Renewals conducted by former UIC staffers involved substantail changes to the terms of the bond (see attached September 17, 1985 correspondence from Page Morgan). However, my reading of 5-210.B.17 is that the existing bonds posted to the OCD are at least in that respect adequate.

JP:egr

Attachment

UNICHEM
INTERNATIONAL

Home Office 707 N. Leech, P.O. Box 1499 / Hobbs, NM 88240 / Ph. 505/393-7751, TWX 910/986-0010

October 22, 1987

VIA CERTIFIED MAIL: P 241 450 308

Mr. Kevin Lambert, Hydrologist
Ground Water & Hazardous Waste Bureau
State of New Mexico
Environmental Improvement Division
P.O. Box 968, Runnels Building
Santa Fe, NM 87504-0968

SUBJECT: Truckers #1 Brine Station - Hobbs, New Mexico
Discharge Plan Submittal #2-A

Dear Kevin:

The installation of two concrete loading pads indicated in our second submittal for the Discharge Plan on Truckers #1 has been completed. The enclosed pictures are provided for your reference and depict the completed installation.

If you have any questions, please do not hesitate to contact me.

Sincerely,

UNICHEM INTERNATIONAL INC.

Wayne Price
Staff Engineer

LWP:mms

Enclosure

UNICHEM
INTERNATIONAL

Home Office 707 N. Leech, P.O. Box 1499 / Hobbs, NM 88240 / Ph. 505/393-7751, TWX 910/986-0010

TRUCKERS #1 BRINE STATION

DISCHARGE PLAN SUBMITTAL #2-A
OCTOBER 22, 1987

TRUCKERS #1 BRINE STATION
COMPLETED INSTALLATION OF CONCRETE
LOADING PADS

NEW MEXICO
HEALTH AND ENVIRONMENT
DEPARTMENT

Post Office Box 968
Santa Fe, New Mexico 87504-0968

ENVIRONMENTAL IMPROVEMENT DIVISION

Michael J. Burkhart
Director

GARREY CARRUTHERS
Governor

LARRY GORDON
Secretary

CARLA L. MUTH
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

October 7, 1987

Truckers #1 Brine Station
Wayne Price, Engineer
Unichem International
707 North Leech
P.O. Box 1499
Hobbs, New Mexico 88240

Dear Mr. Price:

Enclosed is a copy of the public notice pertaining to your proposed discharge which was issued by this division pursuant to New Mexico Water Quality Control Commission Regulations, Section 3-108.

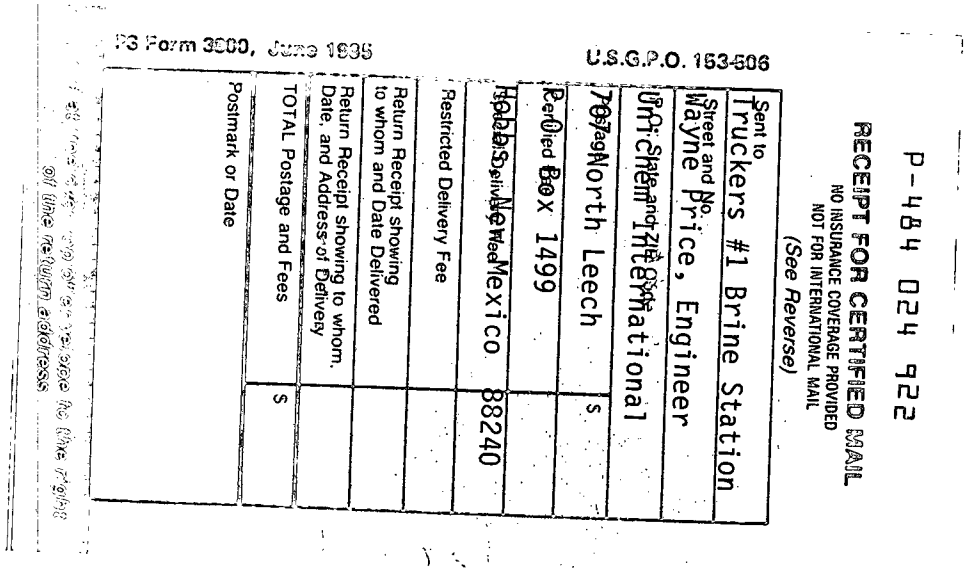
If you have any questions, please do not hesitate to contact me at the address listed above or at phone number (505) 827-2900.

Sincerely,

Ernest C. Rebuck
Program Manager
Ground Water Section

ECR/mp

Enclosure



NEW MEXICO
HEALTH AND ENVIRONMENT
DEPARTMENT

Post Office Box 968
Santa Fe, New Mexico 87504-0968

ENVIRONMENTAL IMPROVEMENT DIVISION

Michael J. Burkhart
Director

GARREY CARRUTHERS
Governor

LARRY GORDON
Secretary

CARLA L. MUTH
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

October 7, 1987

The Honorable JoAnn Martin, Mayor
City of Hobbs
P.O. Box 1117
Hobbs, New Mexico 88240

Dear Mayor Martin:

Enclosed is a public notice which includes notice of a proposed discharge plan(s) for one or more operations in or near your city.

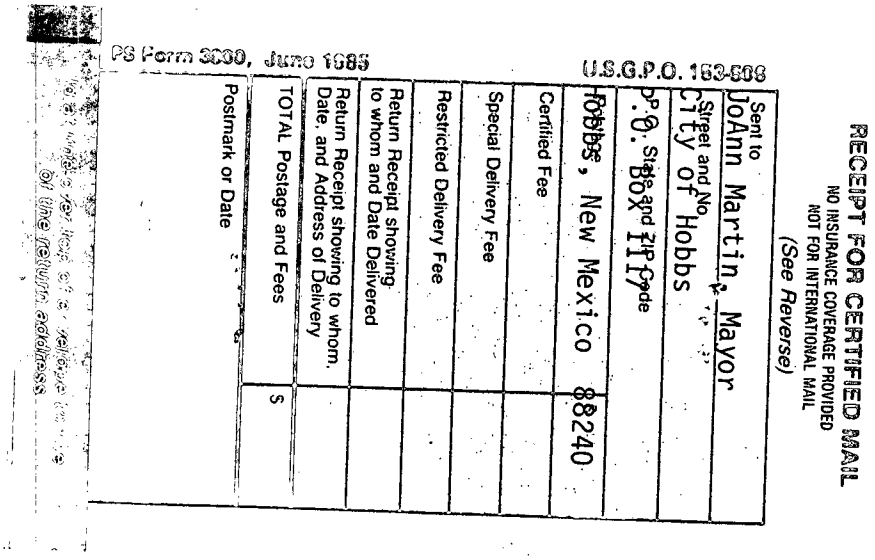
If you have any questions, please do not hesitate to contact me at the address given above or at 827-2900.

Sincerely,

Ernest C. Rebuck
Program Manager
Ground Water Section

ECR/mp

Enclosure



NEW MEXICO
HEALTH AND ENVIRONMENT
DEPARTMENT

Post Office Box 968
Santa Fe, New Mexico 87504-0968

ENVIRONMENTAL IMPROVEMENT DIVISION

Michael J. Burkhart
Director

GARREY CARRUTHERS
Governor

LARRY GORDON
Secretary

CARLA L. MUTH
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

October 7, 1987

Board of County Commissioners
Lea County Courthouse
215 East Central
Lovington, New Mexico 88260

Board of County Commissioners:

Enclosed is a public notice for one or more operations located in your county.

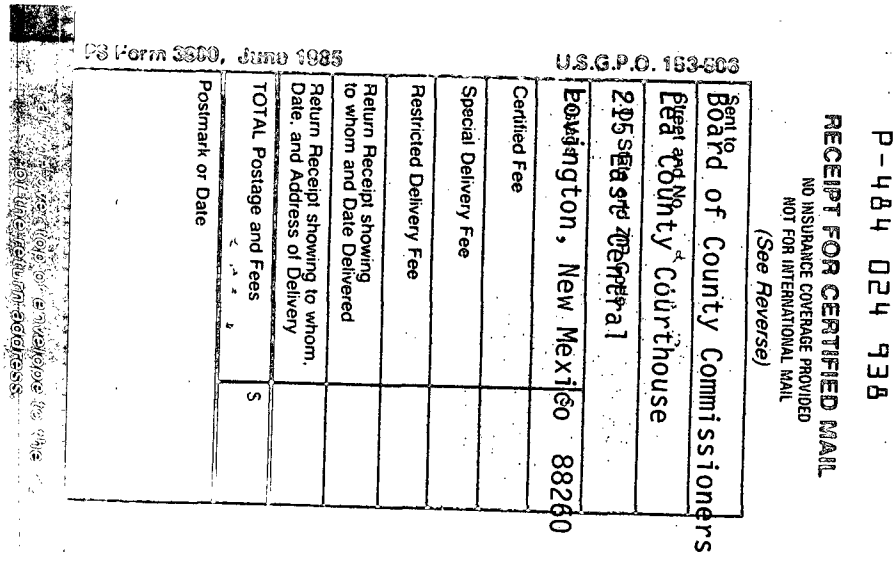
If you have any questions, please do not hesitate to contact me at the address listed above or at phone number (505) 827-2900.

Sincerely,

Ernest C. Rebuck
Program Manager
Ground Water Section

ECR/mp

Enclosure



OCTOBER 5, 1987

TO BE PUBLISHED ON OR BEFORE OCTOBER 14, 1987

PUBLIC NOTICE
NEW MEXICO ENVIRONMENTAL IMPROVEMENT DIVISION

Notice is hereby given that, pursuant to New Mexico Water Quality Control Commission Regulations, the following proposed discharge plans have been submitted for approval to the Director of the New Mexico Environmental Improvement Division, P.O. Box 968, Santa Fe, New Mexico 87504-0968; telephone 827-2900.

(DP-520) ALBUQUERQUE UTILITIES CORPORATION, Mr. Raymond Lucero, 4300 Sara Road, Rio Rancho, New Mexico 87124, proposes to discharge 29,000 gallons per day of domestic and commercial sewage to a lined, aerated lagoon located at T12N, R2E, Section 11, Sandoval County. The treated sewage will then be land applied to 14 acres of undeveloped rangeland approximately 1 mile from the lagoon. The estimated total nitrogen content of the discharge is 32 mg/l. The depth to groundwater in this area is 625 feet with a total dissolved solids content of 250 mg/l.

(DP-471) KIT CARSON CHILE PROCESSING PLANT, Nick and Rena Carson, Owners, P.O. Box 101, Rincon, New Mexico 87940, propose to modify their previously approved discharge plan for the disposal of 35,000 gallons per day of chile wash water to five acres of cropland. The facility is located in the NE¼ of the SE¼ of Section 7, T19S, R2W, NMPM in Dona Ana County. The proposed modification requests that the groundwater monitoring frequency be reduced from biweekly during the months of September to January and monthly during the months of February to August to a frequency of three times per year (August, November and February). The groundwater most likely to be affected is at a depth of approximately 15 feet with a total dissolved solids content of approximately 4000 mg/l.

LAS CRUCES, THE CITY OF, D. Craig Andrews, Associate Director of Wastewater, P.O. Drawer CLC, Las Cruces, New Mexico 88004, proposes to renew the approved discharge plan for the disposal of digested municipal sludge. The current flowrate is 35,000 gallons per day with a 2% solids content. The design flowrate is 61,200 gpd at 4% solids. The sludge is land applied in T23S, R1W, Section 25, SE¼, NMPM in Dona Ana County. The groundwater most likely to be affected is at a depth of approximately 300 feet with a total dissolved solids content of approximately 700 mg/l.

(DP-519) LOVELACE I.T.R.I., J.J. Thompson, P.O. Box 5890, Albuquerque, New Mexico 87185, proposes to continue discharging approximately 35,000 gallons per day of liquid waste from their Biomedical Research Laboratory and Animal Housing facility to a system of six lagoons. This discharge consists of the following: kennel washwater (15%), cage washwater (15%), sewage from restrooms, lab sinks, and cafeteria (20%), mechanical (pump cooling and sealing) and boiler and cooling tower blowdown (50%). The discharge has between 60 and 90 mg/l Nitrate (as NO_3) and is located at T8N, R4E, Section 3 in Bernalillo County. The depth to groundwater in this area is approximately 60 feet with a total dissolved solids content of 870 mg/l.

(DP-247) MOUNTAIN SHADOWS NURSING HOME, H.W. Handy, Executive Director, 1005 Hill Road, Las Cruces, New Mexico 88005, proposes to renew the approved discharge plan for the disposal of domestic wastewater into a septic tank/leachfield system. The discharge, with an estimated flowrate of 2,500 gallons per day, is located at T22S, R1E, Section 5, NMPM in Dona Ana County. The ground water most likely to be affected is at a depth of approximately 10 feet with a total dissolved solids content of approximately 1000 mg/l.

(DP-176) PUBLIC SERVICE COMPANY OF NEW MEXICO, H.L. Plum, Senior Regulatory Coordinator, Alvarado Square, Albuquerque, New Mexico 87158, proposes to modify its previously approved discharge plan for Units 3 and 4 Coal Yard Runoff Basin located at the San Juan Generating Station, T30N, R15W, Section 21, NMPM in San Juan County. The present discharge plan allows the basin to be used for retaining stormwater runoff from the Units 3 and 4 coal piles, emergency upset flows in the ash handling area and other miscellaneous flows. The plan requires PNM to pump the pond water to the water treatment system when the pond water depth exceeds 1.5 feet and the total dissolved solids (TDS) content exceeds 6,000 mg/l. The proposed modification requests the pond water TDS be allowed to increase to 10,000 mg/l before pumping to the water treatment system. The groundwater most likely to be affected is within the Shumway/Westwater arroyo system at a depth of approximately 25 feet with a total dissolved solids content of approximately 15,000 mg/l.

(DP-254) RATON, CITY OF, Eric Honeyfield, Public Works Director, P.O. Box 910, Raton, New Mexico 87740, proposes to renew previously approved discharge plan (DP-254) which allows for the land application of approximately 600,000 gallons per day of treated wastewater to 204 acres and 43,000 gallons per day of sludge to 20 acres of land in Section 6, T30N, R24E, Colfax County, New Mexico. The groundwater below the site is at a depth of approximately 60 feet and has a total dissolved solids concentration of approximately 900 mg/l.

(DP-516) RIP GRIFFIN TRUCK SERVICE, Bill Riggs, P.O. Box 1104, Moriarty, New Mexico 87035, proposes to continue discharging separated water from a 10,000 gallon underground storage tank to an unlined pit with approximately 2720 cubic feet of total capacity. The underground storage tank receives diesel and oil spills plus rainwater runoff via a drain located in the vicinity of the gasoline pumps. Periodically, the water which collects in this tank is siphoned off into the unlined pit described earlier. A trench, which is located at the southern end of the property and has the approximate dimensions of 500 feet by 8 feet by 4 feet, collects additional rainwater runoff mixed with oil and fuel from 15 acres of paved area associated with the truck service. The location of this facility is T9N, R8E, Section 14 in Torrance County. The depth to groundwater in this area is approximately 78 feet with a total dissolved solids content of approximately 870 mg/l.

(DP-227) S & T Dairy, Sid Tuls, Owner, Route 2, Box 154W, Roswell, New Mexico 88201, proposes to renew the approved discharge plan for the disposal of milking center wastewater through land application to cropland, The dairy is located in T11S, R24E, Section 36, NMPM in Chaves County. The estimated flowrate is 94,500 gallons per day. The ground water most likely to be affected is at a depth of approximately 40 feet with a total dissolved solids content of 3000 to 4000 mg/l.

(DP-222) TAOS PHOTOGRAPHIC LABORATORY, J. Gordon Adams, Owner, P.O. Box 2446, Taos, New Mexico 87571, proposes to renew previously approved discharge plan (DP-222) which allows for the discharge of 1400 gallons per day of photographic processing washwater onto 2 acres of land and an intermittent flow of processing solutions into a fiberglass holding tank to be periodically emptied by a commercial service. The discharge site is located 1.4 miles west of Taos in Section 18, T25N, R13E, Taos County, New Mexico. Groundwater below the site is at a depth of 3 feet and has a total dissolved solids concentration of 305 mg/l.

(DP-232) TAOS, TOWN OF, The Honorable Lawrence A. Santistevan, Mayor, P.O. Drawer M, Taos, New Mexico 87571, proposes to modify the public notice published on or before April 10, 1987. The modification consists of changing the sludge application site to 32 acres adjacent to the previously used site to the south and southwest.

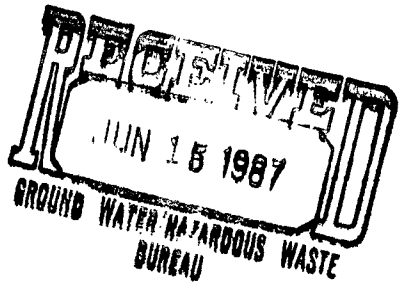
(DP-370) TRUCKERS #1 BRINE STATION, Wayne Price, Engineer, Unichem International, 707 North Leech, P.O. Box 1499, Hobbs, New Mexico 88240, proposes to renew their approved discharge plan (DP-370) for a brine water in situ extraction well and surface facility located at Section 1, T19S, R35E, Lea County, New Mexico. The operation involves injection of fresh water into an underlying salt formation thereby dissolving the salt and forming a brine water solution which is then extracted via a production well and used for oil and gas production. The groundwater below the site is at a depth of 70 feet and has a total dissolved solids concentration of approximately 500 mg/l.

(DP-371) TRUCKERS #2 BRINE STATION, Wayne Price, Engineer, Unichem International, 707 North Leech, P.O. Box 1499, Hobbs, New Mexico 88240, proposes to renew their approved discharge plan (DP-371) for a brine water in situ extraction well and surface facility located at Section 33, T18S, R38E, Lea County, New Mexico. The operation involves injection of fresh water into an underlying salt formation thereby dissolving the salt and forming a brine water solution which is then extracted via a production well and used for oil and gas production. The groundwater below the site is at a depth of 60 feet and has a total dissolved solids concentration of approximately 500 mg/l.

Any interested person may obtain further information from the Ground Water Section, Ground Water Bureau, EID, and may submit written comments to the Director of the EID at the address given above. Prior to ruling on any proposed discharge plan or its modification, the Director of EID will allow thirty (30) days after the date of publication of this Notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for public hearing shall set forth the reasons why the hearing should be held. A hearing will be held if the Director determines that there is significant public interest.

UNICHEM INTERNATIONAL
707 N LEECH, HOBBS NM 88240
505-393-7751

JUNE 13, 1987



MR. KEVIN A. LAMBERT, HYDROLOGIST
GROUND WATER & HAZARDOUS WASTE BUREAU
STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION
P. O. BOX 968, RUNNELS BUILDING
SANTA FE, NM 87504-0968

DEAR KEVIN,

SUBJECT: TRUCKERS #1 BRINE ST HWY 529 W OF HOBBS DISCHARGE PLAN DP-30

TRUCKERS #2 BRINE ST BRDY PL-HOBBS DP-371

PER OUR TELEPHONE CONVERSATION ON JUNE 1, 1987 CONCERNING SECTION 5-101.G. OF THE WQCC REGS REQUIRING THE REPORTING 180 DAYS BEFORE EXPIRATION DATE WHICH IS DUE JUNE 15, 1987, WE WOULD LIKE TO REQUEST AN EXTENSION OF 60 DAYS AS DISCUSSED DURING OUR TELEPHONE CONVERSATION.

AT THAT TIME WE WILL SUBMIT A COMPLETE PART 5 SUBMITTAL PER YOUR REQUEST. KEVIN IF THIS DOES NOT FIT IN YOUR TIME FRAME FOR EVALUATING UPCOMING PROPOSALS PLEASE LET US KNOW AND WE WILL MAKE OTHER ARRANGMENTS. PLEASE NOTE THAT WE HAVE RAN MECHANICAL INTEGRITY TEST ON BOTH WELLS AND HAVE BEEN SENT TO YOU AND SHOULD BE ON FILE THIS YEAR.

TRUCKERS #2 TEST SENT FEB 27, 1987 DP-371
TRUCKERS #3 TEST SENT MAR 4, 1987 DP-370

IF YOU HAVE ANY QUESTIONS, PLEASE DO NOT HESITATE TO CONTACT MY OFFICE.

SINCERELY,

UNICHEM INTERNATIONAL INC.

WAYNE PRICE
STAFF ENGINEER

WP:WP

CC: RICHARD BRAKEY

6/1/87 Wayne Price / Unichem Called
RE: Trucker #1 & #2

Wanting to know about June 15, '87 deadline which allows discharger to keep operating if DP expires
Told him to send in documentation by June 15, so that we have something on record. We will then evaluate information and determine applicability of 5-101. G. and let you know status.

Kevin Tanaka

UNICHEM
INTERNATIONAL

Home Office 707 N. Leech, P.O. Box 1499 / Hobbs, NM 88240 / Ph. 505/393-7751, TWX 910/986-0010

March 4, 1987

VIA CERTIFIED MAIL: P169568908

Mr. Kevin A. Lambert, Hydrologist
Ground Water & Hazardous Waste Bureau
State of New Mexico
Environmental Improvement Division
P.O. Box 968, Runnel Building
Santa Fe, NM 87504-0968

Dear Kevin,

SUBJECT: Truckers #1 Brine Station
Highway 529, 10 Miles West of Hobbs, New Mexico

Please find enclosed an integrity well test performed on our brine well located 10 miles west of Hobbs on Highway 529. Please accept this as the first portion of our required application for a discharge plan under the new requirements to become effective in 1988.

For your information, we will be submitting a more detailed plan for the brine well in the future. In the meantime, I believe that you should already have information on hand from the Oil Conservation Division for Truckers #1, along with detailed plans for the pending upgrade.

If you have any questions, please do not hesitate to contact me.

Sincerely,

UNICHEM INTERNATIONAL INC.

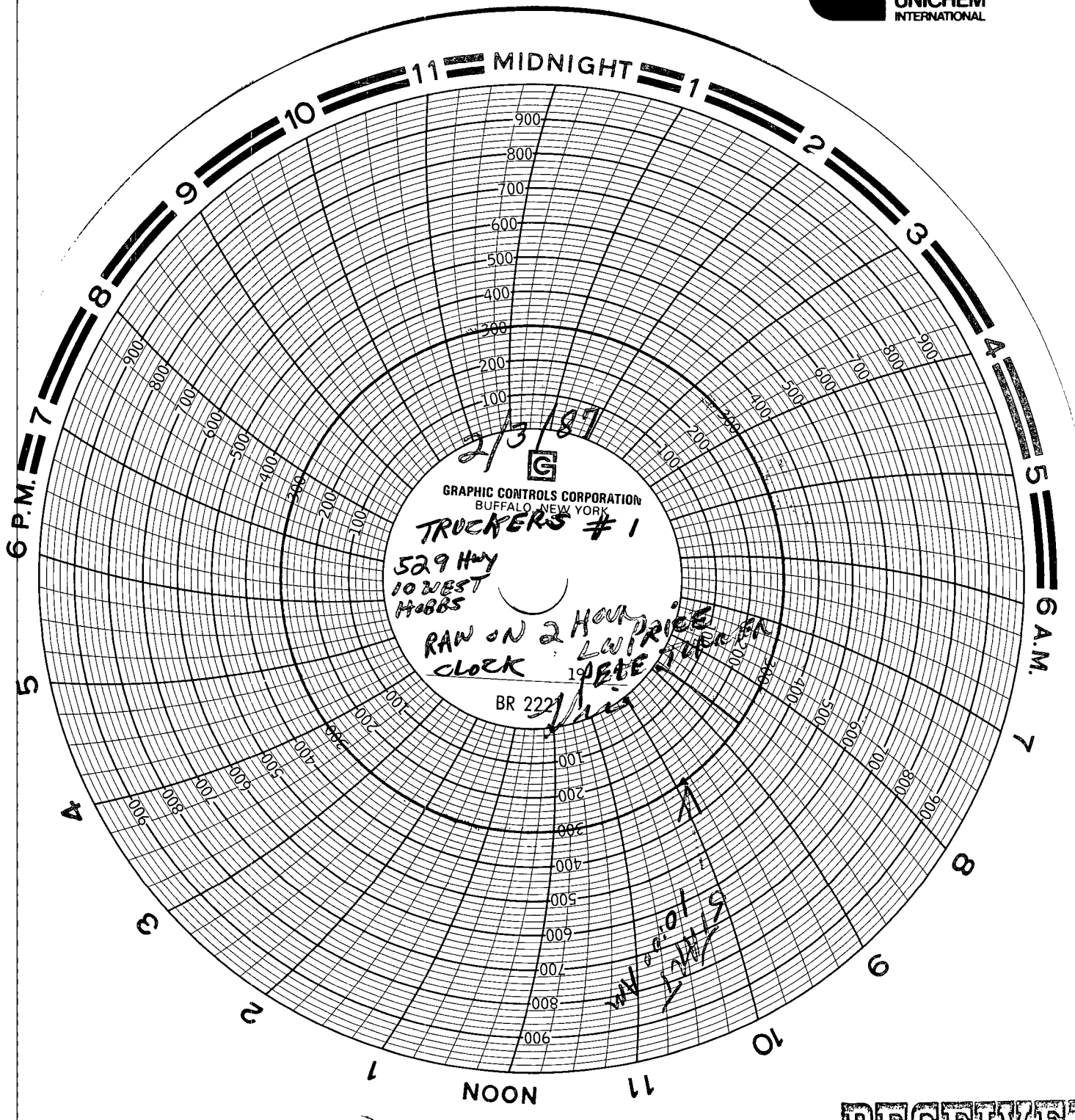
Wayne Price
Staff Engineer

WP:mms

Enclosure

cc: Richard Brakey

UNICHEM
INTERNATIONAL



MECHANICAL INTEGRITY TEST - FEBRUARY 3, 1987
TRUCKERS #1 BRINE STATION
HIGHWAY 529, 10 MILES WEST OF HOBBS, NEW MEXICO

BRINE STATION INSPECTION FORM

DATE 12/10 1986 EID INSPECTOR Lambert, Koschal / Baker
FACILITY Unichem Truckers #1 LOCATION [redacted]
FACILITY REP ON SITE None COUNTY LEA

DP-370

WELL OPERATION 2 well system

WELL IS INJECTING: __ THROUGH ANNULUS __ THROUGH TUBING
SOURCE OF FRESH WATER ?
TRACE INJECTION/PRODUCTION LINES Buried Lines w/ Surface Lines in Loading
WELL HEAD PRESSURE _____ PSIG PUMP PRESSURE _____ PSIG
LEAKS AROUND WELL OR PUMP None

STORAGE AREA

FOR PONDS:
GENERAL LINER APPEARANCE _____
AMOUNT OF FREEBOARD _____
ANY SIGN OF OVERFLOW OR LEAKS _____
LEAK DETECTION SYSTEM __ FLUIDS __ DRY

FOR TANKS:
GENERAL APPEARANCE Good Shape
LABLED PLAINLY X YES __ NO
BERMED TO PREVENT RUNOFF X YES __ NO
CHECK CONTENTS TO ASSURE PROPER FLUID/LABLE MATCH _____
NUMBER OF TANKS FOR 5 BRINE 2 FRESH WATER 3

LOADING AREA

PROPERLY GRADED AND BERMED TO CONTAIN SPILLAGE	X YES	__ NO
ANY EVIDENCE OF RECENT SPILLAGE	~~X~~ YES	X NO
DOES FACILITY HAVE A SPILL COLLECTION SYSTEM	X YES	__ NO
ANY EVIDENCE OF OIL SPILLING/DUMPING	__ YES	X NO

MONITORING WELLS

DEPTH _____ FT STATIC WATER LEVEL _____ FT BELOW CASING
SAMPLED THIS VISIT __ YES __ NO TEMP _____ Ec _____

COMMENTS Not used today but is operational

UNICHEM
INTERNATIONAL

Home Office 707 N. Leech, P. O. Box 1499 / Hobbs, NM 88240 / Ph. 505/393-7751, TWX 910/986-0010

August 28, 1986

Mr. Kevin A. Lambert, Hydrologist
Ground Water & Hazardous Waste Bureau
State of New Mexico
Environmental Improvement Division
P.O. Box 968, Runnels Building
Santa Fe, NM 87504-0968

Dear Kevin,

During my recent visit with you in Santa Fe on August 8, 1986, we discussed Truckers #1 Brine Station. At that time, I indicated that we have temporarily shut down the well, due to economic conditions in southeastern New Mexico. However, we do not want this to impair our permit in any way. We would like to retain the ability to re-open the station once the economy responds favorably, or if work in the area necessitates temporary opening of the station.

With respect to the well's history, we experienced a slight problem on the east side of the well. Rain water would typically build up in this area, and, due to the adjacent brine tanks, the chlorides in the water would sometimes slightly exceed the levels for normal well water. For this reason, Paige Morgan requested that we install some sort of spill collector so that chlorides will not migrate into the soil.

We do not believe that this represents a real problem; however, when we do re-open the station, we will certainly comply with this request. We propose installing a small spill collection system with an underlying liner, with decanting to be performed on a regular basis. If the system is designed as shown on the previous submittal for Truckers #1, we really do not expect to have any water in this area. We will be upgrading the piping and also installing a new level control device, which should take care of this particular problem.

If you have any questions or comments after reviewing this information, please contact me.

Sincerely,

UNICHEM INTERNATIONAL INC.

Wayne Price
Staff Engineer

WP:mms

cc: Jim Britton
Richard Brakey

No. of Samples	Ion
	Na
	K
	Ca
	Mg
	Cl
	HCO3
	CO3
	SO4
	TDS
////////	////////////
	NO3+ NO2
	NH3
	kjeld N
////////	////////////
	As
	Ba
	Cd
	CN
	Cr
	F
	Pb
	Hg
	Se
	Ag
	U
	V
	Ra 226
	Ra 228
////////	////////////
	Cu
	Fe
	Mn
	Phenols
	Zn
////////	////////////
	Al
	B
	Co
	Mo
	Ni
////////	////////////
	pH
	Conduct.

FIELD TRIP REPORT
GROUND WATER SECTION

SLD USER CODES

County Lea

Ground Water: 59300
NO_3, HC, & Toxics: 59600
UIC: 59500

FACILITY VISITED

Name of Facility: TRUCKERS #1 Brine Station
Location: RT 529 near Hobbs, NM

Discharge Plan Number: DP-
Type of Operation: Brine Station

ENVIRONMENTAL IMPROVEMENT DIVISION FIELD VISIT

EID Inspector(s): James/Baker
Date of Inspection or Visit: 6/17/86
Discharger's Representative Present During EID Visit:
Name: none
Title or Position:
Purpose of Visit:
a. Evaluation of Proposed Discharge Plan
b. Compliance Inspection of Discharge with Approved Plan ✓
c. Other (specify)
Inspection Activities During Field Visit:
a. Inspection of Facilities or Construction (specify)

b. Sampling of Effluents (give sampling locations)

c. Sampling of Ground Water (give names or locations of wells)

d. Evaluation of geology, soils, water levels or other physical characteristics of the location (specify)

e. Other (specify)

Observations and Information Obtained during the Visit:

Area looked the same as last time. Loading Area graded and bermed. No evidence of oil spillage. Well is set up to pump brine out annulus. Fresh water line is disconnected

ACTION REQUIRED

UNICHEM
INTERNATIONAL

Home Office 707 N. Leech, P. O. Box 1499 / Hobbs, NM 88240 / Ph. 505/393-7751, TWX 910/986-0010

March 13, 1986

Paige Grant Morgan, Acting Program Manager
State of New Mexico
Environmental Improvement Division
Ground Water Section
P.O. Box 968
Santa Fe, New Mexico 87504-0968

Re: Trucker's Brine Station No. 1

Dear Paige:

In response to your letter of March 3, 1986, it is our intention to act on your suggestion to submit a Part 5 discharge plan within six months of the date of your letter, or September 3, 1986. Further, we anticipate that we will make our first submittal by this summer.

With regard to the loading area to be scarified with concrete tailings, this is an economical means of rendering the present plastic soil condition that currently exists around the loading areas; and it is in lieu of placing a permanant concrete structure or driveway. However, many civil engineers use this method to "beef up" their subgrade. It also prevents mud pumping by changing the porosity of the soil, which, in turn, affects the permeability. This should enhance our discharge plan.

Paige, if you have any further questions, please let me know.

Regards,

UNICHEM INTERNATIONAL INC.

Wayne Price
Staff Engineer

WP/sar

3/12/86: Wayne Price, Unichem called (393-7751) to say:

(1) they plan to submit a Part 5 DP for Trucker's #1 by September 3 at the latest; and

(2) they will have the materials required on the Carlsbad station in to us by March 18th or at least postmarked March 18.

Note: wait for later Part 5 submittals on Trucker's #1 before publishing public notice.

Patsy Morgan

HEALTH ENVIRONMENT department

STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968

TONEY ANAYA
GOVERNOR

DENISE D. FORT
DIRECTOR

March 3, 1986

Wayne Price, Staff Engineer
Unichem International
P.O. Box 1499
Hobbs, New Mexico 88240

RE: Unichem's Trucker's Brine Station No. 1

Dear Wayne:

The plans you have submitted for upgrading the surface facilities at Trucker's No. 1 Brine Station appear to be generally adequate. I will consider these plans an amendment to your Part 3 discharge plan, unless you commit to submitting the balance of a Part 5 plan within a specified time period - say, within the next six months. My reason for this is that I am not inclined to have the proposed improvements at the Trucker's No. 1 facility delayed until the present permit is due to expire. If you agree to prepare the balance of a Part 5 permit within a specified time period, with implementation of the Part 5 plan to be carried out within a specified time period, then I will consider the plans you have submitted to be the first stage in preparing a Part 5 permit for the facility, and will publish public notice accordingly. Please respond quickly with your intentions in this regard.

I do have a question on the plans you have submitted: please explain your remark that the loading area will be scarified with concrete tailings.

With regard to your comment that many brine operators in your area do not have pits (presumably you mean emergency overflow pits) at their facilities: as you know, this agency assumed responsibility for regulating the brine extraction facilities in the state after many of these facilities were already in operation and permitted by the Oil Conservation Division. EID is attempting to work with the brine station operators on a reasonable time schedule to bring all of these facilities into compliance with the Water Quality Control Commission regulations.

The ones which claim our attention first are those which show evidence of spillage and leakage at the facility which pose an immediate threat to ground water quality. Eventually, however, all brine facilities will be required to come up to the same standards.

Sincerely,

Paige Grant Morgan
Acting Program Manager
Ground Water Section

PGM/mp

cc: Garrison McCaslin, EID District IV Manager

EXTENSION DATE: February 17, 1986

UNICHEM
INTERNATIONAL

Home Office 707 N. Leech, P. O. Box 1499 / Hobbs, NM 88240 / Ph. 505/393-7751, TWX 910/986-0010

February 14, 1986

Ms. Paige Grant Morgan
State of New Mexico
Environmental Improvement Division
P.O. Box 968
Santa Fe, New Mexico 87504-0968

RE: Rowland Trucker's Brine Station No. 1
Hwy. 529: Sec. 1, Twp. 19S, Range 35E, Unit A

Dear Paige:

Per your request, we are enclosing the amendment to the Part 3 Discharge Plan entailing a properly designed spill collection system, for your approval.

Due to the depressed economy in this area and the limited use of this brine station, we would like to delay any major expenditures on this facility. Therefore, we would like to propose the following:

As our first option, we would not build the pit. Rather, we would install the proposed electrically operated brine safety shut-off valve which will prevent accidental overflow of brine from the existing tanks. This overflow is caused by the cavity pressure after the brine pump has been shut down. A safety shut-off valve has been installed at the Eunice facility with remarkable results, reducing our incidental spillage by 90%. In addition, we would routinely remove any surface water, whether brine or rainfall, from the area.

Paige, we have noticed that many of the brine operators in our area do not have pits at their facilities. For this reason, we feel that the option above is reasonable. Also, you may note that the enclosed amendment pertains to surface factors only. However, it is precisely these surface factors that contribute to our incidental spillage problem.

Of course, should our first option not be acceptable to you, then we would go ahead with our second option, which is to build the pit as shown on the enclosed amendment.

Also, we respectfully request that you accept the enclosed plan as our preliminary submittal for the 1987 permit under the Water Quality Control Commission regulations, meeting Parts 1 through 5, as applicable. Please realize that we will be dealing with lithology, hydrology and geology in future submittals.

UNICHEM INTERNATIONAL INC.

UNICHEM INTERNATIONAL

I look forward to your comments on our above proposals.

Sincerely,

UNICHEM INTERNATIONAL INC.

Wayne Price

Wayne Price
Staff Engineer

WP/sar
Enclosures - noted

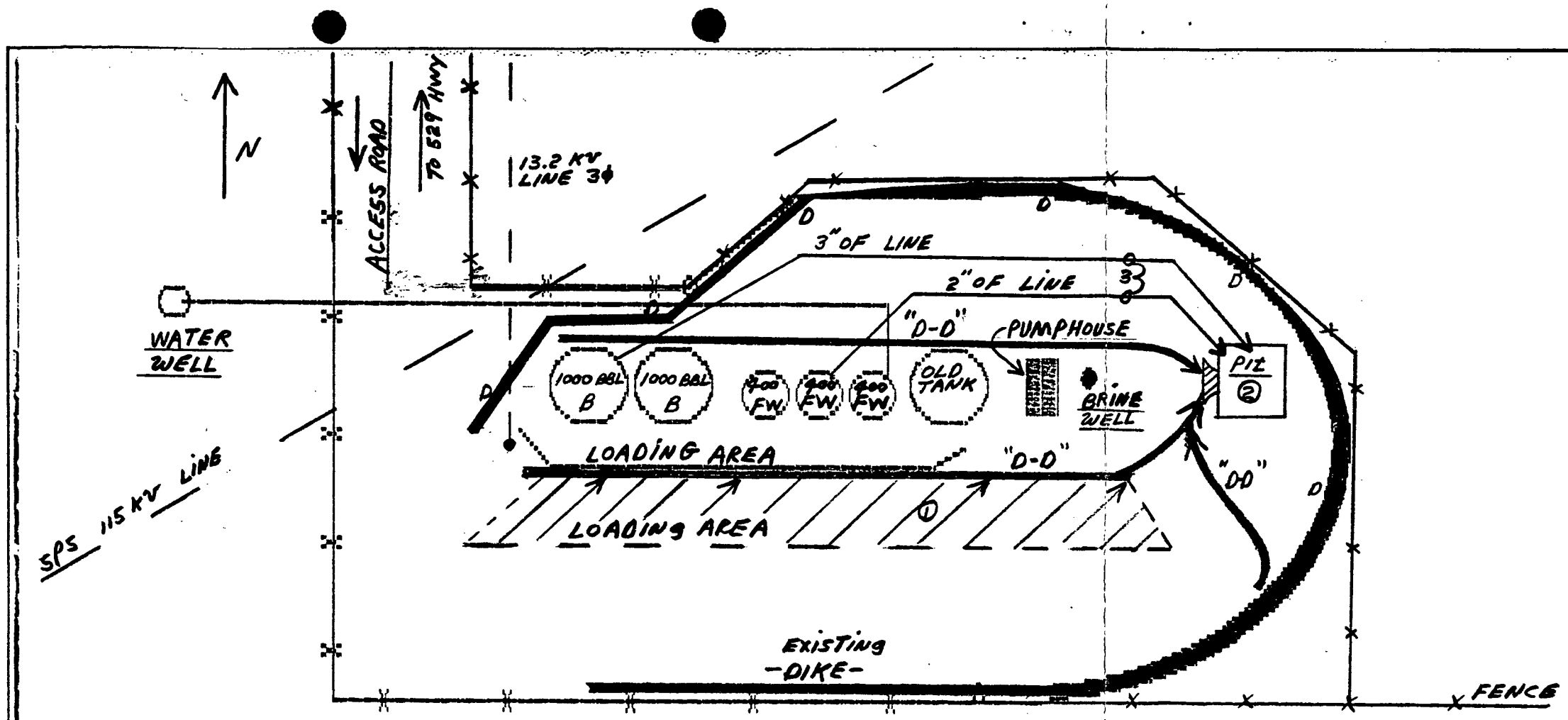
cc: Jim Britton
Richard Brakey
Charles Root

UNICHEM INTERNATIONAL

ATTACHMENTS

EXHIBIT A:	Proposed Plot Plan, Rowland Trucker's Brine Station #1, Hwy. 529
EXHIBIT B:	Piping Flow Schematic
EXHIBIT C:	Electrical Control for Electrically Operated Brine Shut-Off Valve

EXH. 1



NOTES

B BRINE
FW FRESH WATER
-D- DIKE
DD - DRAINAGE DITCH
OF - OVERFLOW-

SPEC'S

1. LOADING AREA TO BE SLOPED TO DRAINAGE DITCH & SCARIFY AREA WITH CONCRETE TAILINGS
2. PIT 30'x30'x3' WITH 36 MIL BF GOODRICH FLEXSEAL LINER #64-46-4736-98-3 with ANCHOR TRENCH DESIGN & APPROACH APRON
3. EXTEND OVERFLOW LINES TO "PIT"

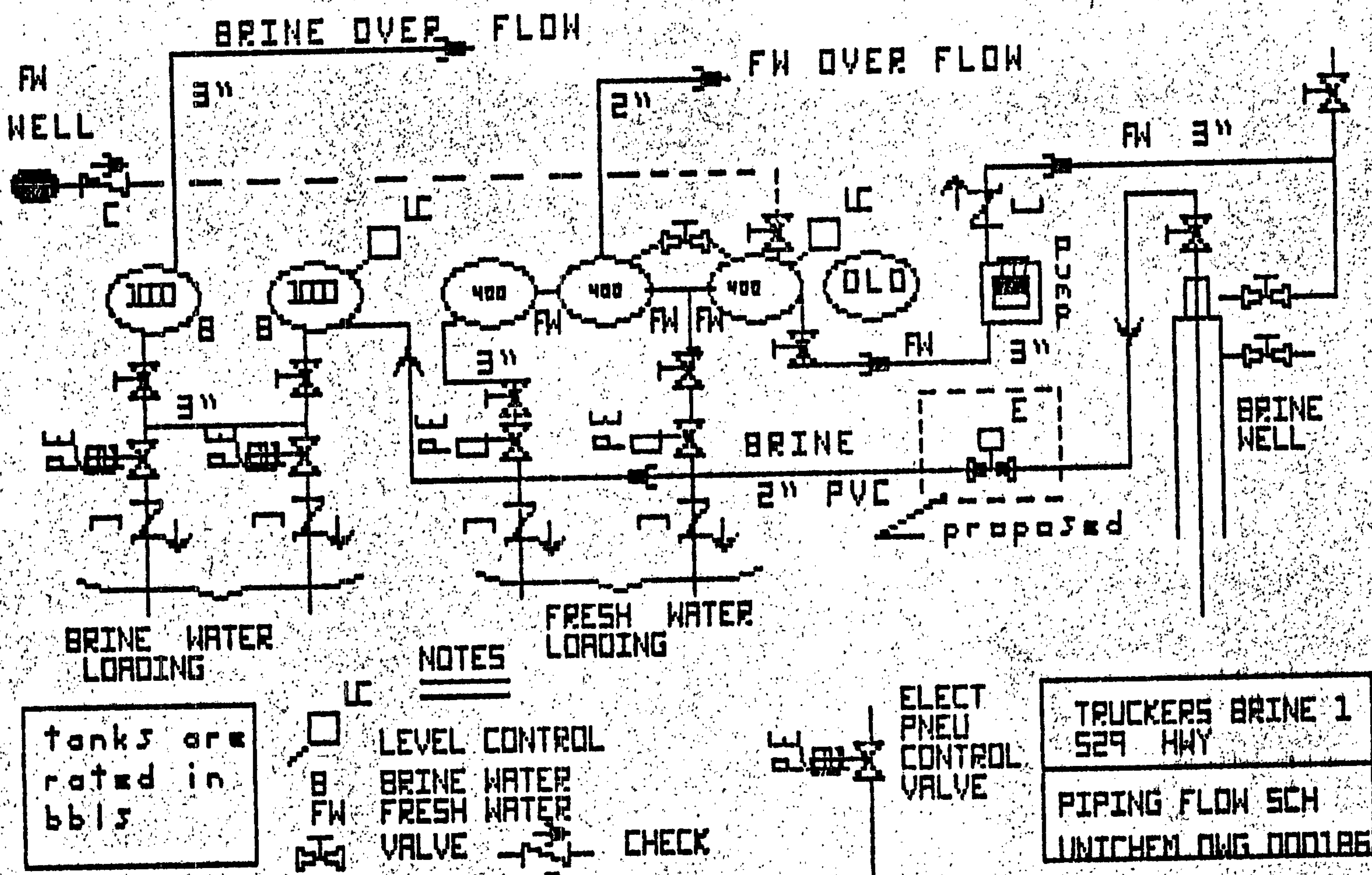
UNICHEM INTL - HOBBS-NM

SCALE: 1" = 66.69'	APPROVED BY:	DRAWN BY LWP
DATE: 2/10/86		REVISED

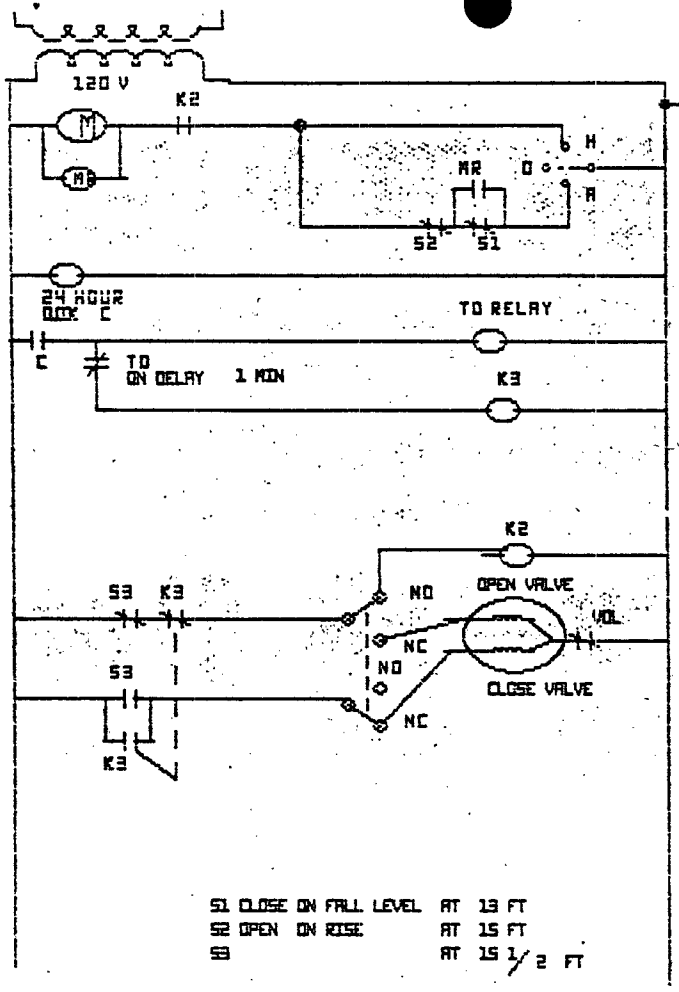
ROWLAND "TRUCKERS" BRINE ST #1 529 HWY
SEC 1 - T19S - R35E ANITA

PLOT PLAN	DRAWING NUMBER 000186-1

EXH. 2


BRINE OVER FLOW
FW OVER FLOW
FW
WELL
3"
2"
FW 3"
C
LC
LC
1000
1000
400
400
400
OLD
B
B
FW
FW
FW
FW
3"
3"
PUMP
3"
BRINE
2" PVC
E
proposed
BRINE
WELL
BRINE WATER
LOADING
FRESH WATER
LOADING
NOTES
tanks are
rated in
bbls
LC
LEVEL CONTROL
B BRINE WATER
FW FRESH WATER
VALVE
CHECK
ELECT
PNEU
CONTROL
VALVE
TRUCKERS BRINE 1
529 HWY
PIPING FLOW SCH
UNITCHEM DWG 000186

EXH. 3



1 MOTOR CONTACTOR M
2 HAND OFF AUTO SW
3 MR AUX MOTOR RELAY
4 S1 S2 LEVEL CONTACTS
5 24 HOUR CLOCK
6 CLOCK MAKES 15 MIN PER 24 HR
7 TIME DELAY RELAY 0 TO 180 SEC ON DELAY
8 K2 MOTOR INTERLOCK RELAY PREVENTS MOTOR FROM RUN IF VALVE IS CLOSED
9 WORCHESTER MOTOR VALVE

SEQUENCE OF OPERATION

OFF POSITION	MOTOR WILL NOT RUN BRINE VALVE WILL OPERATE AS NORMAL
HAND POSITION	MOTOR WILL RUN IF BRINE VALVE IS OPEN ONLY
AUTO POSITION	MOTOR WILL CYCLE OFF AND ON BY LEVEL CONTROL OF S1 AND S2 MOTOR WILL SHUT DOWN IF BRINE VALVE CLOSES VIA K2 RELAY INTERLOCK ONCE EVERY 24 HOURS CONTACT C CLOSES FOR 15 MIN AND PICKS UP RELAY K3 VIA NC TO TIME DELAY RELAY K3 WILL STAY PICKED UP FOR ONE MIN AND WILL CAUSE BRINE VALVE TO CLOSE VIA NO K3 CONTACT A NC K3 CONTACT WILL OPEN AND DROP OUT K2 MOTOR INTERLOCK CAUSING THE MOTOR TO SHUT DOWN IF BRINE IS ALREADY CLOSED NOTHING WILL HAPPEN

1/27/86: Wayne Price called from Utah; said that the company president and he were very worried about the letters I had sent on the Carlsbad and Trucker's #1 facilities and wanted to do everything necessary to straighten things out.

On Carlsbad: Wayne wanted to know what more was expected. I pointed out that I had listed some specific elements of the investigation that would be required: locations and depths of soil cores, what would be analyzed for, etc. We discussed further: he agreed to send me from Utah a sketch map of the facility, as accurate as he could make it, indicating locations of three soil cores around the tank* and two for background.* Soil samples to be analyzed for chloride, by A&L Soillabs, a Texas firm. And that depth of cores to be deeper than any evident brine contamination; if the bottom of any core still showed elevated chloride, cores would be taken to greater depth. Wayne will

* and two from horizontal cores beneath the tank.

have the soil lab send me a description of the technique used to collect the sample and to analyze it. He will submit all this within two weeks.
He indicated that the problems at the Carlsbad facility are only six months old - not long-standing -

Trucker's No 1: Wayne said he had simply let it slide to get a TA amendment in on this facility in time. He asked to be reminded whether I was requiring a full Part 5 amendment or just an amendment of the surface facilities - I said the latter. He said he would definitely get that in before the Feb. 17 deadline.

Sally Morgan

HEALTH ENVIRONMENT department

STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020

TONEY ANAYA
GOVERNOR

DENISE D. FORT
DIRECTOR

January 17, 1986

R.J. Brakey, Vice-President
Unichem International
PO Box 1499
Hobbs, NM 88240

Re: Discharge plan amendment required at Unichem/Trucker's No. 1 Brine Station

Dear Mr. Brakey:

You were informed in a May 23, 1985 letter from EID staff member Paige Morgan that the surface facilities at your above-referenced brine station do not meet the terms of Part 3 of the New Mexico Water Quality Control Commission (WQCC) regulations, under which your discharge plan for that facility had been approved. You were therefore requested to "... submit an amendment to your Part 3 discharge plan entailing a properly designed spill collection system and lining of the spill collection pit." Unichem's staff engineer, Wayne Price, responded to Ms. Morgan's request by taking immediate steps to remove any sources of surface contamination at the site and agreeing to submit the required discharge plan materials on or before January 1, 1986. This date was agreed upon in a telephone conversation between Mr. Price and Ms. Morgan and noted in a letter from Morgan to Price of August 12, 1985.

To date, you have not complied voluntarily with the request to prepare a discharge plan amendment for the Trucker's No. 1 Brine Station. Therefore, pursuant to Section 3-109.E. of the WQCC regulations, you are hereby required to submit said discharge plan amendment by February 17, 1986, to avoid termination of your discharge plan for the Trucker's No. 1 Brine Station. Note that it is illegal to operate a brine extraction well and associated surface facilities in the state of New Mexico without an approved discharge plan

If you have any questions on the contents of this letter, please contact Paige Morgan at the above address or by telephone at 827-2901.

Sincerely,

Ernest Rebuck, Chief
Ground Water/Hazardous Waste Bureau

ER:pgm

cc: Garrison McCaslin, Acting EID District IV Manager
Wayne Price, Unichem Staff Engineer

EID BUCKSLIP

CHECK ONE:

[X] LETTER TO V.P. of Uniocom Int'l
for Bureau Chief's signature

[ ] MEMO TO _____

[ ] PRESS RELEASE

[ ] OTHER

SUBJECT: DP amendment required

DRAFTED BY: Patsy Morgan 1/16/86 (Date)

CONCURRENCES:

NAME:		INITIAL	DATE REC'D	DATE APPROVED
Ron Conrad	Sect. Mgr.	RC	1/17/86	1/17/86
Ernest Rebuck	Bur. Chief	EcR	1/17/86	1/20/86
~~Richard Holland~~	~~Dep. Dir.~~			
~~Denise Fort~~	~~Director~~			

FINAL DECISION NEEDED BY 1/17/86 (date) BECAUSE date of letter, they are 2 weeks overdue on submitting the required DP amendment

COMMENTS BY DRAFTER OR REVIEWER(S):

These guys have 4 brine wells + there have been moderate to severe problems w/ 3 of them. I don't think we should let them slide on any deadline.

UNICHEM
INTERNATIONAL

Home Office 707 N. Leech, P. O. Box 1499 / Hobbs, NM 88240 / Ph. 505/393-7751, TWX 910/986-0010

October 9, 1985

Paige Grant Morgan
Water Resource Specialist
State of New Mexico
Environmental Improvement Division
P.O. Box 968
Santa Fe, New Mexico 87504-0968

Dear Paige:

In response to your letter of October 2, we are currently accepting bids for both liner and dirt construction work on the Eunice brine facility.

On Trucker's No. 1 brine station, a level control device has been installed on the system, and all overflow pipes have been removed.

I will keep you advised of all further developments.

Sincerely,

UNICHEM INTERNATIONAL INC.

Wayne Price

Wayne Price
Staff Engineer

WP/sar

TONEY ANAYA
GOVERNOR

DENISE D. FORT
DIRECTOR

HEALTH ENVIRONMENT department

STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020

October 2, 1985

Wayne Price, Staff Engineer
Unichem International
PO Box 1499
Hobbs, NM 88240

Dear Mr. Price:

This letter is just a brief reminder that our last communication regarding the discharge plan for Unichem's Eunice brine facility was my letter to you of August 9, 1985. I would like to resolve our negotiations regarding the contents of this plan as soon as possible. Please contact me if I can help to clarify the points of my August 9th letter, so that we can finalize the terms of the Eunice station discharge plan.

Also, with regard to my August 28th letter discussing your cleanup of the Trucker's No. 1 brine station: have you installed the necessary pressure release system at the wellhead there, in order to permit you to remove the remaining overflow pipes from two of the brine storage tanks?

I hope to hear from you soon.

Sincerely,

Paige Grant Morgan
Water Resource Specialist

PGM:pgm

cc: John Guinn, EID District IV Manager

Trucker's #1:

Ponds have been closed, oily soil piled up along fence line on north side. One line from well to old pond has been disconnected, two lines, one from 2nd tank from w. end, one from 4th tank from w. end, have not been removed. Ask why not. They stop short of fence line.

Note: no stock tank in field n. of facility - no windmill.

Trucker's water well appears to be located on n.e. corner of fence line

TONEY ANAYA
GOVERNOR

DENISE D. FORT
DIRECTOR

HEALTH ENVIRONMENT department

STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020

August 28, 1985

Wayne Price, Staff Engineer
Unichem International
PO Box 1499
Hobbs, NM 88240

Re: Trucker's No. 1 Brine Station.

Dear Mr. Price:

As I told you when we met at Unichem's Eunice brine station on August 22nd, Steve Sares and I visited the Trucker's No. 1 facility earlier that same day. We found that the cleanup of the surface facilities which you had carried out there was basically adequate as an interim measure prior to submitting an amendment to Unichem's Part 3 discharge plan for the Trucker's No. 1 station on or before January 1, 1986.

The one remaining problem with regard to the surface facilities at the Trucker's No. 1 site is that there are still overflow pipes leading from two of the tanks out to behind the loading area. You indicated that this could be corrected by fitting the wellhead with a pressure release system, such as the one you installed at the Eunice station as part of the upgrade package for that facility. I encourage you to make this improvement at the Trucker's No. 1 station also, to remove that potential source of brine spillage which the company would subsequently be required to clean up.

Thank you for your continued cooperation in bringing Unichem's brine stations in New Mexico into compliance with the state's Water Quality Control Commission regulations.

Sincerely,

Paige Grant Morgan
Water Resource Specialist

PGM:pgm

cc: John Guinn, EID District IV Manager.

No. of Samples	Ion
	Na
	K
	Ca
	Mg
	Cl
	HCO3
	CO3
	SO4
	TDS
	NO3+ NO2
	NH3
	kjeld N
	As
	Ba
	Cd
	CN
	Cr
	F
	Pb
	Hg
	Se
	Ag
	U
	V
	Ra 226
	Ra 228
	Cu
	Fe
	Mn
	Phenols
	Zn
	Al
	B
	Co
	Mo
	Ni
	pH
	Conduct.

FIELD TRIP REPORT
GROUND WATER SECTION

SLD USER CODES

Ground Water: 59300

NO_3, HC, & Toxics: 59600

UIC: 59500

County Lea

FACILITY VISITED

Name of Facility: Trucker's #1 Brine Station - Unichem

Location: just west of inter-section of Hwy 529 with Hobbs-Carlsbad Hwy on Hwy 529

Discharge Plan Number: DP-370

Type of Operation: brine mfg. & sales.

ENVIRONMENTAL IMPROVEMENT DIVISION FIELD VISIT

EID Inspector(s): Patsy Morgan + Steve Sanes

Date of Inspection or Visit: 8/22/85

Discharger's Representative Present During EID Visit: NONE

Name:

Title or Position:

Purpose of Visit:

a. Evaluation of Proposed Discharge Plan _____

b. Compliance Inspection of Discharge with Approved Plan ✓

c. Other (specify) _____

Inspection Activities During Field Visit:

a. Inspection of Facilities or Construction (specify)

As they reported, they have closed the old oil-contaminated ponds + levelled around the facility.

b. Sampling of Effluents (give sampling locations)

c. Sampling of Ground Water (give names or locations of wells)

d. Evaluation of geology, soils, water levels or other physical characteristics of the location (specify)

e. Other (specify)

Observations and Information Obtained during the Visit:

A couple of overflow pipes from the tanks still run out behind the tanks. When I spoke with Wayne Price of Unichem later, he said they would be removed.

ACTION REQUIRED

TONEY ANAYA
GOVERNOR

DENISE D. FORT
DIRECTOR

HEALTH ENVIRONMENT department

STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020

August 12, 1985

Wayne Price, Staff Engineer
Unichem International
PO Box 1499
Hobbs, NM 88240

Dear Mr. Price:

In your letter of July 31, 1985, you requested that Unichem be allowed to delay designing a spill collection system and lining the existing spill collection pit at the "Trucker's Water Company Brine Station #1". I responded to you by telephone that if you wished to delay doing a full redesign of the spill collection system and wanted to commit only to removing spilled fluids from the pit on an interim basis, it would be necessary for you first to remove the salt- and oil-contaminated dirt in and around the pit, so that EID can monitor by occasional visual inspections whether contaminant spills have recurred.

On August 12, 1985, you reported to me that Unichem had cleaned the contaminated soil out of the pit, removing all soil down to uncontaminated caliche. In addition, you reported that the pipes that led from the tanks to the pit have been removed and a berm constructed around the facility to contain any spillage.

Thank you for your prompt attention to removing the sources of surface contamination at this facility. I will visit the site on August 22nd to see the interim steps you have taken to achieve compliance with the Water Quality Control Commission regulations. At that time, I will also attempt to collect a sample of the water from the windmill well immediately east of the Trucker's #1 brine station, for analysis for major ions, total dissolved solids (TDS), chloride and benzene. This information should contribute to an assessment of whether operations at Trucker's #1 brine station have caused any local ground water contamination.

You will be expected to abide by the commitments made in your July 31st letter, which we discussed briefly by phone: to pump out any contaminant spills contained in the pit within 48 hours of a spill; and, on or before January 1, 1986, to submit an amendment to your Part 3 discharge plan entailing a properly designed spill collection system.

Please be aware that your agreement to carry out the above steps does not relieve you of liability should your operation cause pollution of surface or ground waters.

Sincerely,

Paige Grant Morgan

Paige Grant Morgan
Water Resource Specialist

PGM:pgm

cc: John Guinn, EID District IV Manager

UNICHEM
INTERNATIONAL

Home Office 707 N. Leech, P. O. Box 1499 / Hobbs, NM 88240 / Ph. 505/393-7751, TWX 910/986-0010

July 31, 1985

TO: State of New Mexico
Environmental Improvement Division
P.O. Box 968
Santa Fe, New Mexico 87504-0968

ATTN: Paige Grant Morgan
Water Resource Specialist
Ground Water Section

SUBJECT: Truckers Water Company Brine Station No. 1 (529)

After receiving your letter of May 23, 1985, I spent many hours reviewing the system; and I have found that most of the water accumulated east of the brine station was due to rainfall. I did find a leaking valve involved that has been repaired. The old pit to the north appears to have two emergency lines; one from the fresh water side, and the other from the brine side.

With your permission, we would like to delay submitting an amendment for Part 3 of the WQCC regulations requiring a designed spill collection system and lining of that system.

In lieu of that, we will decant all accumulated spills on a timely basis and begin our layout design of the system for the renewal approved per your new regulations. Our first submittal for this site will probably be on or near January 1, 1986.

We would greatly appreciate your patience in this matter. Please indicate if this will be in compliance with your interim requirements.

Sincerely,

UNICHEM INTERNATIONAL INC.

Wayne Price

Wayne Price
Staff Engineer

WP/sar

cc: Richard Brakey
Charles Root
Jim Britton

HEALTH & ENVIRONMENT department

STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020

TONEY ANAYA
GOVERNOR

DENISE D. FORT
DIRECTOR

May 23, 1985

R. J. Brakey, Vice-President
Unichem International
P.O. Box 1499
Hobbs, NM 88240

Re: Unpermitted discharges at Unichem's "Trucker's Water Co. Brine Station #1"

Dear Mr. Brakey:

While in the area on other business, EID staff have twice stopped at your above-named brine facility in T19S R35E Section 1, about a quarter-mile from the intersection of Hwy. 62-180 and Hwy 529. The purpose of the visits, on May 14, 1985 and March 28, 1985, was to observe the condition of the surface facilities. On both occasions, there was evidence of spillage or intentional disposal of oil and brine in the unlined pit adjacent to the tanks. The facility is situated on a topographic rise, with stock ponds in the depression between the brine facility and the highway; thus the opportunity for contamination of shallow ground water appears to be excellent. Depending on the volume of brine and oil that have been spilled/disposed of in the pit for the two decades or more that this brine station is reported to have been in existence, contamination may or may not have already occurred.

The discharge plan for this facility was approved by the Oil Conservation Division under Part 3 of the Water Quality Control Commission regulations two days prior to Part 5 (the portion specific to injection wells) taking effect. When the EID subsequently received the authority for regulating brine extraction wells, we wrote to inform you that you would be required to operate your facility in compliance with Part 3 of the WQCC regulations until your present discharge plan approval expired (at which time you will be required to meet the terms of Part 5 as well as Part 3, if you wish to continue operations). The use of the unlined pit at your Trucker's #1 Brine Station does not meet the terms of Part 3 of the regulations. Therefore, please submit an amendment to your Part 3 discharge plan entailing a properly designed spill collection system and lining of the spill collection pit. If the pit is intended to hold fluids for more than 10 percent of the time, a leak detection system will also be required.

This request constitutes an attempt to obtain your voluntary compliance with the WQCC regulations. If you have any questions, please contact me at the address and telephone number which appears on the letterhead, extension 206.

Sincerely,

Paige Grant Morgan

Paige Grant Morgan
Water Resource Specialist III
GW/HWB

PGM:dlr

cc: John Guinn, Manager, EID District IV

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

December 18, 1982

Unichem International
P.O. Box 1499
Hobbs, NM 88240

RE: GWB-9
Discharge Plan

Gentlemen:

The discharge plan submitted for the brine production facility and in situ extraction well located in Section 1, Township 19 South, Range 35 East, NMPM, Lea County, New Mexico, is hereby approved.

The discharge plan was submitted pursuant to Section 3-106 of the Water Quality Control Commission regulations. It is approved pursuant to Section 109. Please note subsections 3-109E. and 3-109.F which provide for possible future amendment of the plan. Please also be advised that the approval of this plan does not relieve you of liability should your operation result in actual pollution of surface or ground waters which may be actionable under other laws and/or regulations.

Yours very truly,

JOE D. RAMEY
Director

JDR/OS/dp

cc: Hobbs District Office

BSW # 12

UNICHEM
INTERNATIONAL

Home Office 707 N. Leech, P. O. Box 1499 / Hobbs, NM 88240 / Ph. 505/393-7751, TWX 910/986-0010

September 20, 1982

OIL CONSERVATION DIVISION
DEC 9 1982
RECEIVED

Mr. Joe Ramey
Energy and Minerals Department
Oil Conservation Division

RE: Brine Well Discharge Plan
Truckers Water Co. Brine Well #1
Sec. 1 - T19S - R35E Unit A

Dear Sir:

Attached herewith, please find schematic diagrams of our brine producing facility in the captioned location. The diagram of the brine well itself, is self explanitory. The storage facility and its operation is somewhat different, in that we have two fresh water supply wells. The #1 well was drilled for as supply well in the early 1960's and has been in use since then. During periods of high demand, it frequently sanded up and an additional standby well was drilled. We currently use the #2 well as a fresh water supply to produce brine only. The #1 well is used as a standby well and for fresh water sales. The tanks are all above ground, and are monitored daily for leaks and sales.

Pressures are also monitored regularly on the brine well to determine any downhole malfunctions and assure brine quality. During the years 1980-81, 700,000 barrels of brine was produced at this facility.

We trust this meets your requirement for a suitable discharge plan, and meets with your approval.

Very truly yours,

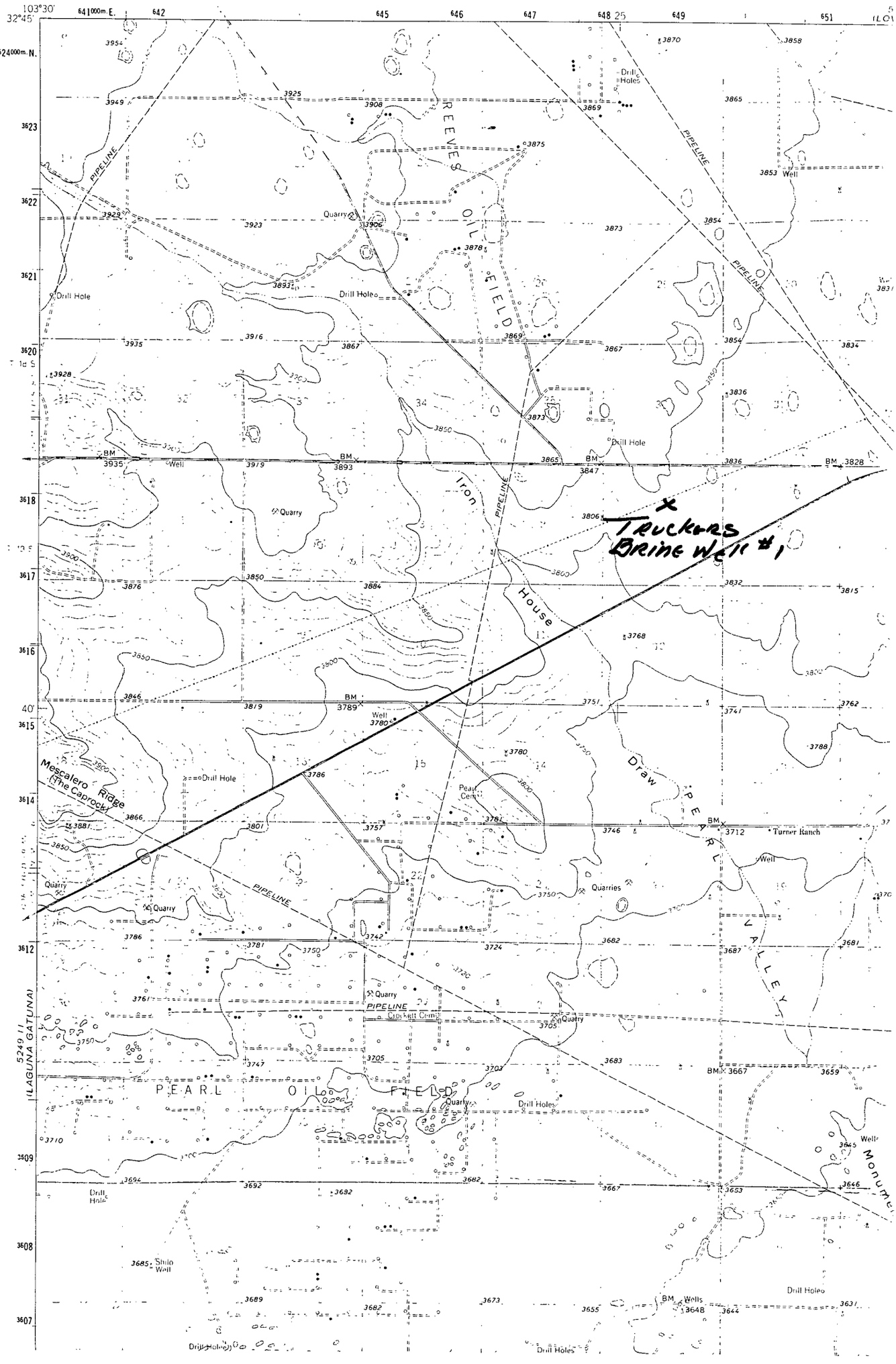
Unichem International Inc.
Truckers Water Co. Division

R. J. Brakey
Vice President

RJB/js

5249 I
(BUCKEYE)

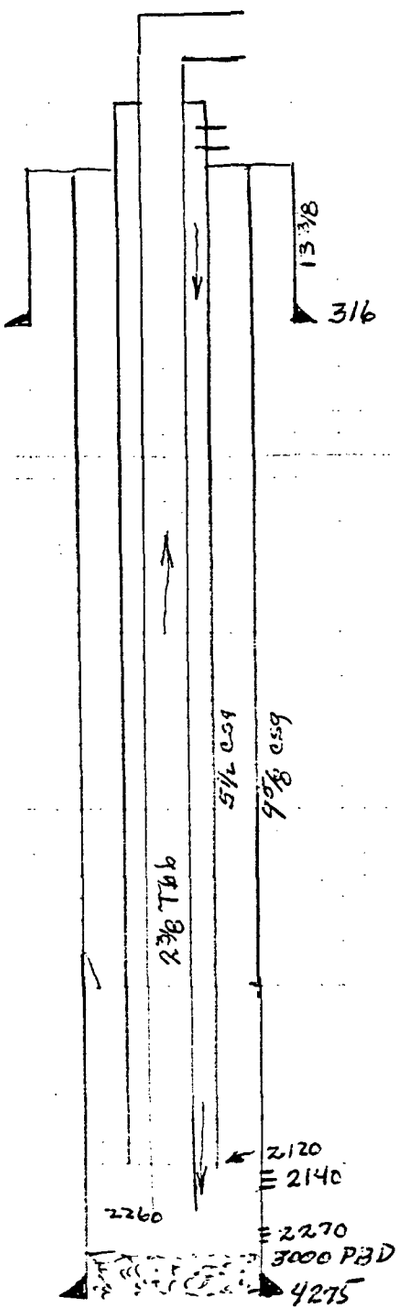
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



INJECTION WELL DATA SHEET

UniChem International — OPERATOR
Truckers Water Co. — LEASE
Brine Well #1 — WELL NO.

FOOTAGE LOCATION
1 — SECTION
19S — TOWNSHIP
35E — RANGE



Tabular Data

Surface Casing

Size 13 3/8" Cemented with 450 sx.

TOC Circulated feet determined by

Hole size 17½

Intermediate Casing

Size 9⅝" Cemented with 2700 sx.

TOC NA feet determined by

Hole size NA

Long string

Size 5½" Cemented with None sx.

TOC feet determined by

Hole size 9⅝ csg

Total depth 3000 PBD

Salt
Injection interval

2140 feet to 2270 feet
(perforated or open-hole, indicate which)

Drillers Log.
0 - 25' Caliche + Snd
25' 310' Red Bed + Anyhydrite
310 - 1960 Anyhydrite + Red bed.
1960 - 2140 Anyhydrite + Salt.
2140 - 2270 Salt

2 3/8 Tubing lined with Not Lined (material) set in a

No packer at feet.
(brand and model)

(or describe any other casing-tubing seal).

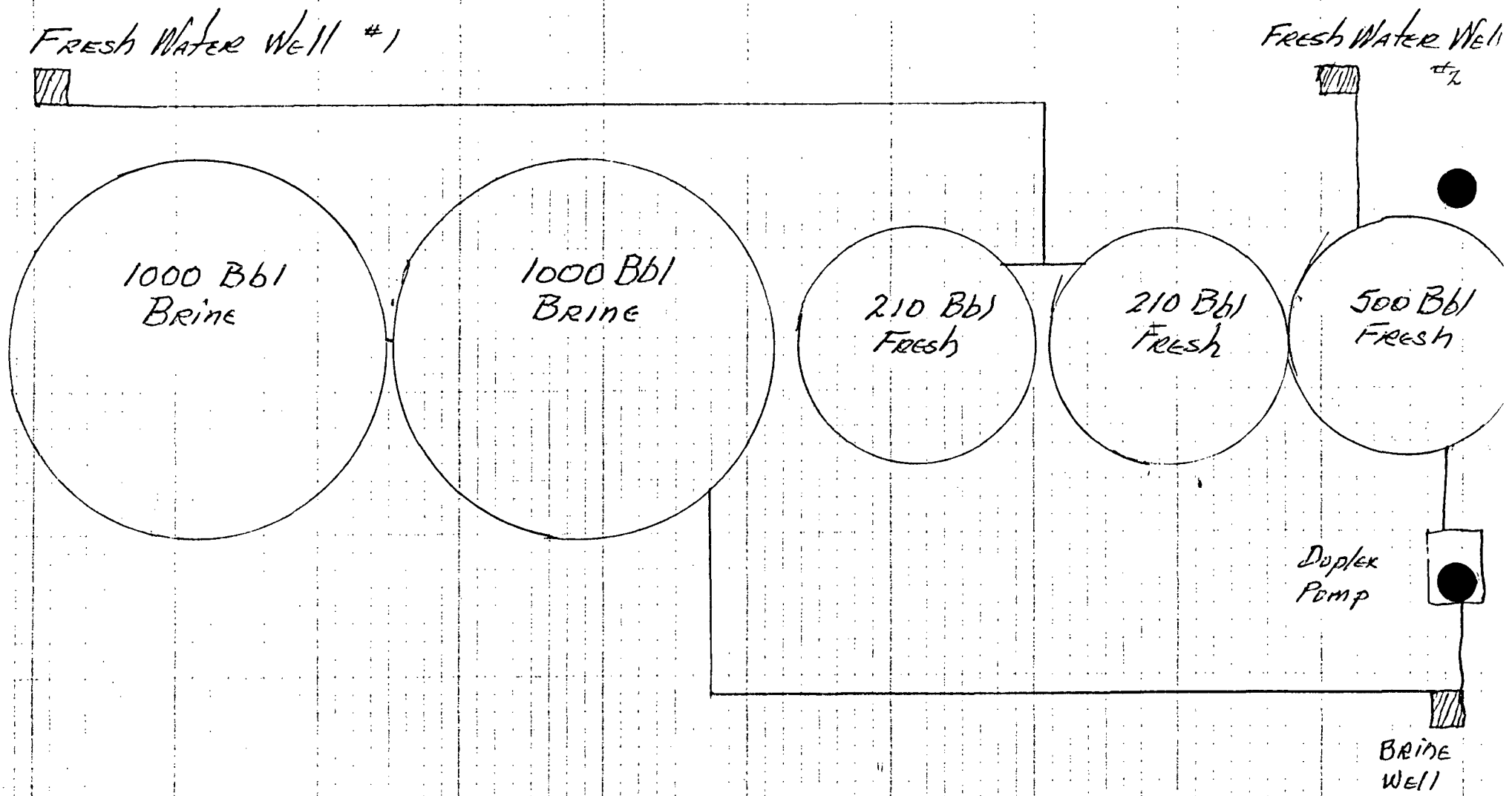
Other Data

1. Name of the injection formation Salt
2. Name of Field or Pool (if applicable)
3. Is this a new well drilled for injection? ☐ Yes ☐ No
   If no, for what purpose was the well originally drilled? Exploratory WildCat Oil or Gas
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) N.A.
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

Trucker Water Company #1

Surface Storage

S1-T19S-R35E



UNICHEM INTERNATIONAL

601 NOTH LEECH P.O.BOX1499

HOBBS. NEW MEXICO 88240

COMPANY : ROWLAND TRUCKING
DATE : 3-26-82
FIELD,LEASE&WELL : TRUCKERS #1 BRINE
SAMPLING POINT: SALT WATER WELL
DATE SAMPLED : 3-24-82

SPECIFIC GRAVITY = 1.198
TOTAL DISSOLVED SOLIDS = 293467
PH = 6.81

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	66.6	1336
MAGNESIUM	(MG)+2	103.	1256.
SODIUM	(NA).CALC.	4854.	111603.
ANIONS			
BICARBONATE	(HCO3)-1	1	61.0
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	88.4	4250
CHLORIDES	(CL)-1	4935	174960.
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)		6.7
BARIUM	(BA)+2	NOT RUN	
MANGANESE	(MN)	NOT RUN	

SCALING INDEX	TEMP
	30C 86F
CARBONATE INDEX	-2.2
CALCIUM CARBONATE SCALING	UNLIKELY
SULFATE INDEX	-.28
CALCIUM SULFATE SCALING	UNLIKELY

WATER ANALYSIS — IONIC

TELEPHONE: HOBBS 393-7751
AREA CODE - 505

KE-TONE®

UNITED CHEMICAL CORPORATION

OF NEW MEXICO

601 NORTH LEECH P. O. BOX 1499
HOBBS, NEW MEXICO 88240

Company Rowland Trucking

Field West Hobbs Station

Lease Truckers

Type of Sample Fresh Water

WATER ANALYSIS

IONIC FORM		me/l *	mg/l *
Calcium (Ca++)		3.36	67
Magnesium (Mg++)		1.00	12
Sodium (Na+)	(CALCULATED)	1.58	36
Iron (Total)			
Bicarbonate (HCO_3)		4.00	244
Carbonate (CO_3)		Not	Found
Hydroxide (OH-)		Not	Found
Sulphate (SO_4)		0.81	39
Chloride (Cl-)		1.13	40
Total Dissolved Solids			438
7.65 ph c 68 °F			
Dissolved Solids on Evap. at 103° - 105° C			
Hardness as Ca CO_3		4.36	218
Carbonate Hardness as $CaCO_3$ (temporary)		4.00	200
Non-Carbonate Hardness as $CaCO_3$ (permanent)		0.36	18
Alkalinity as $CaCO_3$		4.00	200
Specific Gravity c 68° F 1.000			

* mg/l = milligrams per Liter

* me/l = milliequivalents per Liter

$CaCO_3$ Scaling Index slightly positive @ 86°F(0.52)

$CaSO_4$ Scaling Index negative

Mabee Water Work

LAB-31

STATE OF NEW MEXICO

Revised 6-17-77

$50,000.00 BLANKET PLUGGING BOND

BOND NO. 4446488
(For Use of Surety Company)

(Note: File with Oil Conservation Commission, P. O. Box 2088, Santa Fe 87501)

KNOW ALL MEN BY THESE PRESENTS:

That Unichem International, Inc., et al. (~~xxxxxxxxx~~) (a partnership) (a corporation organized in the State of New Mexico, with its principal office in the city of Hobbs, State of New Mexico, and authorized to do business in the State of New Mexico), as PRINCIPAL, and HARTFORD ACCIDENT & INDEMNITY, a corporation organized and existing under the laws of the State of Connecticut, and authorized to do business in the State of New Mexico, as SURETY, are held firmly bound unto the State of New Mexico, for the use and benefit of the Oil Conservation Commission of New Mexico pursuant to Section 65-3-11, New Mexico Statutes Annotated, 1953 Compilation, as amended, in the sum of Fifty Thousand Dollars ($50,000.00) lawful money of the United States, for the payment of which, well and truly to be made, said PRINCIPAL and SURETY hereby bind themselves, their successors and assigns, jointly and severally, firmly by these presents.

The conditions of this obligation are such that:

WHEREAS, The above principal has heretofore or may hereafter enter into oil and gas leases, or carbon dioxide (CO_2) gas leases, or helium gas leases with the State of New Mexico; and

WHEREAS, The above principal has heretofore or may hereafter enter into oil and gas leases, or carbon dioxide (CO_2) gas leases, or helium gas leases on lands patented by the United States of America to private individuals, and on lands otherwise owned by private individuals; and

WHEREAS, The above principal, individually, or in association with one or more other parties, has commenced or may commence the drilling of wells to prospect for and produce oil or gas, or carbon dioxide (CO_2) gas or helium gas, or does own or may acquire, own or operate such wells, or such wells started by others on land embraced in said State oil and gas leases, or carbon dioxide (CO_2) gas leases, or helium gas leases, and on lands patented by the United States of America to private individuals, and on lands otherwise owned by private individuals, the identification and location of said wells being expressly waived by both principal and surety hereto.

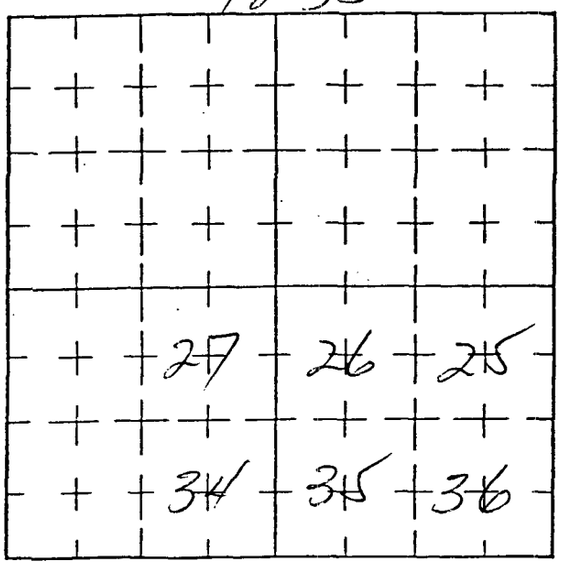
NOW, THEREFORE, If the above bounden principal and surety or either of them or their successors or assigns, or any of them, shall plug all of said wells when dry or when abandoned in accordance with the rules, regulations, and orders of the Oil Conservation Commission of New Mexico in such way as to confine the oil, gas, and water in the strata in which they are found, and to prevent them from escaping into other strata;

THEN, THEREFORE, This obligation shall be null and void; otherwise and in default of complete compliance with any and all of said obligations, the same shall remain in full force and effect.

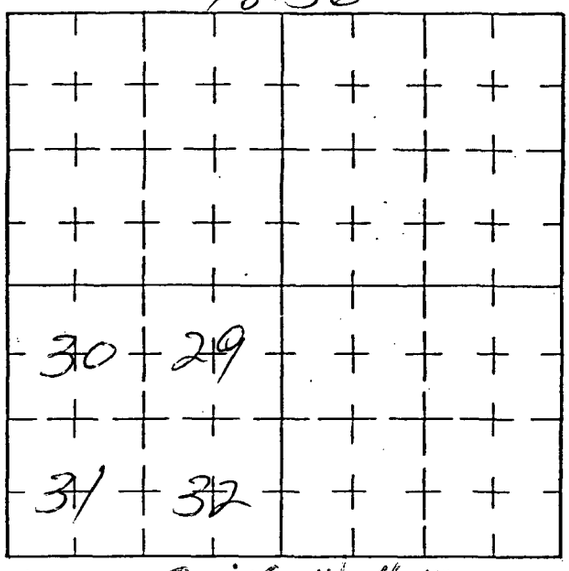
PROVIDED, HOWEVER, That thirty (30) days after receipt by the Oil Conservation Commission of New Mexico of written notice of cancellation from the surety, the obligation of the surety hereunder shall terminate as to property or wells acquired, drilled, or started after said thirty (30) day period but shall continue in effect, notwithstanding said notice, as to property or wells theretofore acquired, drilled, or started.

Sec._____T._____R._____ Sec._____T._____R._____

18-35

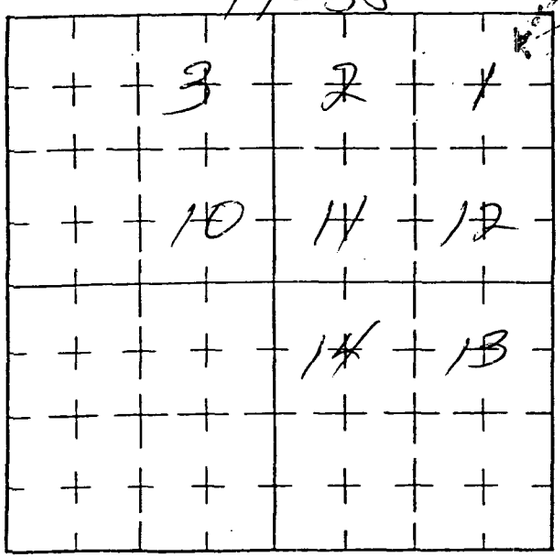


18-36

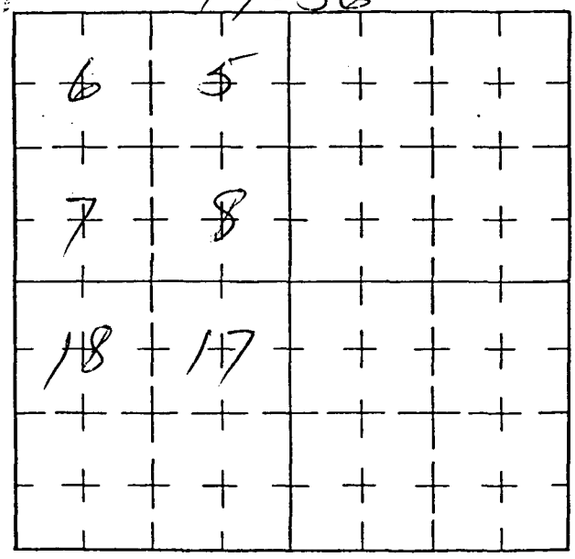


Truckers Brine Well #1

19-35



19-36



Section 26 Township 18 South Range 35 East

L-6868 (E)	$NW\frac{1}{4}SE\frac{1}{4}SW\frac{1}{4}$	26-18-35
L-6869 (E)	$NW\frac{1}{4}SW\frac{1}{4}$	26-18-35

Section 27 Township 18 South Range 35 East

L-3783	2310 ft. from South & West Lines	OWD
L-3963	$NW\frac{1}{4}NE\frac{1}{4}$	OWD

Section 34 Twp. 18 S., Rge. 35 E.

L-7129	$SE\frac{1}{4}SW\frac{1}{4}S$	Stock	Shallow

Section 35 Township 18 South Range 35 East

L-3678		OWD

Section 36 Township 18 S. Range 35 E.

L-6313	$NE\frac{1}{4}NE\frac{1}{4}$	Comm.

Section 29 Township 18 South Range 36 East

L-1551 denied Power Gener.

Section 30 Township 18 South Range 36 East

L-1552 denied Ind.
L-5200-X-5 Approximate Center Ind.
L-6641(E) SE¼NE¼NW¼ OWD

Section 31 Township 18 South Range 36 East

L-1553 Ind.
L-4892 (Withdrawn) SW¼SW¼SW¼ Comm.

Section 1	Township 19 South	Range 35 East
L-2359	$SW\frac{1}{4}SW\frac{1}{4}NW\frac{1}{4}$	Dom.
L-3945	$SW\frac{1}{4}NE\frac{1}{4}NE\frac{1}{4}$	OWD
L-3945 (2)	$SW\frac{1}{4}NE\frac{1}{4}NE\frac{1}{4}$	OWD
L-5434	$SW\frac{1}{4}NE\frac{1}{4}NE\frac{1}{4}$	Ind.
L-6180	recreational	
L-5434-S	$SE\frac{1}{4}NW\frac{1}{4}NE\frac{1}{4}$	COM.
L-8582	$SE\frac{1}{4}SE\frac{1}{4}$	IND
L-8583	$SE\frac{1}{4}NE\frac{1}{4}$	IND

Section 2	Township 19 South	Range 35 East
L-5764	$SE\frac{1}{4}SE\frac{1}{4}NE\frac{1}{4}$	WF
L-5764-X	$NE\frac{1}{4}NE\frac{1}{4}NE\frac{1}{4}$	WF

Section 13	Township 19 South	Range 35 East
L-1756		Irr.
L-4563	$NE\frac{1}{4}SE\frac{1}{4}$	Irr.

Section 14	Township 19 South	Range 35 East
L-6801	$N\frac{1}{2}S\frac{1}{2}$	Stock

Section 5	Township 19 South	Range 36 East
L-2720	NW¼	Ind.
L-4192-X-2	NE¼	Comm.
L-6050	N½NW¼NW¼	Com. Oper. Dom.
L-6853	NE¼	Dom.
L-7431-S	NE¼NE¼	IRR & COM

Section 6	Township 19 South	Range 36 East
L-2889	SE¼SE¼	OWD
L-2720	NW¼	Ind.
L-2329		OWD
L-2718	NE¼	Ind.
L-2719	NE¼	Ind.
L-2720	NE¼	Ind.
L-2721	NE¼	Ind.

Section 8	Township 19 South	Range 36 East
L-2328		OWD

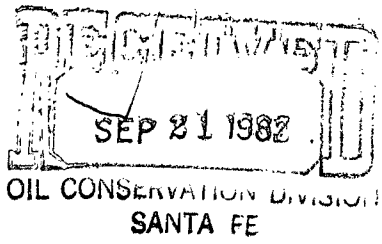
Section 18	Township 19 South	Range 36 East
L-2928 closed	SW¼SE¼	Refinery Opera.
L-7431	NE¼NE¼SE¼	Irr.

BSW #12

UNICHEM
INTERNATIONAL

Home Office 707 N. Leech, P. O. Box 1499 / Hobbs, NM 88240 / Ph. 505/393-7751, TWX 910/986-0010

September 20, 1982



Mr. Joe Ramey
Energy and Minerals Department
Oil Conservation Division

RE: Brine Well Discharge Plan
Truckers Water Co. Brine Well #1
Sec. 1 - T19S - R35E Unit A

Dear Sir:

Attached herewith, please find schematic diagrams of our brine producing facility in the captioned location. The diagram of the brine well itself, is self explanitory. The storage facility and its operation is somewhat different, in that we have two fresh water supply wells. The #1 well was drilled for as supply well in the early 1960's and has been in use since then. During periods of high demand, it frequently sanded up and an additional standby well was drilled. We currently use the #2 well as a fresh water supply to produce brine only. The #1 well is used as a standby well and for fresh water sales. The tanks are all above ground, and are monitored daily for leaks and sales.

Pressures are also monitored regularly on the brine well to determine any downhole malfunctions and assure brine quality. During the years 1980-81, 700,000 barrels of brine was produced at this facility.

We trust this meets your requirement for a suitable discharge plan, and meets with your approval.

Very truly yours,

Unichem International Inc.
Truckers Water Co. Division

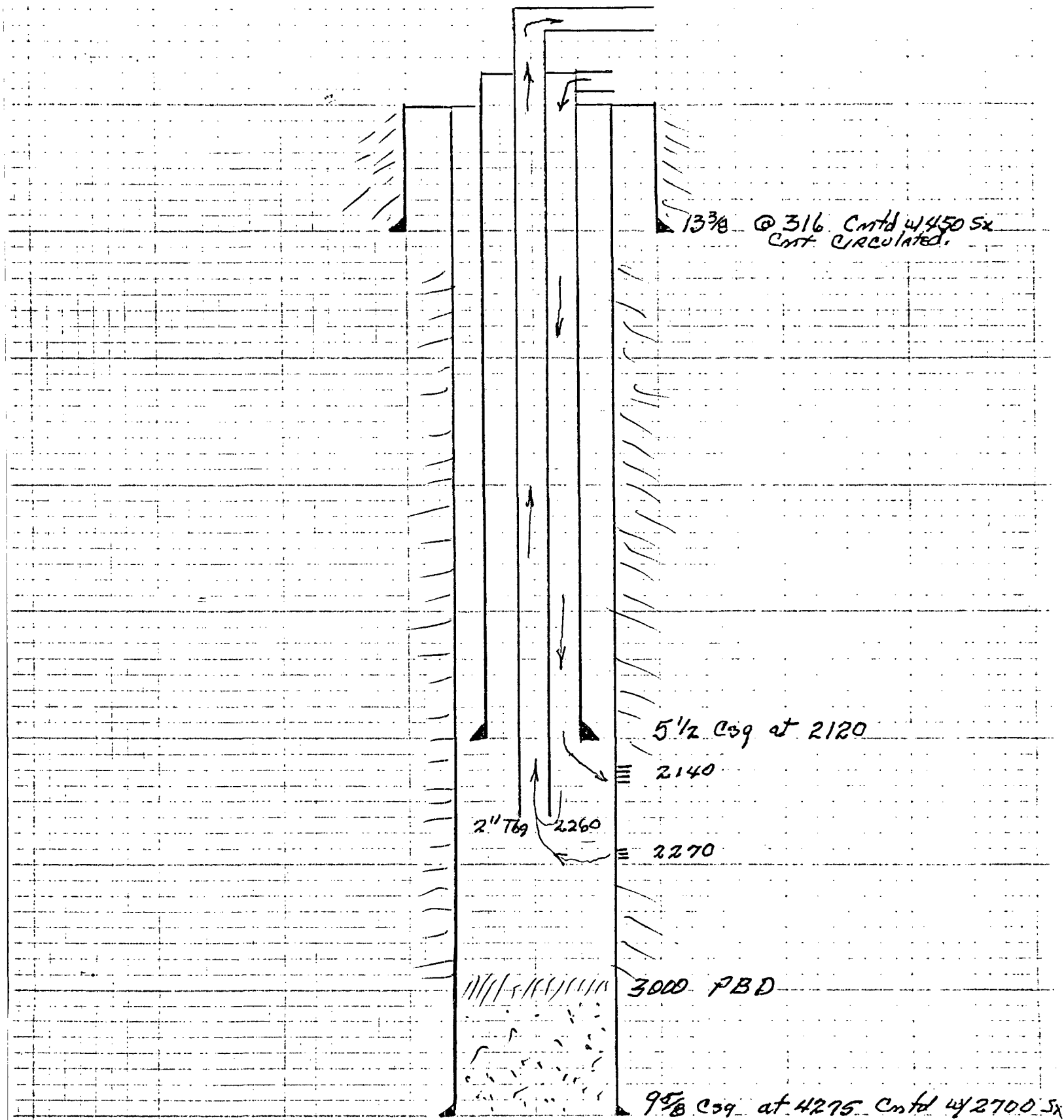
R. J. Brakey
Vice President

RJB/js

UniChem International

Truckers Water Co #1 Brine Well #1

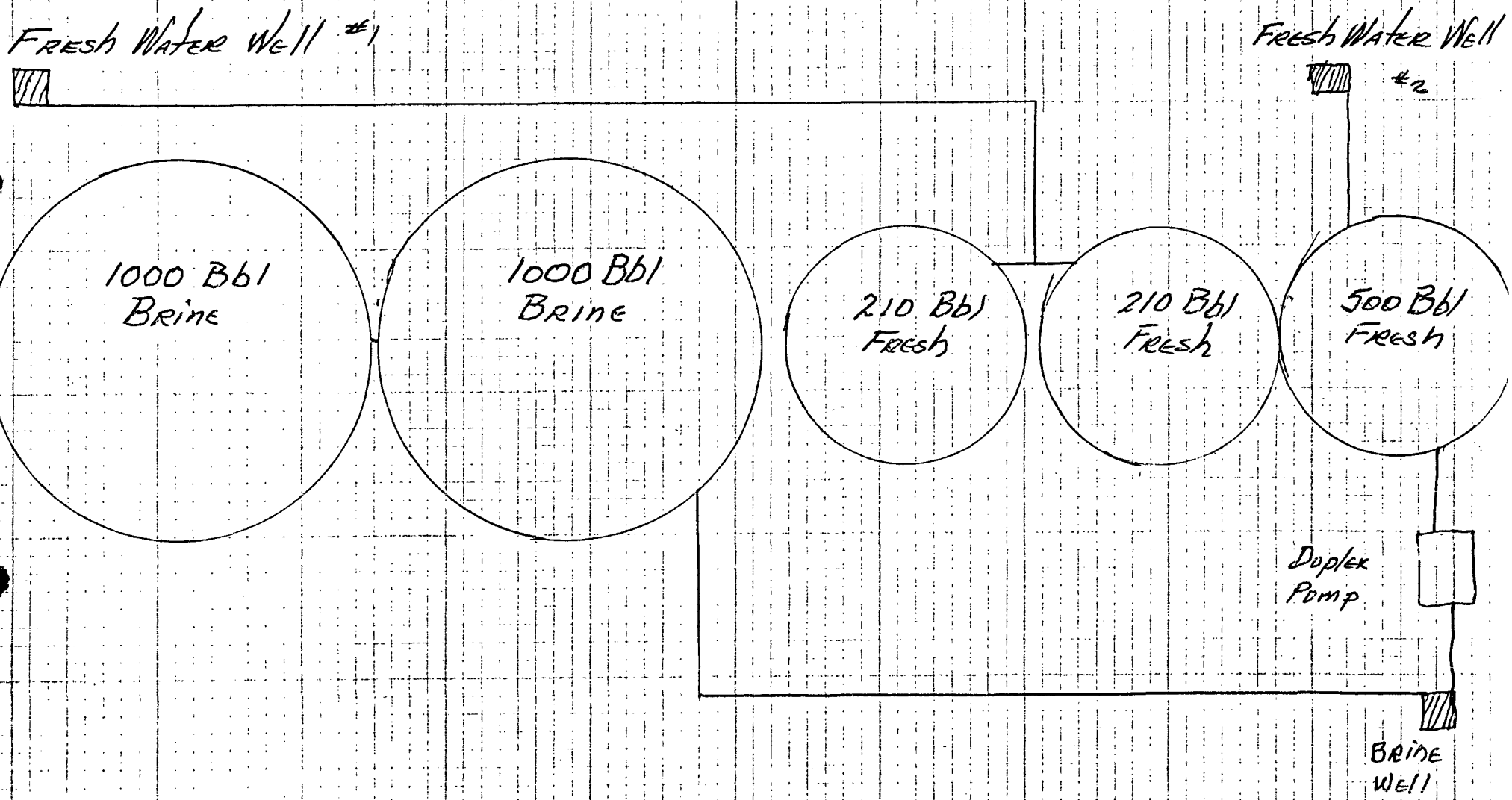
Unit A S1 - T19S - R35E



Trucker Water Company #1

Surface Storage

S1-T19S-R35E

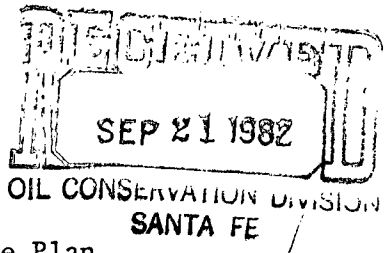


BSW #12

UNICHEM
INTERNATIONAL

Home Office 707 N. Leech, P. O. Box 1499 / Hobbs, NM 88240 / Ph. 505/393-7751, TWX 910/986-0010

September 20, 1982



Mr. Joe Ramey
Energy and Minerals Department
Oil Conservation Division

RE: Brine Well Discharge Plan
Truckers Water Co. Brine Well #1
Sec. 1 - T19S - R35E Unit A

Dear Sir:

Attached herewith, please find schematic diagrams of our brine producing facility in the captioned location. The diagram of the brine well itself, is self explanitory. The storage facility and its operation is somewhat different, in that we have two fresh water supply wells. The #1 well was drilled for as supply well in the early 1960's and has been in use since then. During periods of high demand, it frequently sanded up and an additional standby well was drilled. We currently use the #2 well as a fresh water supply to produce brine only. The #1 well is used as a standby well and for fresh water sales. The tanks are all above ground, and are monitored daily for leaks and sales.

Pressures are also monitored regularly on the brine well to determine any downhole malfunctions and assure brine quality. During the years 1980-81, 700,000 barrels of brine was produced at this facility.

We trust this meets your requirement for a suitable discharge plan, and meets with your approval.

Very truly yours,

Unichem International Inc.
Truckers Water Co. Division

R. J. Brakey
Vice President

RJB/js

Unichem Truckers #1 DP-370 Dec 1988
Shut-in Wellhead

Vinychem Truckers #1 DP-370 Dec. 1988

Tankage

Vulchem Truckers #1

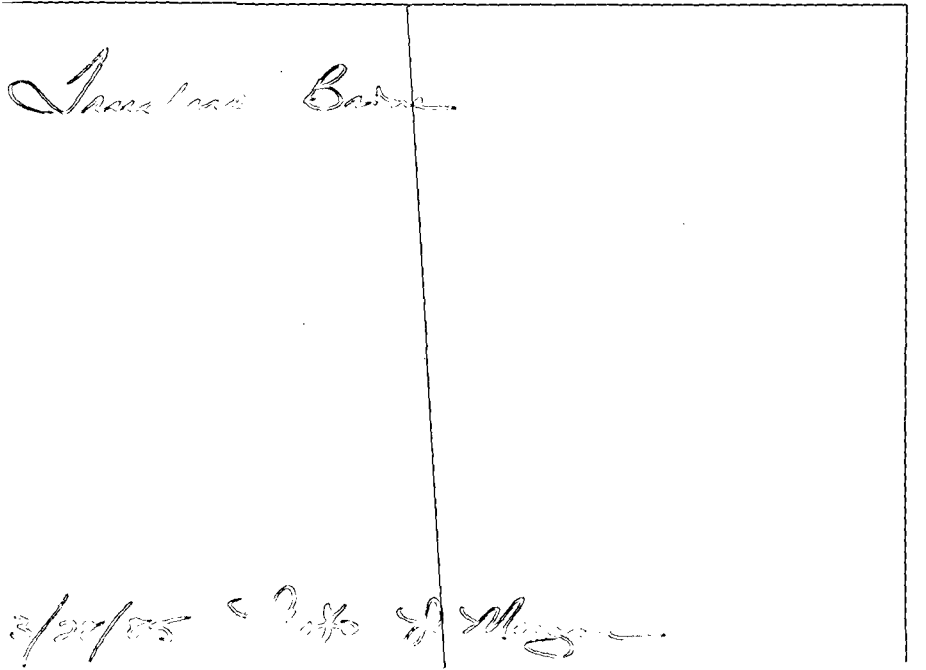
Dec 1988

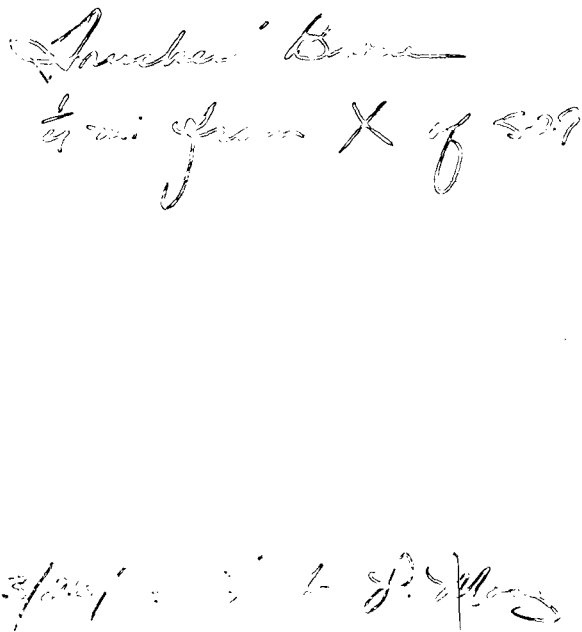
Pumphouse

Truckers' Barn.

[illegible] [illegible] of [illegible] in [illegible] –
[illegible] on slight rise. Shallow
[illegible]? ponds in [illegible].

[illegible] [illegible] Morgan.





Trucker's #1 Brown Sts. (Ulrichson)

5/22/85

Parker S. [illegible]

Tucker's #1 Brine Stn. (Unichem)

8/22/85

photo: S. Sasso

Sinclair's #1 Bridge Sta. (Unknown)

8/22/85

photo: S. Sacco

"Truckers Water" W. of Hobbs
5/14/84
[illegible]

"Truckers Wales" W. of Hobbs
5/14/84 DGB

"Trucker's Wales"

Spillage pit. West of Hobbs

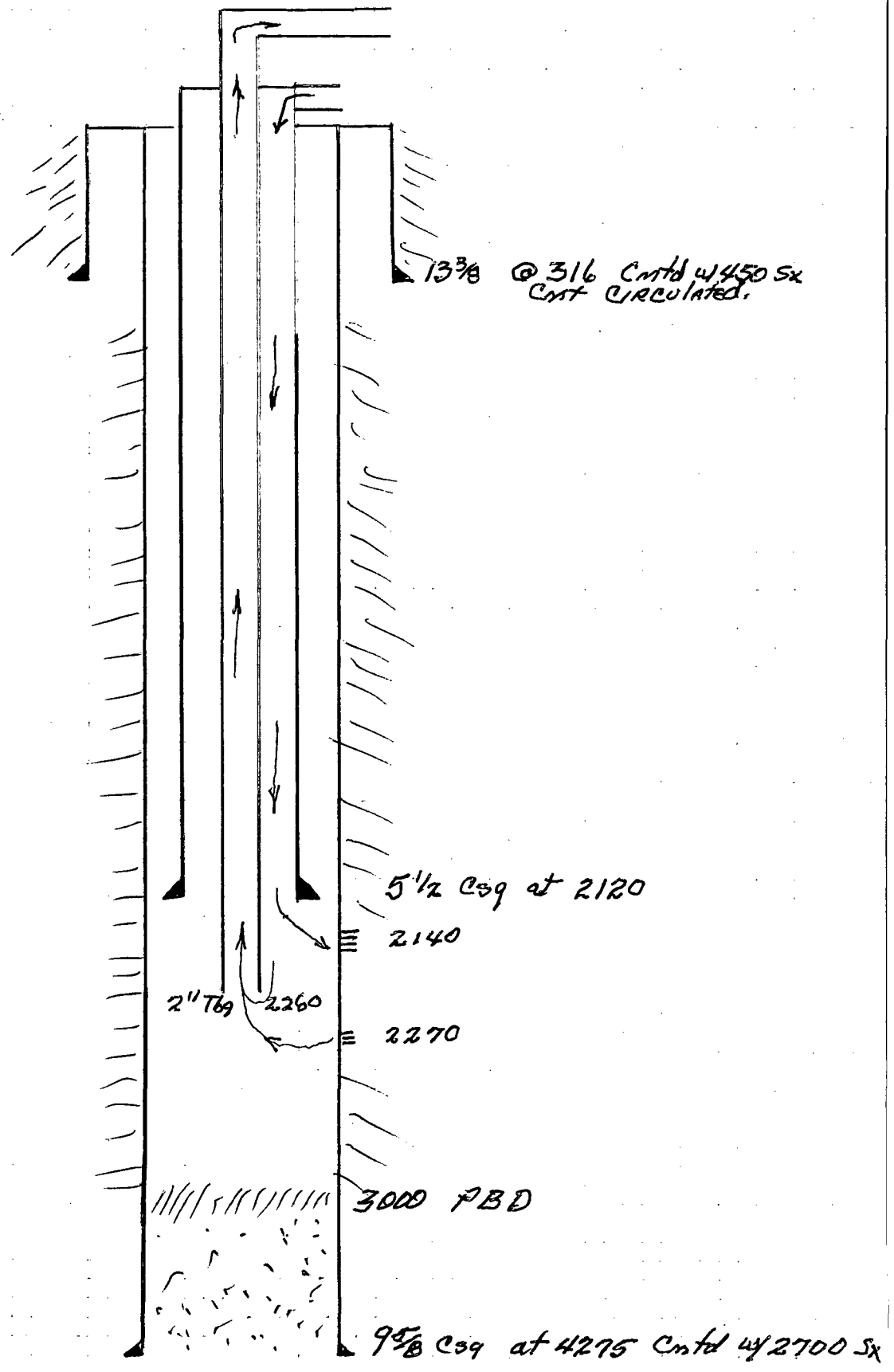
5/14/84 AFB

"Truckers Water" W. J. Hobbs
5/14/84 [illegible]

U[redacted]Chem International

Truckers Water Co #1 Brine Well #1

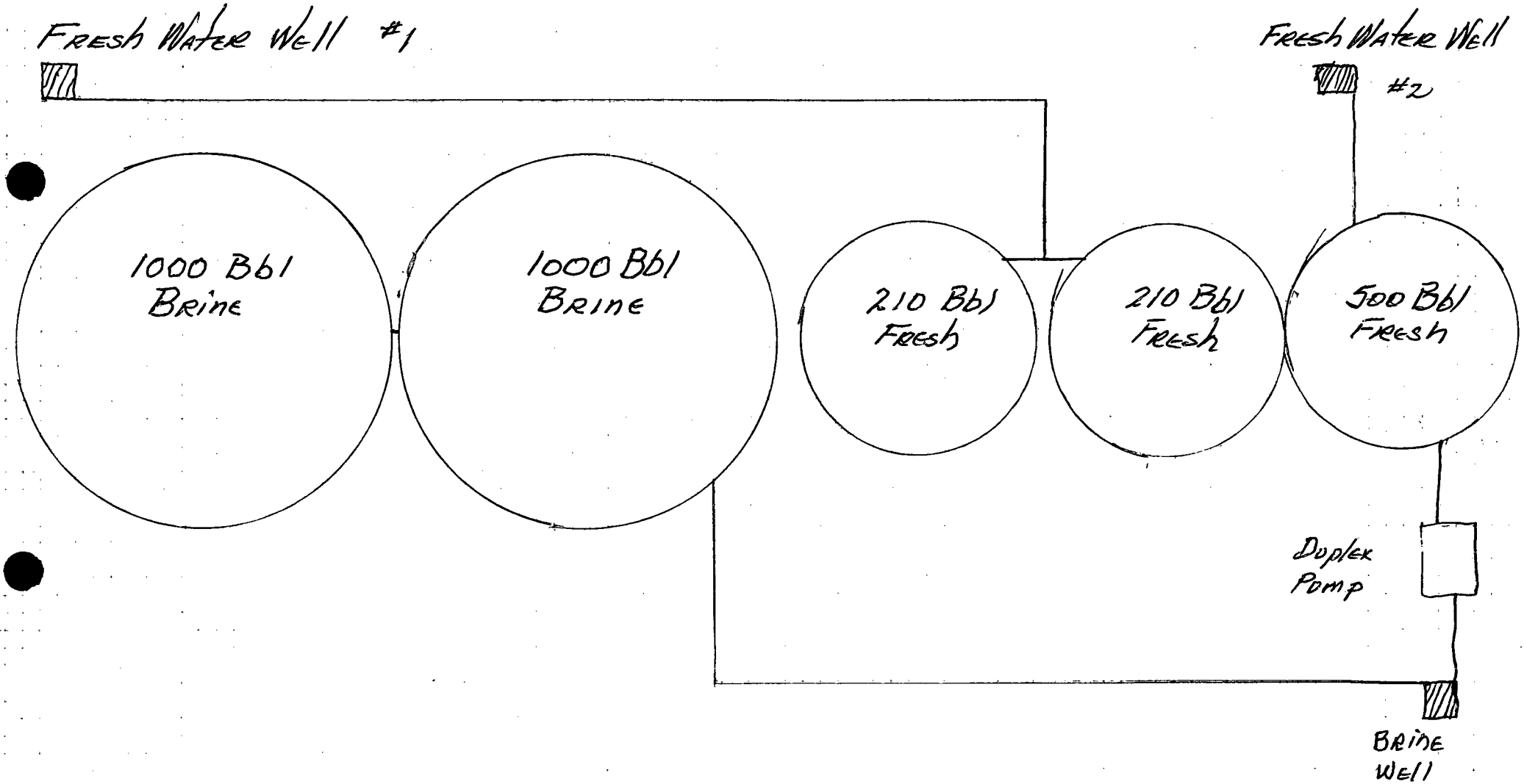
Unit A S1-T19S-R35E



Trucker Water Company #1

Surface Storage

S1-T19S-R35E



DP-370

TRUCKERS #1 BRINE STATION

Discharge Plan
Permit Submittal #2

September 22, 1987

UNICHEM
INTERNATIONAL

UNICHEM
INTERNATIONAL

TRUCKERS #1 BRINE STATION

DISCHARGE PLAN PERMIT SUBMITTAL #2

Presented to:

STATE OF NEW MEXICO

Environmental Improvement Division

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
HOBBS, NEW MEXICO 88240

Prepared by:

Wayne Price, Staff Engineer

UNICHEM
INTERNATIONAL

Home Office 707 N. Leech, P.O. Box 1499 / Hobbs, NM 88240 / Ph. 505/393-7751, TWX 910/986-0010

September 22, 1987

VIA CERTIFIED MAIL: P 241 450 298

Mr. Kevin Lambert, Hydrologist
Ground Water & Hazardous Waste Bureau
State of New Mexico
Environmental Improvement Division
P.O. Box 968, Runnels Building
Santa Fe, NM 87504-0968

SUBJECT: Truckers #1 Brine Station - Hobbs, New Mexico
Discharge Plan Submittal #2

Dear Kevin:

From our telephone conversation of 25 August 1987, it is my understanding that the existing permit (DP-370) for Truckers #1 was accepted and approved by the Oil Conservation Division, meeting Part III of the Water Quality Control Commission requirements. Please accept the information contained herein as our completion of Part V requirements, submitted for renewal of the existing discharge permit.

Additionally, please note that Exhibit #1 of the accompanying report represents the original Discharge Plan dated September 20, 1982, which was submitted to Mr. Joe Ramey of the Energy and Minerals Department of the Oil Conservation Division. This submittal for Truckers #1 Brine Station, located approximately 10 miles west of Hobbs, New Mexico, on Highway 529 (Sec. 1-T19S-R35E) is provided for your information.

During our discussion on the 25th, you indicated that your primary concerns with a re-permit situation such as this include the following general items pertaining to Part V of the Water Quality Control Commission regulations:

--Plugging and Abandonment (Surety Bond);
--Mechanical Integrity;
--Monitoring and Reporting Requirements; and
--Discharge Plan Signatory Requirements

Each of these items will be addressed in detail in the accompanying report and supplemental exhibits. Also contained within this submittal is an upgrade plan to enhance our discharge plan. The following upgrade items are included:

(1) Installation of two concrete loading pads as shown on the plot plan in Exhibit #2. This work is presently under way, and completion is estimated by 30 September 1987. Upon completion of the work, verification will be provided to the EID.

(2) Installation of an auto-brine valve system as detailed on the piping schematic in Exhibit #3. It is anticipated that this system will be completed by 1 December 1987; again, pending completion, verification will be sent to the EID.

(3) General clean-up and removal of all old piping, tanks, etc. This work is complete as of 8 September 1987.

(4) As of 8 September 1987, the dirt berm height on the east end has been increased by two feet.

Unichem International requests that this upgrade plan be accepted as representing our completion of the Part III requirements, and that the information contained herein be accepted as our completion of Part V requirements.

In order to stay in compliance and be fully permitted by 31 December 1987, we are requesting that a public notice be issued upon receipt of this document--Unichem will provide subsequent verification in the interim period on a timely basis.

If you have any questions about the accompanying information, please do not hesitate to contact me.

Sincerely,

UNICHEM INTERNATIONAL INC.

Wayne Price
Staff Engineer

LWP:mms

Enclosure

TABLE OF CONTENTS

PART V QUESTIONS AND ANSWERS

Truckers #1 Brine Station
Submittal #2 - September 22, 1987

The following information is submitted for review in response to Part 5, Water Quality Control--Underground Injection Control:

5-100 REGULATIONS FOR EFFLUENT DISPOSAL AND IN SITU EXTRACTION WELLS:

Noted for in situ extraction wells.

5-101 DISCHARGE PLAN AND OTHER REQUIREMENTS:

A. Noted for in situ extraction wells.

B. (1) Noted for in situ extraction wells.

(2) Noted for in situ extraction wells.

(3) Noted for in situ extraction wells.

C. (1) Not applicable.

(2) If deemed necessary by the Environmental Improvement Division, Unichem International will utilize state of the art techniques in compliance with recommendations from the EID in order to restore any ground water damage caused by its operation under this discharge plan.

D. Not applicable.

E. Noted for in situ extraction wells.

F. Not applicable.

G. Noted for in situ extraction wells.

H. The Discharge Plan Signatory Requirement is set forth in Exhibit #11.

I. Not applicable.

J. Noted for in situ extraction wells.

5-102 PRE-CONSTRUCTION REQUIREMENTS:

Not applicable for permit renewal. Please refer to Exhibit #1 for a copy of the existing permit and documentation that is on file.

5-103 DESIGNATED AQUIFERS:

Not applicable.

PART V QUESTIONS AND ANSWERS
(Continuation)

Truckers #1 Brine Station

5-104 WAIVER OF REQUIREMENT BY DIRECTOR:

Not applicable.

5-105 AUTHORITY:

Noted for in situ extraction wells.

5-200 TECHNICAL CRITERIA AND PERFORMANCE STANDARDS FOR EFFLUENT DISPOSAL WELLS AND IN SITU EXTRACTION WELLS:

Noted for in situ extraction wells.

5-201 PURPOSE:

Noted for in situ extraction wells.

5-202 AREA OF REVIEW:

The area of review for this brine station has been determined as a 1/4-mile radius area from the wellhead. More detailed information will be provided in response to Section 5-210.B.

5-203 CORRECTIVE ACTION:

A. At the present time there is one known well penetrating the injection zone in the area of review. This well has been reviewed and is listed in Sections 5-210.2 and 5-210.3. According to the public records located on file at the Oil Conservation Division in Hobbs, New Mexico, the well has been reviewed and requires no corrective action.

B. Noted for in situ extraction wells.

C. (1) Noted for in situ extraction wells.

(2) Noted for in situ extraction wells.

(3) Noted for in situ extraction wells.

(4) Noted for in situ extraction wells.

(5) Noted for in situ extraction wells.

(6) Noted for in situ extraction wells.

(7) Noted for in situ extraction wells.

D. Noted for in situ extraction wells.

PART V QUESTIONS AND ANSWERS
(Continuation)

Truckers #1 Brine Station

5-204 MECHANICAL INTEGRITY:

For a response to items A through D, please refer to the most recent mechanical integrity test performed, as shown in Exhibit #4.

5-205 CONSTRUCTION REQUIREMENTS:

All of the requirements set forth in this section have been included in the original OCD submittal contained in Exhibit #1.

5-206 OPERATING REQUIREMENTS:

A. (1) A maximum pressure of 300 psig at the wellhead has been used without any adverse effect on the formation.

(2) This statement has been duly noted and compliance is herein agreed to.

B. Not applicable.

C. (1) This statement has been duly noted and compliance is herein agreed to.

(2) This statement has been duly noted and compliance is herein agreed to.

5-207 MONITORING REQUIREMENTS:

A. Requirement noted and complied with. Please refer to the mechanical integrity test in Exhibit #4.

B. Not applicable.

C. (1) This requirement is agreed to--please refer to Exhibit #5 for the most recently performed analysis of the injected fluid.

(2a) Items i and ii: Fluid volumes (fresh and brine) are metered and recorded daily by an automated electronic key system.

(2b) Items i and ii: Not applicable.

(2c) Unichem is aware of this requirement and agrees to comply as deemed necessary by the EID.

(3) Not applicable.

5-208 REPORTING REQUIREMENTS:

A. Not applicable.

B. (1) Unichem International agrees to notify the New Mexico EID in the event of any leachate excursion and will provide subsequent reports necessary to explain any potential problem.

(2a) This statement has been duly noted and compliance is agreed to.

(2b) This statement has been duly noted and compliance is agreed to.

(3) Not applicable.

C. (1 & 2) Requirement noted and complied with. Please refer to Exhibit #11.

5-209 PLUGGING AND ABANDONMENT:

Unichem International will abide by all of the requirements set forth in Section 5-209 where applicable and will seek approval from the EID on this matter. Please refer to the Blanket Plugging Bond (Surety Bond) in Exhibit #6.

5-210 INFORMATION TO BE CONSIDERED BY THE DIRECTOR:

A. Noted for in situ extraction wells.

B. (1) The information required in Part III, Sections 3-106C (1-8) has been provided under the original discharge plan submitted to the OCD. This information is also contained in Exhibit #1.

(2) The applicable area of review is set forth in Exhibit #7. Please note that there are no known springs, mines, or quarries within the area of review. With respect to the general location of residential properties and roads, Exhibit #7 includes maps of the area of review for reference purposes.

There is a depressed area that lies approximately 300 yards northeast of the brine station, which is occasionally noted to collect rain water. When full of water, this pond is used by the local ranchers to water cattle.

There are two water wells within the area of review currently listed by the State Engineer's office. These are shown and marked with a highlighter in Exhibit #8. The two wells listed are both dedicated to the brine station and are licensed by the State Engineer's office for fresh water sales and production of brine. Originally listed as OWD wells (used for oil well drilling), they were converted to

industrial and commercial wells. Both of the wells are drilled to 150' with 7" casing--water was found at 70' below the surface.

(3) Refer to Exhibit #9 for a complete tabulation of the data available on all wells within the area of review. The one well listed in Exhibit #9 has been plugged and abandoned, per information on file with the OCD records.

(4) Noted for in situ extraction wells.

(5) Important fresh water (sands) appears to go to a depth of 150', with the primary ground water being the ogalalla aquifer found as shallow as 70' below the surface in the area of review.

Any potential usage ground water between 150' and the injection zone of 2,140' to 2,270' has not been identified at this time. Ground water in this area generally flows downgradient from NW to SE. A map and cross-section can be provided if deemed necessary.

(6) There are no known faults, nor are any suggested from the investigation. Again, a map and cross-section can be provided if deemed necessary. The geological structure can be interpreted from the various well logs on file and listed in Exhibit #9.

(7) Generalized maps and cross-sections illustrating the regional geologic setting can be provided to the New Mexico EID upon request.

(8a) The average injected fluid is 518 bbl/day over an 18-year time span. The maximum injected fluid rate possible is 90 bbl/hour or 2,160 bbl/day, which represents the injection pump capability. Refer to Exhibit #10, which represents a summary of the injection volumes.

(8b) The average injection pressure varies from 225 psig to 300 psig, with the maximum injection pressure experienced to date being 300 psig.

(8c) The injection fluid is fresh water obtained from two water wells located on site, as shown in the original OCD submittal in Exhibit #1. Chemical analysis of the injection fluid utilized is provided in Exhibit #5.

(9) This requirement is duly noted and compliance is agreed to as deemed necessary.

PART V QUESTIONS AND ANSWERS
(Continuation)

Truckers #1 Brine Station

(10) Generally, fresh water is pumped down the casing through perforations at approximately 2,120'; the water is mixed in an underground cavern created by continual injection of fresh water. The brine is returned through the tubing at approximately 2,260' and pumped to the surface. The pressure increases when salt builds up at the perforations, resulting in blockage.

(11) A proposed stimulation program consists of reversing the flow in order to clear any salt blockage.

(12) Actual injection procedures consist of pumping fresh water down the casing and producing brine out of the tubing, interspersed with short periods of reversal to clear lines of salt blockage.

(13) Please refer to Exhibit #2 for a plot plan and to Exhibit #3 for the details of the surface piping schematic. The subsurface construction is shown on page three of Exhibit #1, and a depiction of the drilling of the well is provided in Exhibit #9.

(14) Not applicable, since this permit is for renewal and not for construction.

(15) The contingency plan for Truckers #1 Brine Station will include daily monitoring of the system. Should a potential problem occur, the system will be shut down and necessary repairs implemented in order to be in proper compliance.

It shall also include notification in accordance with the EID requirements, accompanied by restitution for any damaged ground water deemed to be the responsibility of Unichem International.

An additional aspect of the contingency plan shall consist of an updated plugging and abandonment procedure to include provision of all required bonds.

Unichem International will provide a more-detailed description of its contingency plan in accordance with Water Quality Control Commission guidelines at the request of the EID.

(16) This requirement duly noted and compliance agreed to. Unichem International will submit additional material as deemed necessary.

(17) This requirement duly noted and compliance agreed to--please refer to Exhibit #6.

C. (1-7) Requirements noted and complied with in this submittal.

5-300 INJECTION WELL NOTIFICATION REQUIREMENT:

A. The requirement in this section is duly noted and the information indicated is currently on file with the EID.

B. This statement has been duly noted and compliance is agreed to.

EXHIBIT #1

UNICHEM INTERNATIONAL

Home Office 707 N. Leech, P. O. Box 1499 / Hobbs, NM 88240 / Ph. 505/393-7751, TWX 910/986-0010

September 20, 1982

Mr. Joe Ramey
Energy and Minerals Department
Oil Conservation Division

RE: Brine Well Discharge Plan
Truckers Water Co. Brine Well #1
Sec. 1 - T19S - R35E Unit A

Dear Sir:

Attached herewith, please find schematic diagrams of our brine producing facility in the captioned location. The diagram of the brine well itself, is self explanitory. The storage facility and its operation is somewhat different, in that we have two fresh water supply wells. The #1 well was drilled for as supply well in the early 1960's and has been in use since then. During periods of high demand, it frequently sanded up and an additional standby well was drilled. We currently use the #2 well as a fresh water supply to produce brine only. The #1 well is used as a standby well and for fresh water sales. The tanks are all above ground, and are monitored daily for leaks and sales.

Pressures are also monitored regularly on the brine well to determine any downhole malfunctions and assure brine quality. During the years 1980-81, 700,000 barrels of brine was produced at this facility.

We trust this meets your requirement for a suitable discharge plan, and meets with your approval.

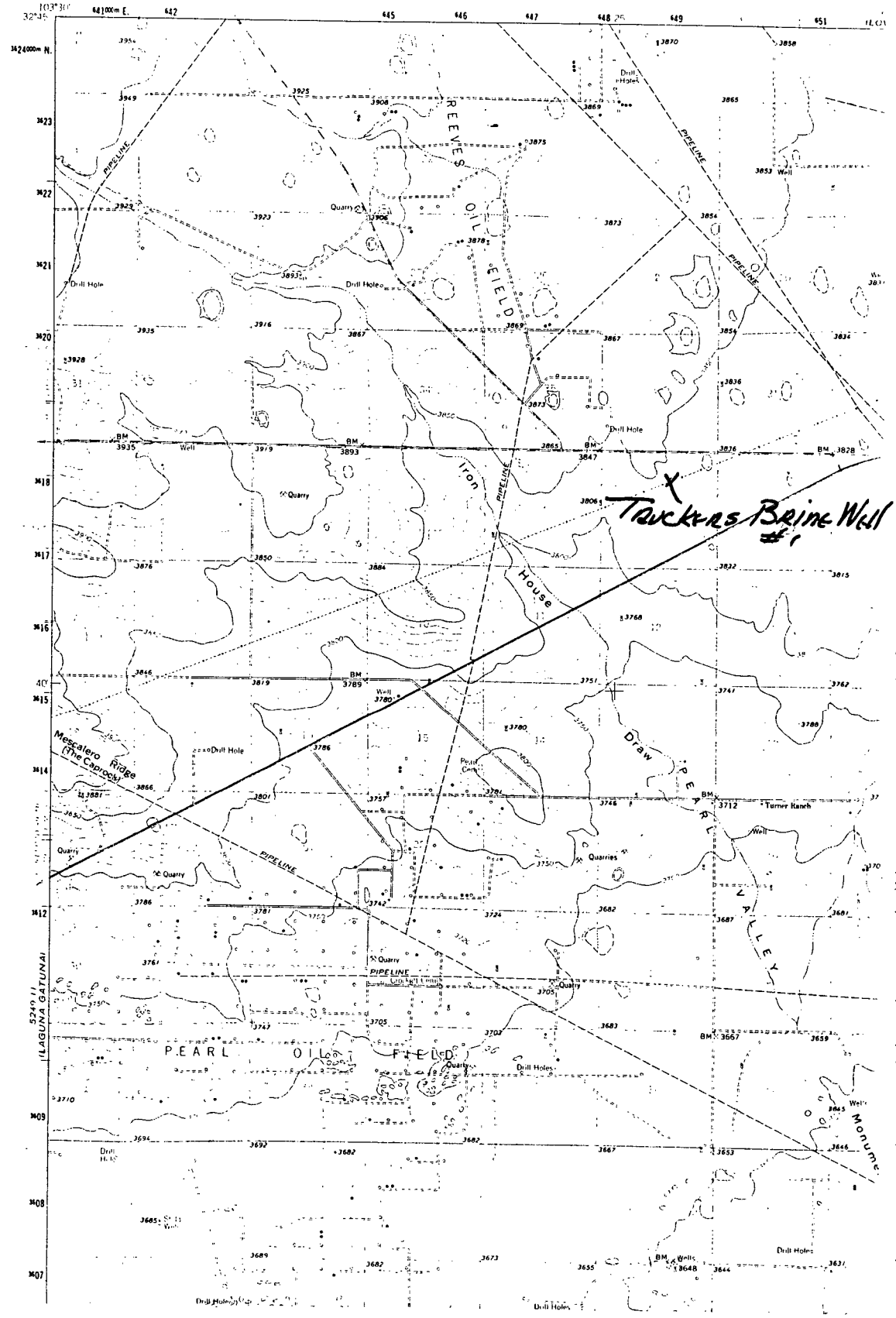
Very truly yours,

Unichem International Inc.
Truckers Water Co. Division

R. J. Brakey
Vice President

RJB/js

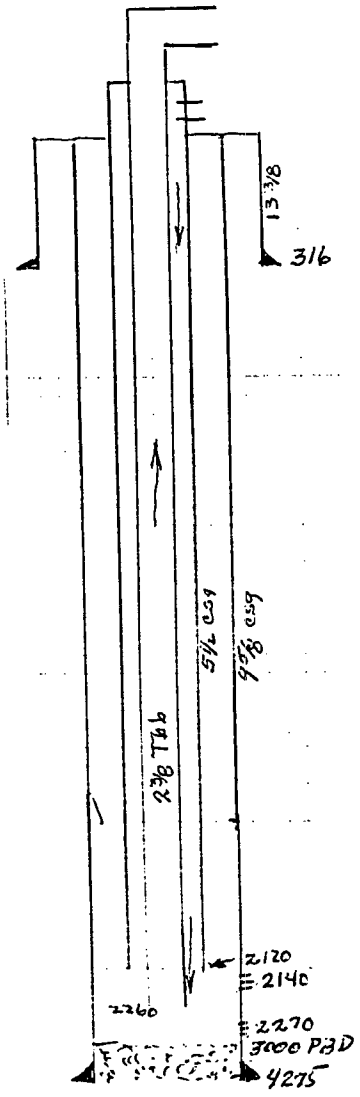
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



INJECTION WELL DATA SHEET

Uni Chem International — OPERATOR
Truckers Water Co Brine Well #1 — LEASE

WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
1			19S	35E



Tabular Data

Surface Casing

Size 13 3/8" ± " Cemented with 450 sx.

TOC Circulated feet determined by _____

Hole size 17½

Intermediate Casing

Size 9 5/8" " Cemented with 2700 sx.

TOC NA feet determined by _____

Hole size NA

Long string

Size 5½" " Cemented with None sx.

TOC _____ feet determined by _____

Hole size 9 5/8 csg

Total depth 3000 PBD

Salt
~~Injection~~ interval

2140 feet to 2270 feet
(perforated or open-hole, indicate which)

Drillers Log.
0 - 25' Caliche + Snd
25' 310' Red Bed + Anyhydrite
310 - 1960 Anyhydrite + Red bed.
1960 - 2140 Anyhydrite + Salt.
2140 - 2270 Salt

2⅜ Tubing — lined with Not Lined (material) set in a

(brand and model)

No packer at _____ feet.

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Salt

2. Name of Field or Pool (if applicable) _____

3. Is this a new well drilled for injection? ☐ Yes ☑ No

If no, for what purpose was the well originally drilled? Exploratory WildCat Oil or Gas

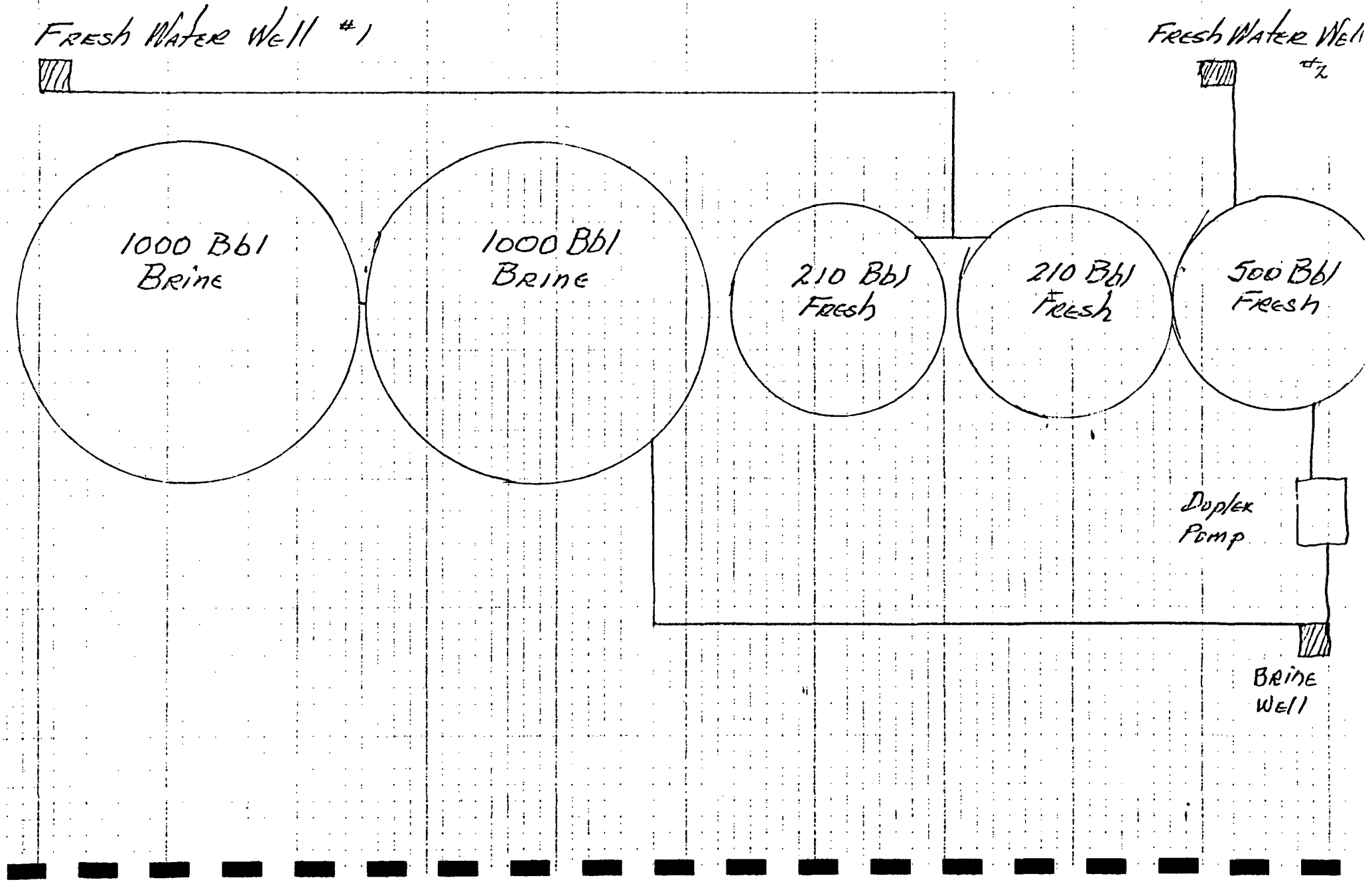
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) N.A.

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. _____

Trucker Water Company #1

Surface Storage

S1-T19S-R35E



UNICHEM INTERNATIONAL

601 NOTH LEECH P.O.BOX1499

HOBBS. NEW MEXICO 88240

COMPANY : ROWLAND TRUCKING
DATE : 3-26-82
FLD.LEASE&WELL : TRUCKERS #1 BRINE
MPLING POINT: SALT WATER WELL
ATE SAMPLED : 3-24-82

ECIFIC GRAVITY = 1.198
OTAL DISSOLVED SOLIDS = 293467
H = 6.81

		ME/L	MG/L
CATIONS			
LCIUM	(CA)+2	66.6	1336
AGNESIUM	(MG)+2	103.	1256.
ODIUM	(NA).CALC.	4854.	111603.
ANIONS			
ICARBONATE	(HCO3)-1	1	61.0
ARBONATE	(CO3)-2	0	0
DROXIDE	(OH)-1	0	0
LFATE	(SO4)-2	88.4	4250
HLORIDES	(CL)-1	4935	174960.
DISSOLVED GASES			
REON DIOXIDE	(CO2)	NOT RUN	
YDROGEN SULFIDE	(H2S)	NOT RUN	
YGEN	(O2)	NOT RUN	
RON(TOTAL)	(FE)		6.7
ARIUM	(BA)+2	NOT RUN	
NGANESE	(MN)	NOT RUN	

SCALING INDEX	TEMP	
	30C 86F	
ARBONATE INDEX	-2.2	
ALCIUM CARBONATE SCALING	UNLIKELY	
LFATE INDEX	-.28	
ALCIUM SULFATE SCALING	UNLIKELY	

WATER ANALYSIS — IONIC

TELEPHONE: HOBBS 393-7751
AREA CODE - 505

KE-TONE®

UNITED CHEMICAL CORPORATION

OF NEW MEXICO

601 NORTH LEECH P. O. BOX 1499
HOBBS, NEW MEXICO 88240

Company Rowland Trucking

Field West Hobbs Station

Lease Truckers

Type of Sample Fresh Water

WATER ANALYSIS

IONIC FORM	(CALCULATED)	me/l *	mg/l *
Calcium (Ca++)		3.36	67
Magnesium (Mg++)		1.00	12
Sodium (Na+)		1.58	36
Iron (Total)			
Bicarbonate (HCO_3^-)		4.00	244
Carbonate (CO_3^-)		Not	Found
Hydroxide (OH^-)		Not	Found
Sulphate (SO_4^-)		0.81	39
Chloride (Cl^-)		1.13	40
Total Dissolved Solids			438
7.65 ph c 68 °F			
Dissolved Solids on Evap. at 103° - 105° C			
Hardness as $CaCO_3$		4.36	218
Carbonate Hardness as $CaCO_3$ (temporary)		4.00	200
Non-Carbonate Hardness as $CaCO_3$ (permanent)		0.36	18
Salinity as $CaCO_3$		4.00	200
Specific Gravity c 68° F 1.000			

see Exhibit #5

* mg/l = milligrams per Liter

* me/l = milliequivalents per Liter

$CaCO_3$ Scaling Index slightly positive @ 86°F(0.52)

$CaSO_4$ Scaling Index negative

Mabee Water Work

STATE OF NEW MEXICO

Revised 6-17-77

$50,000.00 BLANKET PLUGGING BOND

BOND NO. 4446488
(For Use of Surety Company)

(Note: File with Oil Conservation Commission, P. O. Box 2088, Santa Fe 87501)

KNOW ALL MEN BY THESE PRESENTS:

That Unichem International, Inc., et al. (~~xxxxxxxxx~~) (a partnership) (a corporation organized in the State of New Mexico, with its principal office in the city of Hobbs, State of New Mexico, and authorized to do business in the State of New Mexico), as PRINCIPAL, and HARTFORD ACCIDENT & INDEMNITY, a corporation organized and existing under the laws of the State of Connecticut, and authorized to do business in the State of New Mexico, as SURETY, are held firmly bound unto the State of New Mexico, for the use and benefit of the Oil Conservation Commission of New Mexico pursuant to Section 65-3-11, New Mexico Statutes Annotated, 1953 Compilation, as amended, in the sum of Fifty Thousand Dollars($50,000.00) lawful money of the United States, for the payment of which, well and truly to be made, said PRINCIPAL and SURETY hereby bind themselves, their successors and assigns, jointly and severally, firmly by these presents.

The conditions of this obligation are such that:

WHEREAS, The above principal has heretofore or may hereafter enter into oil and gas leases, or carbon dioxide (CO_2) gas leases, or helium gas leases with the State of New Mexico; and

WHEREAS, The above principal has heretofore or may hereafter enter into oil and gas leases, or carbon dioxide (CO_2) gas leases, or helium gas leases on lands patented by the United States of America to private individuals, and on lands otherwise owned by private individuals; and

WHEREAS, The above principal, individually, or in association with one or more other parties, has commenced or may commence the drilling of wells to prospect for and produce oil or gas, or carbon dioxide (CO_2) gas or helium gas, or does own or may acquire, own or operate such wells, or such wells started by others on land embraced in said State oil and gas leases, or carbon dioxide (CO_2) gas leases, or helium gas leases, and on lands patented by the United States of America to private individuals, and on lands otherwise owned by private individuals, the identification and location of said wells being expressly waived by both principal and surety hereto.

NOW, THEREFORE, If the above bounden principal and surety or either of them or their successors or assigns, or any of them, shall plug all of said wells when dry or when abandoned in accordance with the rules, regulations, and orders of the Oil Conservation Commission of New Mexico in such way as to confine the oil, gas, and water in the strata in which they are found, and to prevent them from escaping into other strata;

THEN, THEREFORE, This obligation shall be null and void; otherwise and in default of complete compliance with any and all of said obligations, the same shall remain in full force and effect.

PROVIDED, HOWEVER, That thirty (30) days after receipt by the Oil Conservation Commission of New Mexico of written notice of cancellation from the surety, the obligation of the surety hereunder shall terminate as to property or wells acquired, drilled, or started after said thirty (30) day period but shall continue in effect, notwithstanding said notice, as to property or wells theretofore acquired, drilled, or started.

UNICHEM INTERNATIONAL INC., et al
PRINCIPAL

P.O. Box 1499, Hobbs, N.M. 88240
Address

By William D. Walton
Signature

Vice President
Title

(Note: Principal, if corporation, affix corporate seal here.)

HARTFORD ACCIDENT & INDEMNITY CO.
SURETY

6061 S. Willow Dr., Englewood, Colo. 80111
Address

By Pat Cargile
Attorney-in-fact
Pat Cargile

(Note: Corporate surety affix corporate seal here.)

ACKNOWLEDGMENT FORM FOR NATURAL PERSONS

STATE OF _____)
COUNTY OF _____) ss.

On this _____ day of _____, 19____, before me personally appeared _____, to me known to be the person (persons) described in and who executed the foregoing instrument and acknowledged that he (they) executed the same as his (their) free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and seal on the day and year in this certificate first above written.

_____
Notary Public

My Commission expires

ACKNOWLEDGMENT FORM FOR CORPORATION

STATE OF New Mexico)
COUNTY OF Lea) ss.

On this 26th day of October, 19 81, before me personally appeared William D. Walton, to me personally known who, being by me duly sworn, did say that he is Vice President of Unichem International, Inc., et al and that the foregoing instrument was signed and sealed on behalf of said corporation by authority of its board of directors, and acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and seal on the day and year in this certificate first above written.

Linda Andrews
Notary Public

4-21-82
My Commission expires

ACKNOWLEDGMENT FORM FOR CORPORATE SURETY

STATE OF New Mexico)
COUNTY OF Lea) ss.

On this 26th day of October, 19 81, before me appeared Pat Cargile, to me personally known, who, being by me duly sworn, did say that he is attorney in fact of HARTFORD ACCIDENT & INDEMNITY CO. and that the foregoing instrument was signed and sealed on behalf of said corporation by authority of its board of directors, and acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and seal on the day and year in this certificate first above written.

Linda Andrews
Notary Public

4-21-82
My Commission expires
(Note: Corporate surety attach power of attorney.)

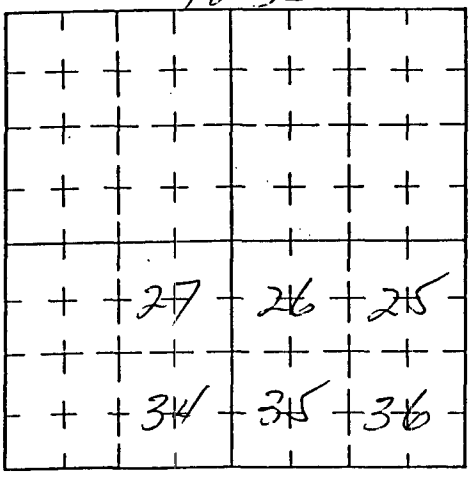
APPROVED BY:
OIL CONSERVATION COMMISSION OF NEW MEXICO

By _____

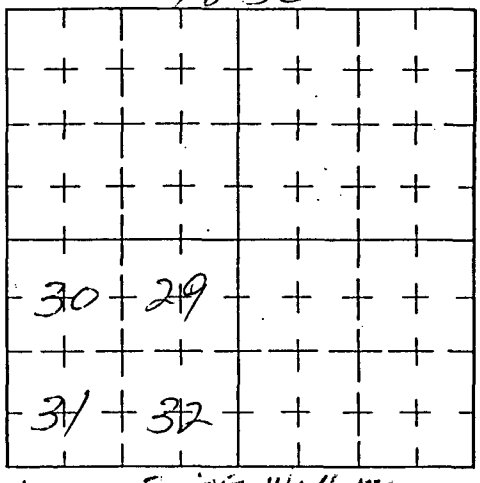
Date _____

Sec._____ T._____ R._____ Sec._____ T._____ R._____

18-35

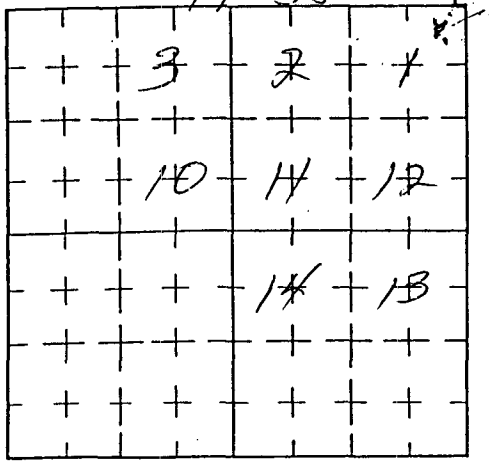


18-36

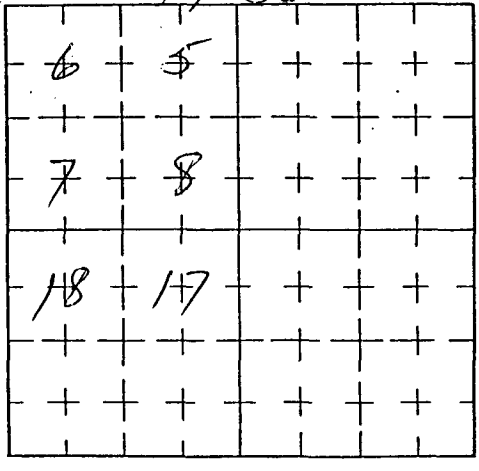


Trinchera Brine Well #1

19-35



19-36



Section 26 Township 18 South Range 35 East

L-6868 (E)	NW¼SE¼SW¼	26-18-35
L-6869 (E)	NW¼SW¼	26-18-35

Section 27 Township 18 South Range 35 East

L-3783	2310 ft. from South & West Lines	OWD
L-3963	NW¼NE¼	OWD

Section 34 Twp. 18 S., Rge. 35 E.

L-7129	SE¼SW¼S	Stock	Shallow

Section 35 Township 18 South Range 35 East

L-3678	OWD

Section 36 Township 18 S. Range 35 E.

L-6313	NE¼NE¼	Comm.

Section 29	Township 18 South		Range 36 East
L-1551		denied Power Gener.	

Section 30	Township 18 South		Range 36 East
L-1552		denied Ind.	
L-5200-X-5	Approximate Center		Ind.
L-6641(E)	SE¼NE¼NW¼	OWD	

Section 31	Township 18 South		Range 36 East
L-1553			Ind.
L-4892 (Withdrawn)	SW¼SW¼SW¼		Comm.

Section 1	Township 19 South	Range 35 East
L-2359	SW¼SW¼NW¼	Dom.
L-3945	SW¼NE¼NE¼	OWD
L-3945 (2)	SW¼NE¼NE¼	OWD
L-5434	SW¼NE¼NE¼	Ind.
L-6180	recreational	
L-5434-S	SE¼NW¼NE¼	COM.
L-8582	SE¼SE¼	IND
L-8583	SE¼NE¼	IND

Section 2	Township 19 South	Range 35 East
L-5764	SE¼SE¼NE¼	WF
L-5764-X	NE¼NE¼NE¼	WF

Section 13	Township 19 South	Range 35 East
L-1756		Irr.
L-4563	NE¼SE¼	Irr.

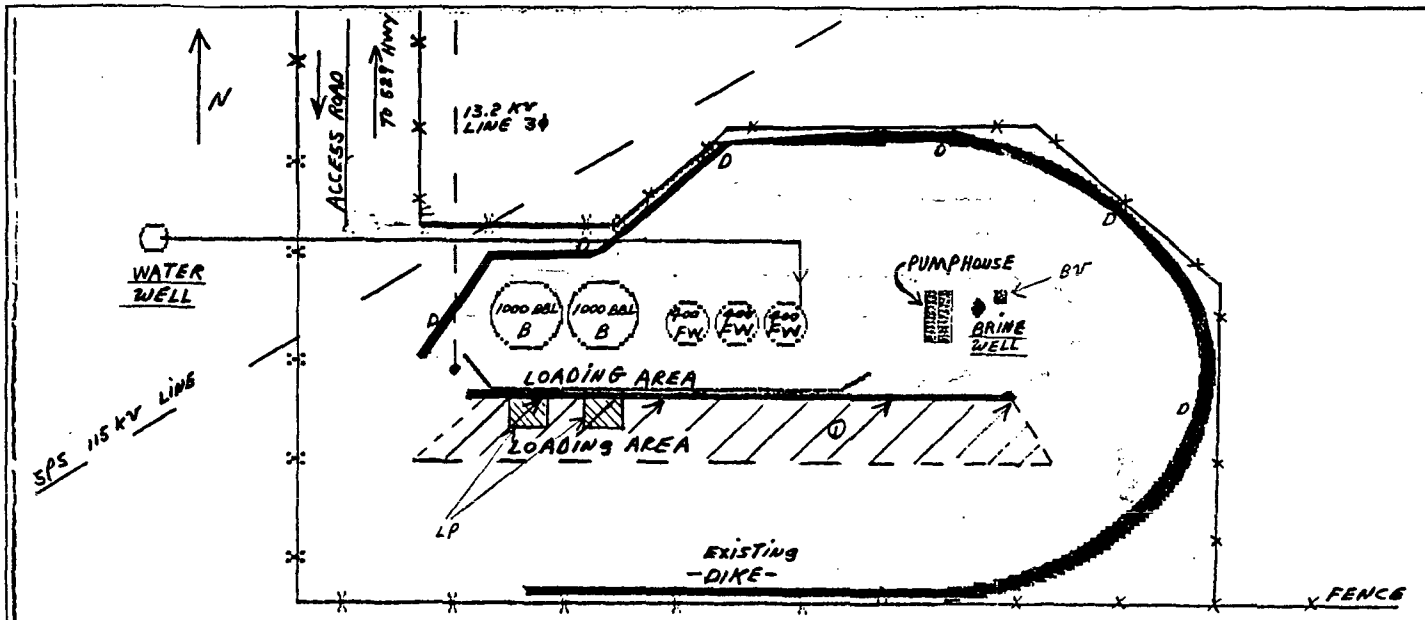
Section 14	Township 19 South	Range 35 East
L-6801	N½S½	Stock

Section 5	Township 19 South	Range 36 East
L-2720	NW¼	Ind.
L-4192-X-2	NE¼	Comm.
L-6050	N½NW¼NW¼	Com. Oper. Dom.
L-6853	NE¼	Dom.
L-7431-S	NE¼NE¼	IRR & COM

Section 6	Township 19 South	Range 36 East
L-2889	SE¼SE¼	OWD
L-2720	NW¼	Ind.
L-2329		OWD
L-2718	NE¼	Ind.
L-2719	NE¼	Ind.
L-2720	NE¼	Ind.
L-2721	NE¼	Ind.

Section 8	Township 19 South	Range 36 East
L-2328		OWD

Section 18	Township 19 South	Range 36 East
L-2928 closed	SW¼SE¼	Refinery Opera.
L-7431	NE¼NE¼SE¼	Irr.



REVISIONS: 9/5/87

1. REMOVED PROPOSED PIT AREA & OVERFLOW LINES
2. REMOVED "OLD TANK"
3. ADDED 2' TO DIKE TOTAL 4' ON EAST END
4. ADDED 2 NEW CONCRETE LOADING PADS
5. ADDED NEW AUTO-BRINE VALVE SYSTEM
6. REMOVED ALL OLD UNDERGROUND PIPING

NOTES

B BRINE
FW FRESH WATER
-D- DIKE
LP- LOADING PADS - CONCRETE
BV- AUTO BRINE VALVE

UNICHEM INTL - HOBBS-NM

SCALE: 1" = 66.67'	APPROVED BY:	DRAWN BY LWP
DATE: 2/10/86		REVISED 9-5-87-1'

ROWLAND "TRUCKERS" BRINE ST #1 529 HWY
SEC 1 - T19S - R35E LEA

PLOT PLAN

DRAWING NUMBER 000186-1

11 X 17 PRINTED ON NO. 1000H CLEARPRINT ®

EXHIBIT #2

EXHIBIT #3

PIPING FLOW SCHEMATIC
TRUCKERS #1 BRINE STATION

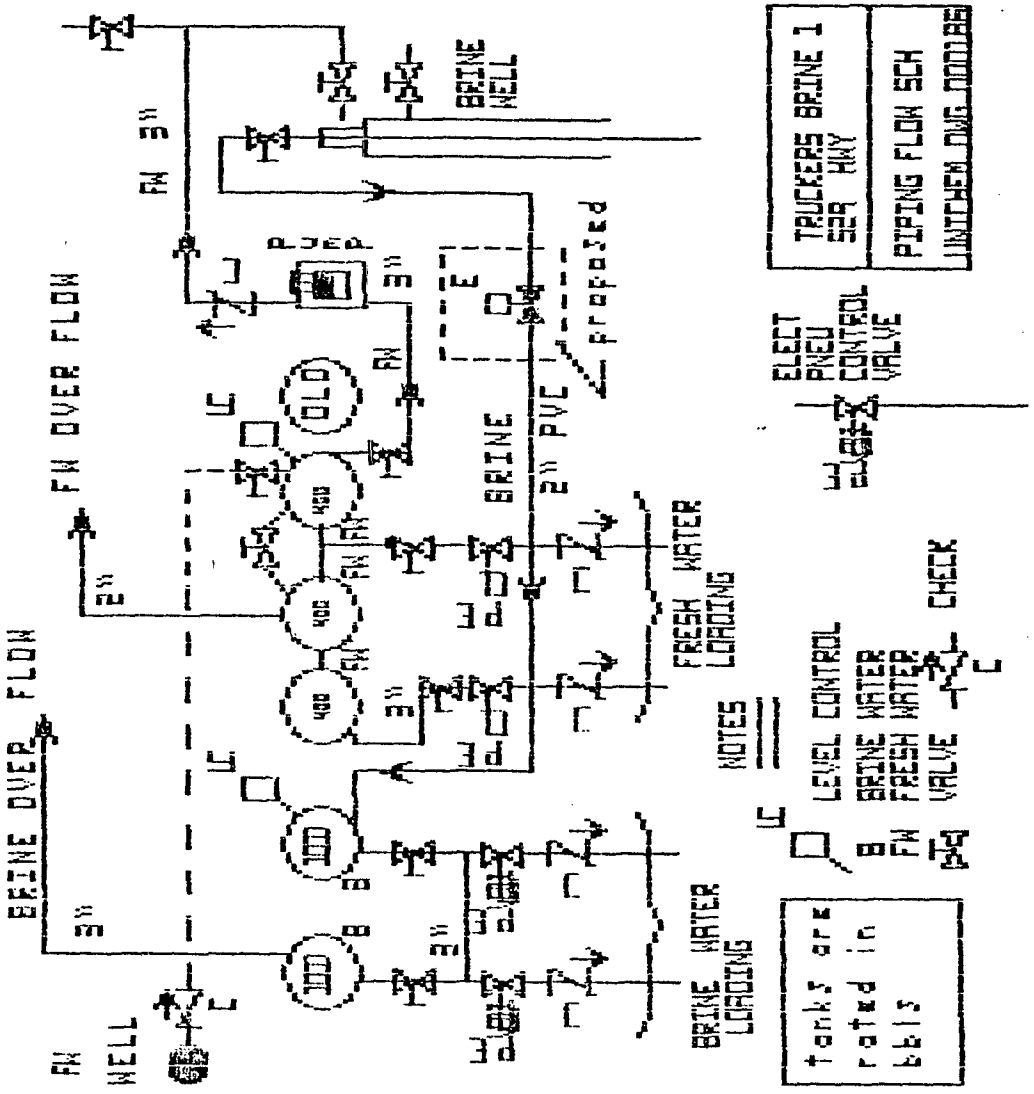


EXHIBIT #3

THE REPRODUCTION OF

THE

FOLLOWING

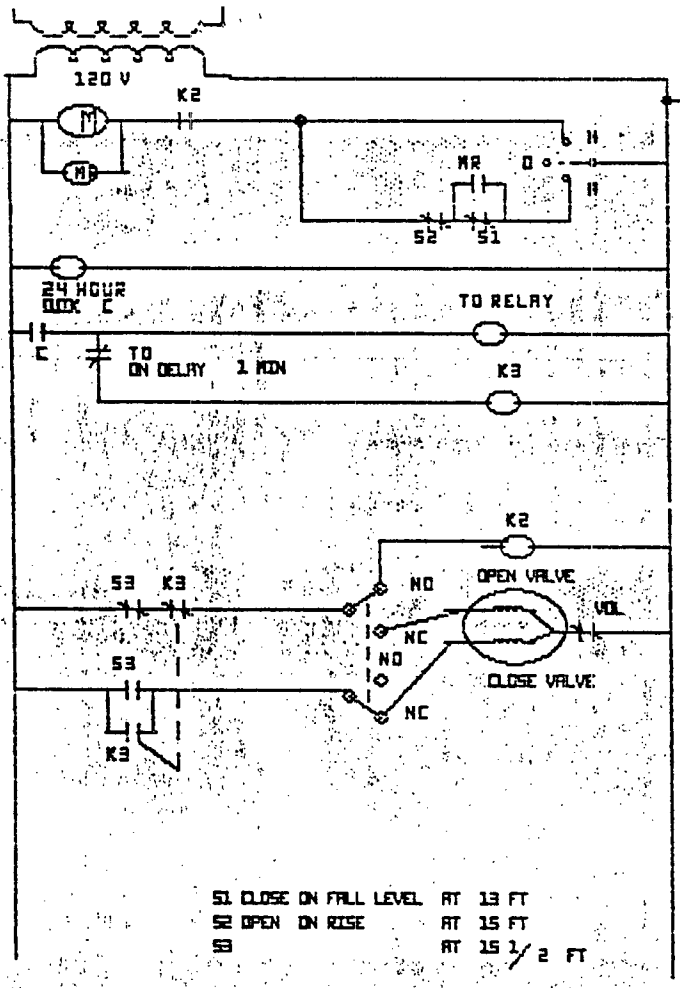
DOCUMENT (S)

CANNOT BE IMPROVED

DUE TO

THE CONDITION OF

THE ORIGINAL



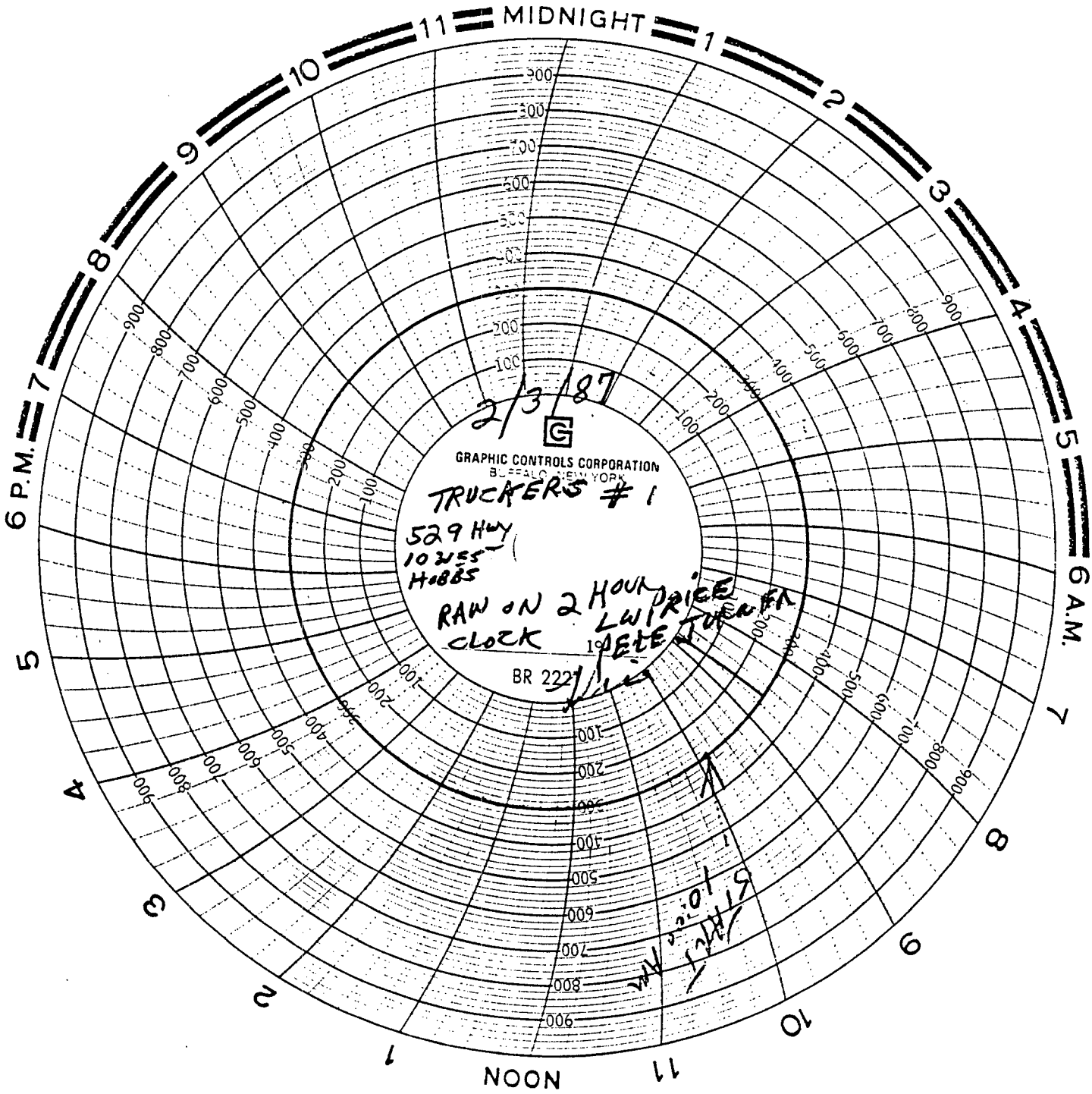
1 MOTOR CONTACTOR M
2 HAND OFF AUTO SW
3 MR AUX MOTOR RELAY
4 S1 S2 LEVEL CONTACTS
5 24 HOUR CLOCK
6 CLOCK MAKES 15 MIN PER 24 HR
7 TIME DELAY RELAY 0 TO 180 SEC ON DELAY
8 K2 MOTOR INTERLOCK RELAY PREVENTS MOTOR FROM RUN IF VALVE IS CLOSED
9 WORCHESTER MOTOR VALVE

S1 CLOSE ON FALL LEVEL AT 13 FT
S2 OPEN ON RISE AT 15 FT
S3 AT 15 1/2 FT

SEQUENCE OF OPERATION

OFF POSITION	MOTOR WILL NOT RUN BRINE VALVE WILL OPERATE AS NORMAL
HAND POSITION	MOTOR WILL RUN IF BRINE VALVE IS OPEN ONLY
AUTO POSITION	MOTOR WILL CYCLE OFF AND ON BY LEVEL CONTROL OF S1 AND S2 MOTOR WILL SHUT DOWN IF BRINE VALVE CLOSES VIA K2 RELAY INTERLOCK ONCE EVERY 24 HOURS CONTACT C CLOSES FOR 15 MIN AND PICKS UP RELAY K3 VIA NC TO TIME DELAY RELAY K3 WILL STAY PICKED UP FOR ONE MIN AND WILL CAUSE BRINE VALVE TO CLOSE VIA NO K3 CONTACT A NC K3 CONTACT WILL OPEN AND DROP OUT K2 MOTOR INTERLOCK CAUSING THE MOTOR TO SHUT DOWN IF BRINE IS ALREADY CLOSED NOTHING WILL HAPPEN

UNICHEM
INTERNATIONAL



MECHANICAL INTEGRITY TEST - FEBRUARY 3, 1987
TRUCKERS #1 BRINE STATION
HIGHWAY 529, 10 MILES WEST OF HOBBS, NEW MEXICO

EXHIBIT #4

UNICHEM INTERNATIONAL

EXHIBIT #5

Home Office 707 N. Leech, P.O. Box 1499 / Hobbs, NM 88240 / Ph. 505/393-7751, TWX 910/986-0010

WATER ANALYSIS

CLIENT NAME: N.M. ENVIRONMENTAL IMPROVEMENT DIV. DATE: 09/04/87

ANALYSIS PERFORMED	TRUCKER #1 BRINE	TRUCKER #1 FRESH
pH	7.09	7.55
P-ALKALINITY	0	0
TOTAL ALKALINITY	60	152
TOTAL HARDNESS	10800	200
CALCIUM	3200	156
MAGNESIUM	7600	44
CHLORIDE	180400	52
SULFATE	51200	54
SPECIFIC CONDUCTANCE	179400	386

* ALL RESULTS EXPRESSED IN MILLIGRAMS/LITER

ANALYZED BY _____ (HOBBS LAB)

APPROVED BY Jimmy Poindexter

EXHIBIT #5

STATE OF NEW MEXICO

Revised 6-17-77

$50,000.00 BLANKET PLUGGING BOND

BOND NO. 4446488
(For Use of Surety Company)

(Note: File with Oil Conservation Commission, P. O. Box 2088, Santa Fe 87501)

KNOW ALL MEN BY THESE PRESENTS:

That Unichem International, Inc., et al, (~~xxxxxxxx~~) (a partnership) (a corporation organized in the State of New Mexico, with its principal office in the city of Hobbs, State of New Mexico, and authorized to do business in the State of New Mexico), as PRINCIPAL, and HARTFORD ACCIDENT & INDEMNITY, a corporation organized and existing under the laws of the State of Connecticut, and authorized to do business in the State of New Mexico, as SURETY, are held firmly bound unto the State of New Mexico, for the use and benefit of the Oil Conservation Commission of New Mexico pursuant to Section 65-3-11, New Mexico Statutes Annotated, 1953 Compilation, as amended, in the sum of Fifty Thousand Dollars ($50,000.00) lawful money of the United States, for the payment of which, well and truly to be made, said PRINCIPAL and SURETY hereby bind themselves, their successors and assigns, jointly and severally, firmly by these presents.

The conditions of this obligation are such that:

WHEREAS, The above principal has heretofore or may hereafter enter into oil and gas leases, or carbon dioxide (CO_2) gas leases, or helium gas leases with the State of New Mexico; and

WHEREAS, The above principal has heretofore or may hereafter enter into oil and gas leases, or carbon dioxide (CO_2) gas leases, or helium gas leases on lands patented by the United States of America to private individuals, and on lands otherwise owned by private individuals; and

WHEREAS, The above principal, individually, or in association with one or more other parties, has commenced or may commence the drilling of wells to prospect for and produce oil or gas, or carbon dioxide (CO_2) gas or helium gas, or does own or may acquire, own or operate such wells, or such wells started by others on land embraced in said State oil and gas leases, or carbon dioxide (CO_2) gas leases, or helium gas leases, and on lands patented by the United States of America to private individuals, and on lands otherwise owned by private individuals, the identification and location of said wells being expressly waived by both principal and surety hereto.

NOW, THEREFORE, If the above bounden principal and surety or either of them or their successors or assigns, or any of them, shall plug all of said wells when dry or when abandoned in accordance with the rules, regulations, and orders of the Oil Conservation Commission of New Mexico in such way as to confine the oil, gas, and water in the strata in which they are found, and to prevent them from escaping into other strata;

THEN, THEREFORE, This obligation shall be null and void; otherwise and in default of complete compliance with any and all of said obligations, the same shall remain in full force and effect.

PROVIDED, HOWEVER, That thirty (30) days after receipt by the Oil Conservation Commission of New Mexico of written notice of cancellation from the surety, the obligation of the surety hereunder shall terminate as to property or wells acquired, drilled, or started after said thirty (30) day period but shall continue in effect, notwithstanding said notice, as to property or wells theretofore acquired, drilled, or started.

EXHIBIT #6

UNICHEM INTERNATIONAL INC., et al
PRINCIPAL

P.O. Box 1499, Hobbs, N.M. 88240
Address

By William D. Walton
Signature

Vice President
Title

(Note: Principal, if corporation, affix corporate seal here.)

HARTFORD ACCIDENT & INDEMNITY CO.
SURETY

6061 S. Willow Dr., Englewood, Colo. 80111
Address

By Pat Cargile
Attorney-in-Fact
Pat Cargile

(Note: Corporate surety affix corporate seal here.)

ACKNOWLEDGMENT FORM FOR NATURAL PERSONS

STATE OF _____)
COUNTY OF _____) ss.

On this _____ day of _____, 19____, before me personally appeared _____, to me known to be the person (persons) described in and who executed the foregoing instrument and acknowledged that he (they) executed the same as his (their) free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and seal on the day and year in this certificate first above written.

_____
Notary Public

_____
My Commission expires

ACKNOWLEDGMENT FORM FOR CORPORATION

STATE OF New Mexico)
COUNTY OF Lea) ss.

On this 26th day of October, 19 81, before me personally appeared William D. Walton, to me personally known who, being by me duly sworn, did say that he is Vice President of Unichem International, Inc., et al and that the foregoing instrument was signed and sealed on behalf of said corporation by authority of its board of directors, and acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and seal on the day and year in this certificate first above written.

Linda Andrews
Notary Public

4-21-82
My Commission expires

ACKNOWLEDGMENT FORM FOR CORPORATE SURETY

STATE OF New Mexico)
COUNTY OF Lea) ss.

On this 26th day of October, 19 81, before me appeared Pat Cargile, to me personally known, who, being by me duly sworn, did say that he is attorney in fact of HARTFORD ACCIDENT & INDEMNITY CO. and that the foregoing instrument was signed and sealed on behalf of said corporation by authority of its board of directors, and acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and seal on the day and year in this certificate first above written.

Linda Andrews
Notary Public

4-21-82
My Commission expires
(Note: Corporate surety attach power of attorney.)

APPROVED BY:
OIL CONSERVATION COMMISSION OF NEW MEXICO

By _____

Date _____

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

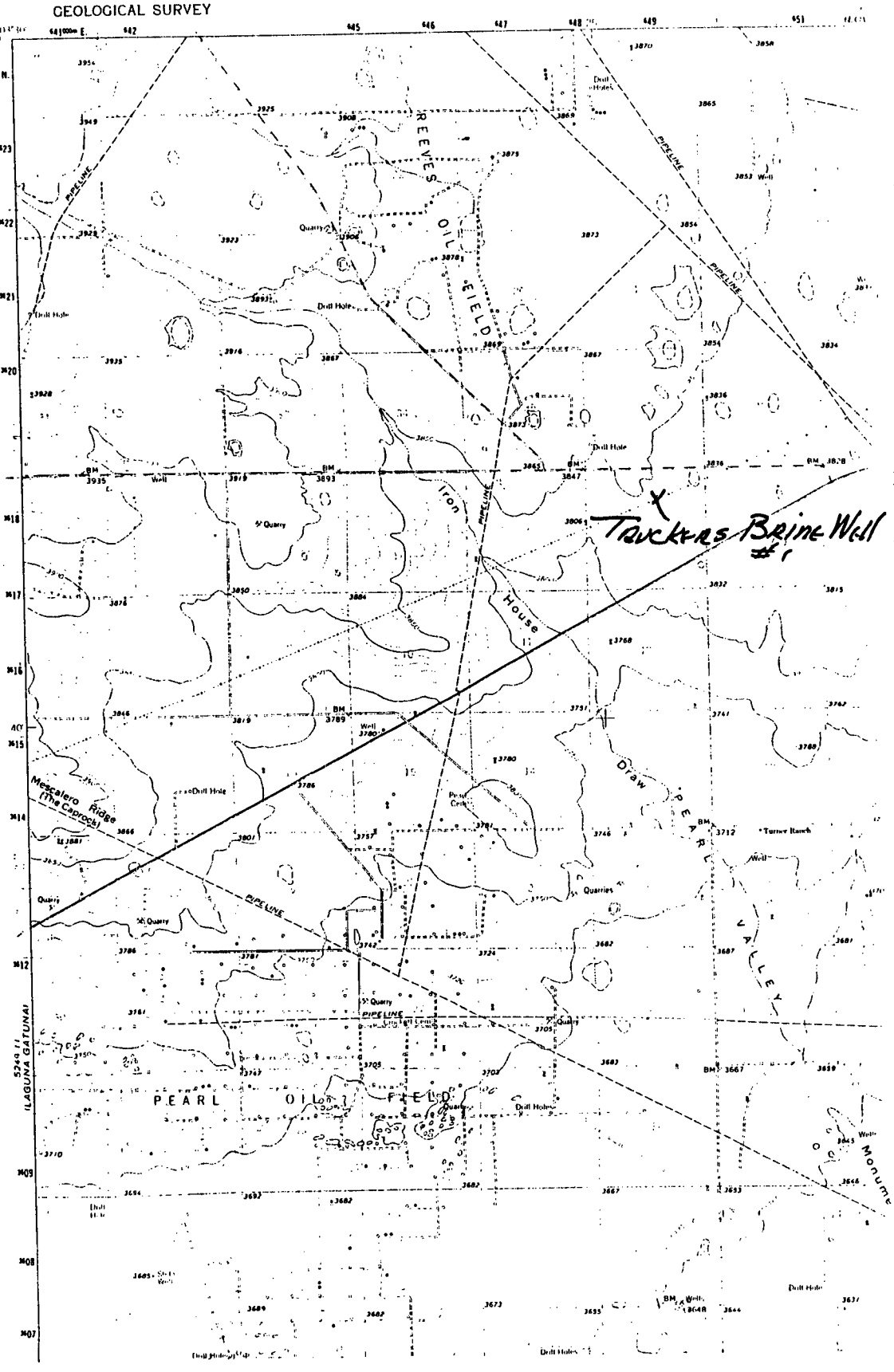
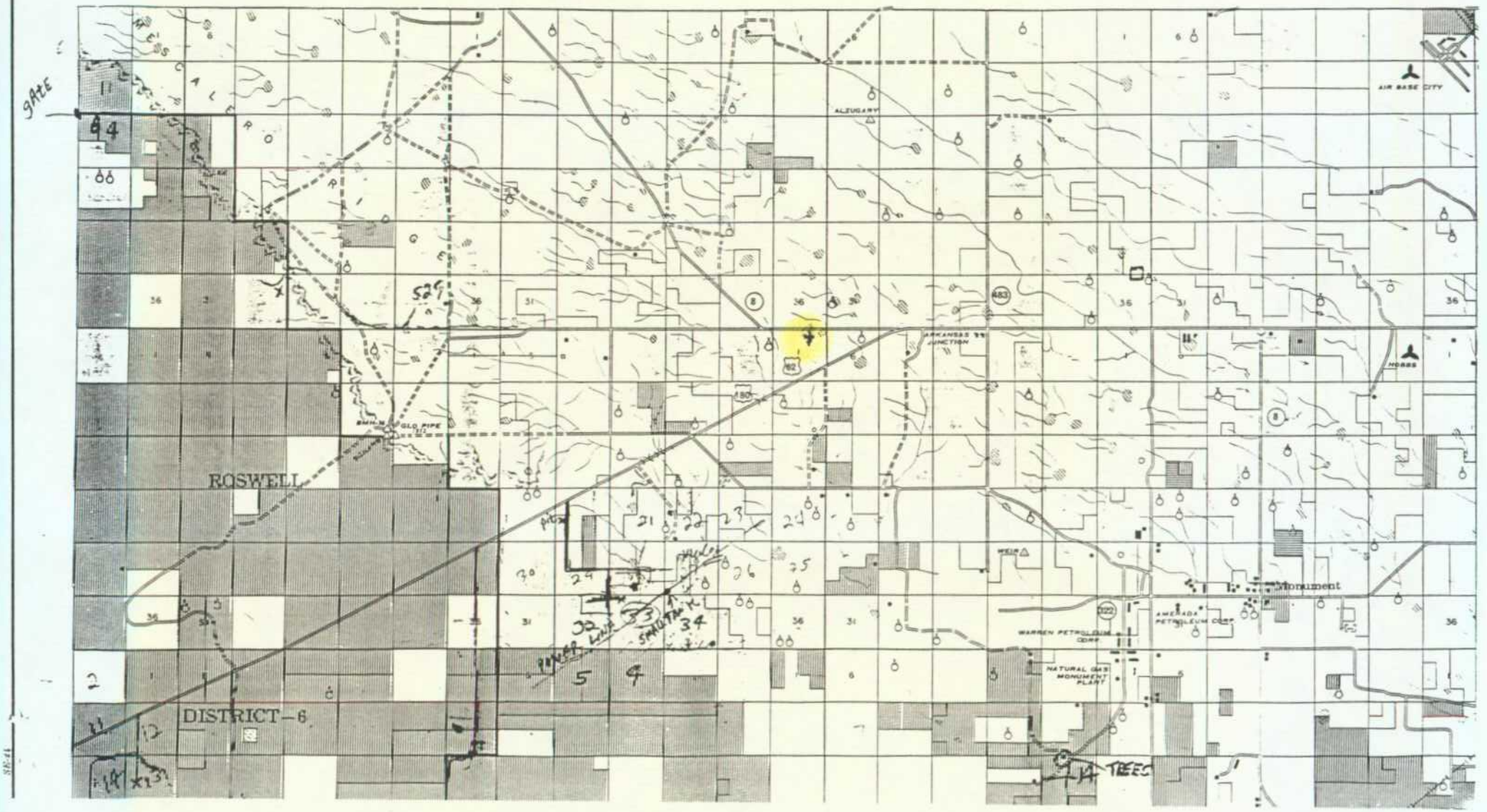


EXHIBIT #7

BUREAU OF LAND MANAGEMENT

NEW MEXICO

R. 33 E. R. 34 E. R. 35 E. SE-80 R. 36 E. R. 37 E.



WELLS IN AREA of REVIEW

NOT NOT DRILLED OR PERMIT WITHDRAWN

L-(LEA)

* L-3945(2) ARE SAME WELLS AS L-5434 & L-5434-S

UPDATED TO 9/4/87
STATE of N.M. ENGR
PER JOHN HERNANDEZ
9/4/87

EXHIBIT #8

Section 36 Township 18 S. Range 35 E.

L-6313	NE¼NE¼	Comm.

Section 1 Township 19 South Range 35 East

L-2359	SW¼SW¼NW¼	Dom.
L-3945	SW¼NE¼NE¼	OWD
* L-3945 (2)	SW¼NE¼NE¼	OWD
L-5434	SW¼NE¼NE¼	Ind.
L-6180	recreational	
L-5434-S	SE¼NW¼NE¼	COM. NOT
L-8582	SE¼SE¼	~~IND~~ NOT
L-8583	SE¼NE¼	~~IND~~ NOT

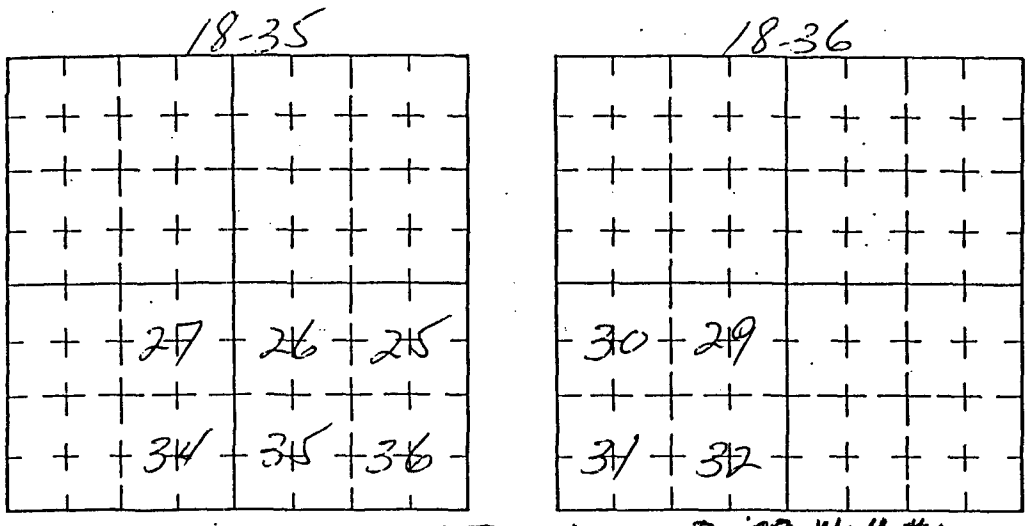
Section 31 Township 18 South Range 36 East

L-1553		~~Ind.~~ NOT
L-4892 (Withdrawn)	SW¼SW¼SW¼	~~Comm.~~ NOT

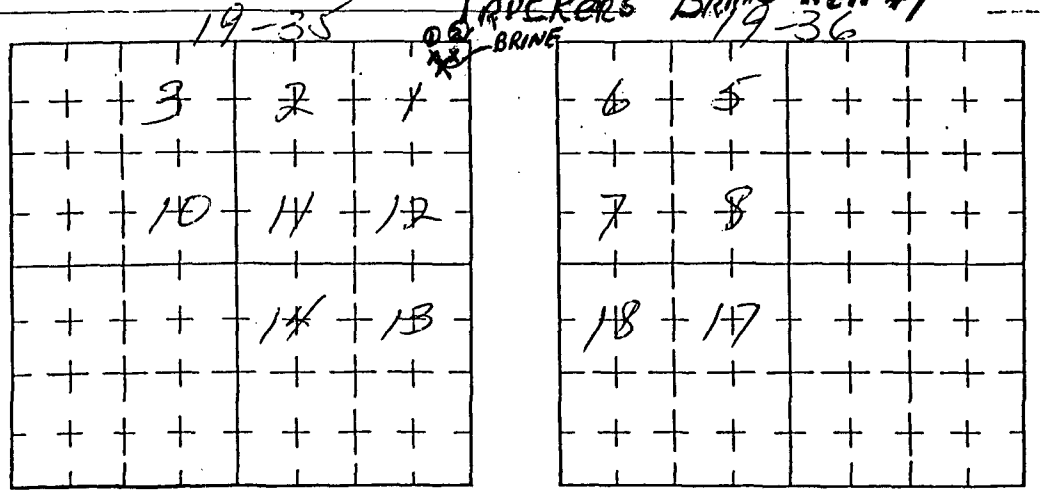
Section 6 Township 19 South Range 36 East

L-2889	SE¼SE¼	OWD
L-2720	NW¼	~~Ind.~~ NOT
L-2329		OWD
L-2718	NE¼	Ind.
L-2719	NE¼	Ind.
L-2720	NE¼	Ind.
L-2721	NE¼	Ind.

Sec._____ T._____ R._____ Sec._____ T._____ R._____



Truckers Brine Well #1



① L-5434-S
② L-5434

Section 36	Township 18 S.	Range 35 E.
L-6313	NE¼NE¼	Comm.

Section 1	Township 19 South	Range 35 East
L-2359	SW¼SW¼NW¼	Dom.
L-3945	SW¼NE¼NE¼	OWD
L-3945 (2)	SW¼NE¼NE¼	OWD
L-5434	SW¼NE¼NE¼	Ind.
L-6180	recreational	
L-5434-S	SE¼NW¼NE¼	COM.
L-8582	SE¼SE¼	IND
L-8583	SE¼NE¼	IND

Section 31	Township 18 South	Range 36 East
L-1553		Ind.
L-4892 (Withdrawn)	SW¼SW¼SW¼	Comm.

Section 6	Township 19 South	Range 36 East
L-2889	SE¼SE¼	OWD
L-2720	NW¼	Ind.
L-2329		OWD
L-2718	NE¼	Ind.
L-2719	NE¼	Ind.
L-2720	NE¼	Ind.
L-2721	NE¼	Ind.

EXHIBIT #9

TABULATION OF WELL HISTORY DATA

PERTAINING TO WELLS WITHIN AREA OF REVIEW

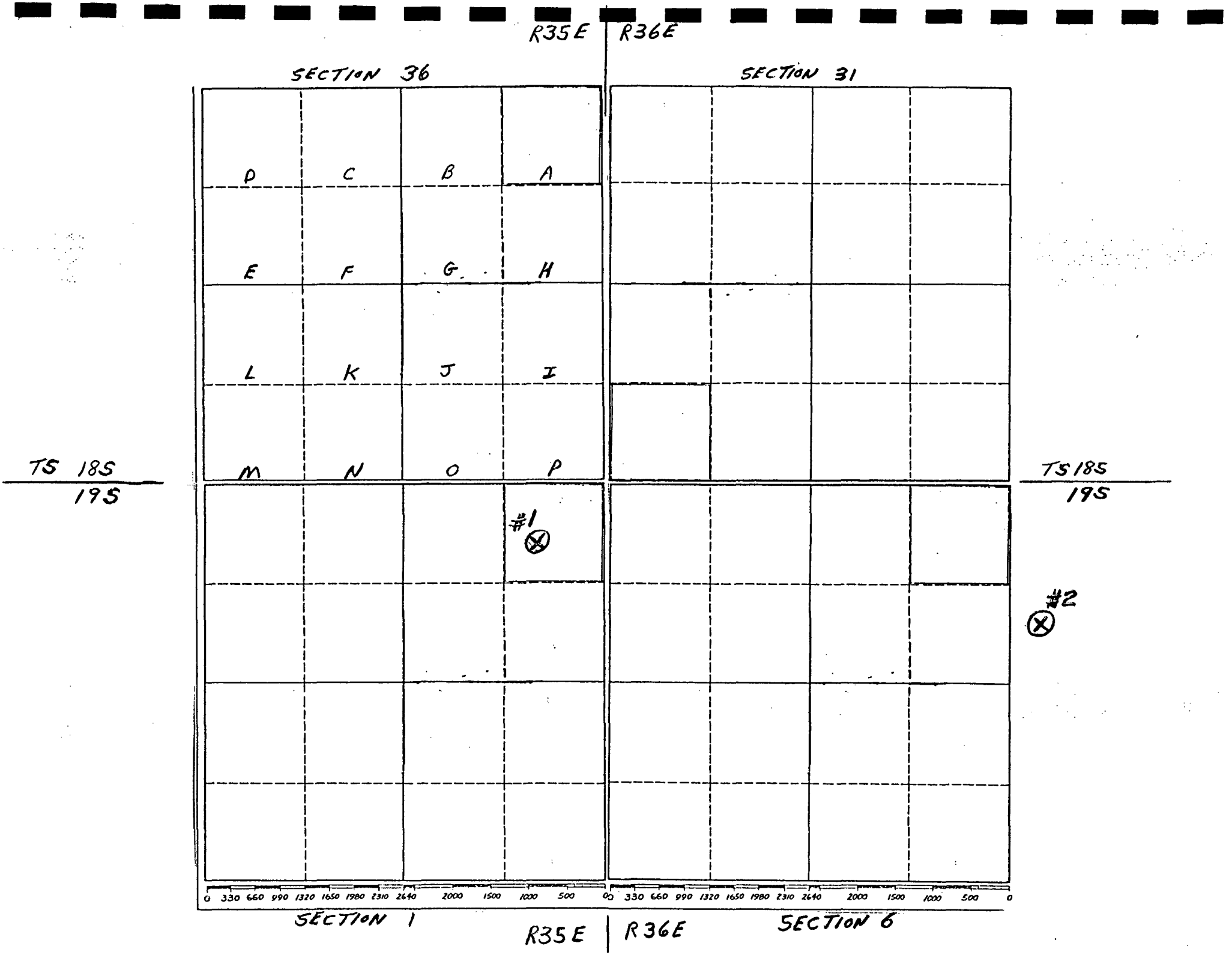
Listing #1: Unichem International Inc., Truckers #1 Brine Well

Sec 1, T19S, R35E (Unit A)

Listing #2: Amoco Production Company, State "NO" (Well #1)

Sec 7, T19S, R36E (Unit E)

NOTE: Dry hole, plugged and abandoned.


R35E
R36E
SECTION 36
SECTION 31
D
C
B
A
E
F
G
H
L
K
J
I
M
N
O
P
#1
#2
T5 18S
19S
T5 18S
19S
0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0
0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0
SECTION 1
SECTION 6
R35E
R36E

DISTRIBUTION		
SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
TRANSPORTER — OIL		
TRANSPORTER — GAS		
OPERATOR		
PRORATION OFFICE		

NEW MEXICO OIL CONSERVATION COMMISSION

REQUEST FOR ALLOWABLE

AND

AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

Form C-104
Supersedes Old C-104 and C-11
Effective 1-1-65

#1

Operator: Unichem International, Inc.

Address: P. O. Box 1196, Eunice, New Mexico 88231

Reason(s) for filing (Check proper box)

- New Well [ ]
- Recompletion [ ]
- Change in Ownership [X]
- Change in Transporter of: Oil [ ] Dry Gas [ ] Casinghead Gas [ ] Condensate [ ]

Other (Please explain)

If change of ownership give name and address of previous owner: Pioneer Water Company, P. O. Box 1196, Eunice, New Mexico 88231

DESCRIPTION OF WELL AND LEASE

Lease Name	Well No.	Pool Name, Including Formation	Kind of Lease State, Federal or Fee	Lease No.
Brine State	1			

Location

Unit Letter A ; 660 Feet From The North Line and 660 Feet From The East

Line of Section 1 Township 19S Range 35E , NMPM, Lea County

DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil [ ] or Condensate [ ]	Address (Give address to which approved copy of this form is to be sent)
Name of Authorized Transporter of Casinghead Gas [ ] or Dry Gas [ ]	Address (Give address to which approved copy of this form is to be sent)

If well produces oil or liquids, give location of tanks.	Unit	Sec.	Twp.	Rge.	Is gas actually connected?	When

If this production is commingled with that from any other lease or pool, give commingling order number:

COMPLETION DATA

Designate Type of Completion – (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Res'v.	Diff. Res'v.

Date Spudded	Date Compl. Ready to Prod.	Total Depth	P.B.T.D.
Elevations (DF, RKB, RT, GR, etc.)	Name of Producing Formation	Top Oil/Gas Pay	Tubing Depth
Perforations			Depth Casing Shoe

TUBING, CASING, AND CEMENTING RECORD

HOLE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT

TEST DATA AND REQUEST FOR ALLOWABLE (Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

OIL WELL

Date First New Oil Run To Tanks	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil-Bbls.	Water-Bbls.	Gas-MCF

GAS WELL

Actual Prod. Test-MCF/D	Length of Test	Bbls. Condensate/MMCF	Gravity of Condensate
Testing Method (pitot, back pr.)	Tubing Pressure (Shut-in)	Casing Pressure (Shut-in)	Choke Size

CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Commission have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

[signature]
(Signature)

Vice Presidetn
(Title)

10-14-81
(Date)

OIL CONSERVATION COMMISSION

APPROVED OCT 29 1981, 19

BY Orig. Signed by Les Clements

TITLE Oil & Gas Insp.

This form is to be filed in compliance with RULE 1104.

If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.

All sections of this form must be filled out completely for allowable on new and recompleted wells.

Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter, or other such change of condition.

NO. OF COPIES RECEIVED		
DISTRIBUTION		
SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
TRANSPORTER — OIL		
TRANSPORTER — GAS		
OPERATOR		
PRORATION OFFICE		

NEW MEXICO OIL CONSERVATION COMMISSION
REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

Form C-104
Supersedes Old C-104 and C-110
Effective 1-1-65

Operator: PIONEER WATER COMPANY, INC.

Address: P.O. Box 1196, Eunice, New Mexico 88231

Reason(s) for filing *(Check proper box)*
New Well ☐
Recompletion ☐
Change in Ownership ☒ XX
Change in Transporter of: Oil ☐ Dry Gas ☐ Casinghead Gas ☐ Condensate ☐
Other *(Please explain)*

If change of ownership give name and address of previous owner: T & T Inc., Box 906, Lovington, New Mexico

DESCRIPTION OF WELL AND LEASE

Lease Name	Well No.	Pool Name, Including Formation	Kind of Lease State, Federal or Fee	Lease No.
~~19-35-1~~ Brine Well	1	brine well	State	M14244

Location
Unit Letter ____ ; 660 Feet From The north Line and 660 Feet From The east
Line of Section 1 Township 19S Range 35E , NMPM, Lea County

DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil ☐ or Condensate ☐	Address *(Give address to which approved copy of this form is to be sent)*
none	

Name of Authorized Transporter of Casinghead Gas ☐ or Dry Gas ☐	Address *(Give address to which approved copy of this form is to be sent)*

If well produces oil or liquids, give location of tanks.	Unit	Sec.	Twp.	Rge.	Is gas actually connected?	When

If this production is commingled with that from any other lease or pool, give commingling order number: ____

COMPLETION DATA   we have no facts on this information

Designate Type of Completion – (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Res'v.	Diff. Res'v.

Date Spudded	Date Compl. Ready to Prod.	Total Depth	P.B.T.D.
this information is unknown			

Elevations *(DF, RKB, RT, GR, etc.)*	Name of Producing Formation	Top Oil/Gas Pay	Tubing Depth
	Brine		

Perforations	Depth Casing Shoe

TUBING, CASING, AND CEMENTING RECORD

HOLE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT
7"	7" & 2"	1000 ?	to surface

TEST DATA AND REQUEST FOR ALLOWABLE
(Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

OIL WELL

Date First New Oil Run To Tanks	Date of Test	Producing Method *(Flow, pump, gas lift, etc.)*	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil-Bbls.	Water-Bbls.	Gas-MCF

GAS WELL

Actual Prod. Test-MCF/D	Length of Test	Bbls. Condensate/MMCF	Gravity of Condensate
Testing Method *(pitot, back pr.)*	Tubing Pressure (Shut-in)	Casing Pressure (Shut-in)	Choke Size

CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Commission have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

R. L. McLean
(Signature)
President
(Title)
June 17, 1969
(Date)

OIL CONSERVATION COMMISSION

APPROVED ________________, 19____

BY ________________

TITLE ________________

This form is to be filed in compliance with RULE 1104.

If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.

All sections of this form must be filled out completely for allowable on new and recompleted wells.

Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter, or other such change of condition.

Separate Forms C-104 must be filed for each pool in multiply

NEW M CO OIL CONSERVATION COMMI ON
Santa Fe, New Mexico

Form C-101
Revised (12/1/55)

NOTICE OF INTENTION TO DRILL

Notice must be given to the District Office of the Oil Conservation Commission and approval obtained before drilling or recompletion begins. If changes in the proposed plan are considered advisable, a copy of this notice showing such changes will be returned to the sender. Submit this notice in QUINTUPLICATE. One copy will be returned following approval. See additional instructions in Rules and Regulations of the Commission. If State Land submit 6 Copies Attach Form C-128 in triplicate to first 5 copies of form C-101

Lovington, New Mexico (Place) August 19, 1963 (Date)

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Gentlemen:

You are hereby notified that it is our intention to commence the Drilling of a well to be known as

T & T, Inc. (Formerly Ralph Lowe Ohio State No. 1) (Company or Operator)

State Brine (Lease), Well No. 1, in A (Unit). The well is

located 990 feet from the North line and 990 feet from the East line of Section 1, T. 19S, R. 35E, NMPM.

(GIVE LOCATION FROM SECTION LINE) Undesignated Pool, Lea County

If State Land the Oil and Gas Lease is No. ~~Salt~~ M-11244

If patented land the owner is

Address

We propose to drill well with drilling equipment as follows: Drill out surface plug with reverse unit.

The status of plugging bond is Active

Drilling Contractor Well Unit, Inc.

We intend to complete this well in the Salado formation at an approximate depth of 2000 feet.

D	C	B	A
E	F	G	H
L	K	J	I
M	N	O	P

CASING PROGRAM

We propose to use the following strings of Casing and to cement them as indicated:

Size of Hole	Size of Casing	Weight per Foot	New or Second Hand	Depth	Sacks Cement
17	13 3/8	48	New	316	450
11	9 5/8	36	New	4275	2700

If changes in the above plans become advisable we will notify you immediately.

ADDITIONAL INFORMATION (If recompletion give full details of proposed plan of work.)

We propose to reenter clean out to 3000' set Bridge Plug and perforate in salt section to produce brine.

Approved ....., 19.....
Except as follows:

OIL CONSERVATION COMMISSION

By .....

Sincerely yours,

T & T, Inc. (Company or Operator)

By Weldon Miles

Position Operator

Send Communications regarding well to

Name T & T, Inc.

Address P.O. Box 906, Lovington, New M

NO. OF COPIES RECEIVED		
DISTRIBUTION		
SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
TRANSPORTER	OIL	
	GAS	
PRORATION OFFICE		
OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION

FORM C-103
(Rev 3-55)

MISCELLANEOUS REPORTS ON WELLS

(Submit to appropriate District Office as per Commission Rule 1106)

Name of Company		Address				
T & T, Inc.		P.O. Box 906, Lovington, New Mexico				
Lease	Well No.	Unit Letter	Section	Township	Range	
State Brine	1	A	1	19S	35E	
Date Work Performed	Pool		County			
May 5 - May 15, 1963	Undesignated		Lea			

THIS IS A REPORT OF: *(Check appropriate block)*

- ☐ Beginning Drilling Operations
- ☐ Casing Test and Cement Job
- ☒ Other *(Explain)*: Cleanout
- ☐ Plugging
- ☐ Remedial Work

Detailed account of work done, nature and quantity of materials used, and results obtained.

Reentered well formerly Ralph Lowe Ohio State No. 1 Well.
Drilled out surface plug and cleaned out to 3,000 feet.
Perforated 10 - 5/8" holes @ 2110'.
Perforated 10 - 5/8" holes @ 2270'.
Set Guiberson Drillable Packer at 2150 and ran 2½" tubing.
Latched tubing into packer and placed on production for Brine.

Witnessed by	Position	Company
Weldon Miles	Operator	T & T, Inc.

FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

ORIGINAL WELL DATA

DF Elev.	TD	PBTD	Producing Interval	Completion Date

Tubing Diameter	Tubing Depth	Oil String Diameter	Oil String Depth

Perforated Interval(s)

Open Hole Interval	Producing Formation(s)

RESULTS OF WORKOVER

Test	Date of Test	Oil Production BPD	Gas Production MCFPD	Water Production BPD	GOR Cubic feet/Bbl	Gas Well Potential MCFPD
Before Workover						
After Workover						

OIL CONSERVATION COMMISSION

Approved by: Joe D. Ramey

Title: Dist. Supv.

Date: 9-9-63

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

Name: Weldon Miles

Position: Operator

Company: T & T, Inc.

NEW MEXICO OIL CONSERVATION COMMISSION

FORM C-128
Revised 5/1/57

WELL LOCATION AND ACREAGE DEDICATION PLAT

SEE INSTRUCTIONS FOR COMPLETING THIS FORM ON THE REVERSE SIDE

SECTION A

Operator	Lease	Well No.
T & T, Inc.	State-Brine	1 0

Unit Letter	Section	Township	Range	County
A	1	19S	35E	Lea

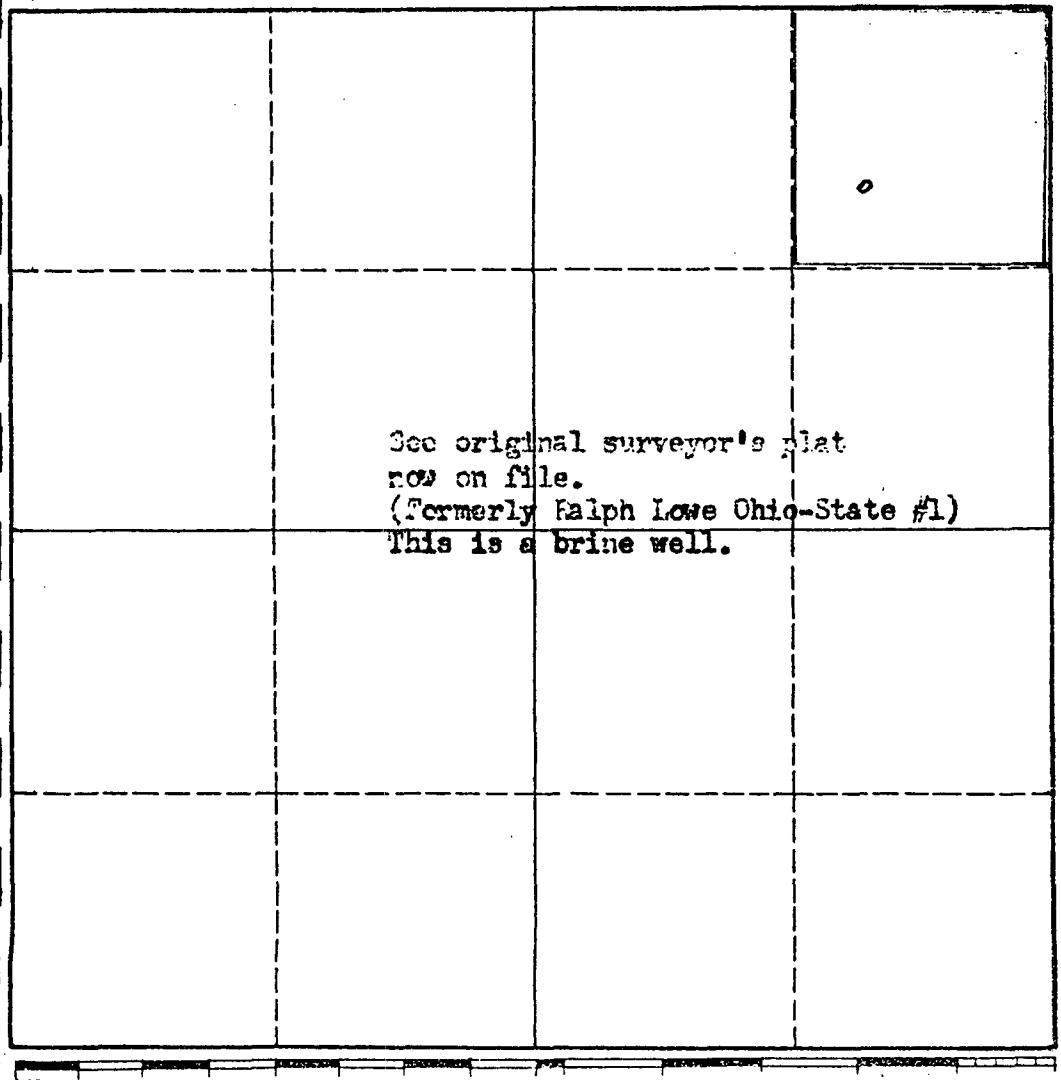
Actual Footage Location of Well:
990 feet from the North line and 990 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
	Salado	Undesignated	40 Acres

1. Is the Operator the only owner in the dedicated acreage outlined on the plat below? YES X NO ____. *("Owner" means the person who has the right to drill into and to produce from any pool and to appropriate the production either for himself or for himself and another. (65-3-29 (e) NMSA 1935 Comp.)*
2. If the answer to question one is "no," have the interests of all the owners been consolidated by communitization agreement or otherwise? YES ____ NO ____. If answer is "yes," Type of Consolidation ____
3. If the answer to question two is "no," list all the owners and their respective interests below:

Owner	Land Description

SECTION B



CERTIFICATION

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

T & T, Inc.

Name Weldon Miles

Weldon Miles

Position Operator

Company T & T, Inc.

Date August 19, 1963

I hereby certify that the well location shown on the plat in *SECTION B* was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

Registered Professional Engineer and/or Land Surveyor

Certificate No.

Form C-103
(Revised 3-55)

NEW MEXICO OIL CONSERVATION COMMISSION
MISCELLANEOUS REPORTS ON WELLS
(Submit to appropriate District Office as per Commission Rule 1106)

COMPANY Ralph Lowe Box 832, Midland, Texas
(Address)

LEASE Ohio State WELL NO. 1 UNIT A S 1 T 19-S R 35-E

DATE WORK PERFORMED November 29, 1958 POOL Undesignated

This is a Report of: (Check appropriate block)

- [ ] Beginning Drilling Operations
- [X] Plugging
- [ ] Results of Test of Casing Shut-off
- [ ] Remedial Work
- [ ] Other

Detailed account of work done, nature and quantity of materials used and results obtained.

Set a 25 sack plug from 12,020 to 11, 954 & 20 sack plug from 10,810 to 10,780, 9,000 to 8,970 and 6,980 to 6,930. Set a 15 sack plug from 6,800 to 6,730 and a 30 sack plug from 4,286 to 4,209. Set 5 sack plug in top of surface with marker.

FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

Original Well Data:

DF Elev. _____ TD _____ PBD _____ Prod. Int. _____ Compl Date _____

Tbng. Dia _____ Tbng Depth _____ Oil String Dia _____ Oil String Depth _____

Perf Interval (s) _____

Open Hole Interval _____ Producing Formation (s) _____

RESULTS OF WORKOVER:	BEFORE	AFTER
Date of Test		
Oil Production, bbls. per day		
Gas Production, Mcf per day		
Water Production, bbls. per day		
Gas-Oil Ratio, cu. ft. per bbl.		
Gas Well Potential, Mcf per day		

Witnessed by _____ _____ (Company)

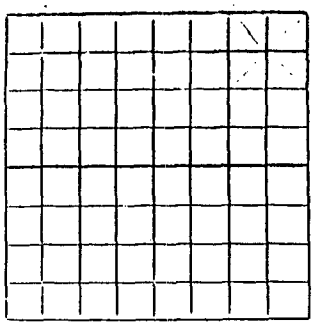
OIL CONSERVATION COMMISSION

Name Leslie A. Clements
Title _____
Date _____

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

Name _____
Position Agent
Company Ralph Lowe

(Revised 7/1/58)
(Form C-105)



AREA 640 ACRES
LOCATE WELL CORRECTLY

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

WELL RECORD

Mail to District Office, Oil Conservation Commission, to which Form C-101 was sent not later than twenty days after completion of well. Follow instructions in Rules and Regulations of the Commission. Submit in QUINTUPLICATE. If State Land submit 6 Copies

Ralph Lowe (Company or Operator) Ohio State (Lease)

Well No. 1, in NE ¼ of NE ¼, of Sec. 1, T. 19-S, R. 35-E, NMPM.

Undesignated Pool, Lea County.

Well is 990 feet from North line and 990 feet from East line of Section 1. If State Land the Oil and Gas Lease No. is E-2253

Drilling Commenced August 4, 1958 Drilling was Completed November 27, 1958

Name of Drilling Contractor Lowe Drilling Company

Address Box 832, Midland, Texas

Elevation above sea level at Top of Tubing Head 3853-D.F. The information given is to be kept confidential until X X, 19.....

OIL SANDS OR ZONES

No. 1, from.....to..... No. 4, from.....to.....

No. 2, from.....to..... No. 5, from.....to.....

No. 3, from.....to..... No. 6, from.....to.....

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....to.....feet. .....

No. 2, from.....to.....feet. .....

No. 3, from.....to.....feet. .....

No. 4, from.....to.....feet. .....

CASING RECORD

SIZE	WEIGHT PER FOOT	NEW OR USED	AMOUNT	KIND OF SHOE	CUT AND PULLED FROM	PERFORATIONS	PURPOSE
13 3/8	48	New	316	Reg	---		Surface
9 5/8	36	New	4275	Reg	---		Salt

MUDDING AND CEMENTING RECORD

SIZE OF HOLE	SIZE OF CASING	WHERE SET	NO. SACKS OF CEMENT	METHOD USED	MUD GRAVITY	AMOUNT OF MUD USED
17	13 3/8	316	450	Pump		
12 1/4	9 5/8	4275	2700	Pump		

RECORD OF PRODUCTION AND STIMULATION

(Record the Process used, No. of Qts. or Gals. used, interval treated or shot.)

No Production

Result of Production Stimulation.....

.....Depth Cleaned Out.....

RECORD OF DRILL-STEM AND SPECIAL T[illegible]

If drill-stem or other special tests or deviation surveys were made, submit report on separate sheet and attach hereto

TOOLS USED

Rotary tools were used from 0 feet to 12,020 feet, and from ..... feet to ..... feet.

Cable tools were used from ..... feet to ..... feet, and from ..... feet to ..... feet.

PRODUCTION

Put to Producing No production, 19.....

OIL WELL: The production during the first 24 hours was None barrels of liquid of which ..... % was was oil; ..... % was emulsion; ..... % water; and ..... % was sediment. A.P.I. Gravity.....

GAS WELL: The production during the first 24 hours was ..... M.C.F. plus ..... barrels of liquid Hydrocarbon. Shut in Pressure ..... lbs.

Length of Time Shut in.....

PLEASE INDICATE BELOW FORMATION TOPS (IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE):

Southeastern New Mexico		Northwestern New Mexico		Northwestern New Mexico	
T. Anhy	1810	T. Devonian	12,002	T. Ojo Alamo	
T. Salt	1925	T. Silurian		T. Kirtland-Fruitland	
B. Salt		T. Montoya		T. Farmington	
T. Yates	3242	T. Simpson		T. Pictured Cliffs	
T. 7 Rivers		T. McKee		T. Menefee	
T. Queen	4400	T. Ellenburger		T. Point Lookout	
T. Grayburg	4910	T. Gr. Wash		T. Mancos	
T. San Andres	5163	T. Granite		T. Dakota	
T. Glorieta		T.		T. Morrison	
T. Drinkard		T.		T. Penn	
T. Tubbs		T.		T.	
T. Abo		T.		T.	
T. Penn		T.		T.	
T. Miss	10905	T.		T.	

FORMATION RECORD

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
0	1810		Red Beds				
1810	1925		Anhy				
1925	3080		Salt, Red Beds & Anhy				
3080	3242		Lime & Anhy				
3242	5163		Sand & Dolo				
5163	7120		Sand, Dolo & Shale				
7120	8870		Lime & Chert				
8870	9530		Sand & Shale				
9530	10541		Lime, Shale & Chert				
10541	10707		Lime & Shale				
10707	10827		Sand & Lime				
10827	10905		Shale				
10905	11215		Lime				
11215	11832		Lime & Chert				
11832	12002		Shale				
12002	12020		Lime & Dolo				

ATTACH SEPARATE SHEET IF ADDITIONAL SPACE IS NEEDED

I hereby swear or affirm that the information given herewith is a complete and correct record of the well and all work done on it so far as can be determined from available records.

December 5, 1958 (Date)

Company or Operator Ralph Lowe Address Box 832, Midland, Texas

Name [illegible] Position or Title Agent

(Form C-102)
(Revised 7/1/52)

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

MISCELLANEOUS NOTICES

Submit this notice in TRIPLICATE to the District Office, Oil Conservation Commission, before the work specified is to begin. A copy will be returned to the sender on which will be given the approval, with any modifications considered advisable, or the rejection by the Commission or agent, of the plan submitted. The plan as approved should be followed, and work should not begin until approval is obtained. See additional instructions in the Rules and Regulations of the Commission.

Indicate Nature of Notice by Checking Below

Notice of Intention to Change Plans		Notice of Intention to Temporarily Abandon Well		Notice of Intention to Drill Deeper	
Notice of Intention to Plug Well	X	Notice of Intention to Plug Back		Notice of Intention to Set Liner	
Notice of Intention to Squeeze		Notice of Intention to Acidize		Notice of Intention to Shoot (Nitro)	
Notice of Intention to Gun Perforate		Notice of Intention (Other)		Notice of Intention (Other)	

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Midland, Texas (Place) December 5, 1958 (Date)

Gentlemen:

Following is a Notice of Intention to do certain work as described below at the Ohio State

Ralph Lowe (Company or Operator) Well No. 1 in A (Unit)

NE ¼ NE ¼ (40-acre Subdivision) of Sec. 1, T. 19-S, R. 35-E, NMPM., Undesignated Pool

Lea County.

FULL DETAILS OF PROPOSED PLAN OF WORK
(FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS)

After reaching a total depth of 12,020, testing & logging with no show of oil, received verbal approval from Hobbs District office to set 25 sack plug from 12,020 to 11,954, a 20 sack plug from 10,810 to 10,780, 9000 to 8,970, and 6980 to 6930. Set 15 sack plug from 6800 to 6730 and a 30 sack plug from 4286 to 4209. Set 5 sack plug in top of surface with marker.

10 216

Approved DEC 8 1958, 19
Except as follows:

Approved
OIL CONSERVATION COMMISSION
By
Title

Ralph Lowe
Company or Operator
By
Position Agent
Send Communications regarding well to:
Name Ralph Lowe
Address Box 832, Midland, Texas

Form C-103
(Revised 3-55)

NEW MEXICO OIL CONSERVATION COMMISSION
MISCELLANEOUS REPORTS ON WELLS
(Submit to appropriate District Office as per Commission Rule 1106)

COMPANY Ralph Lowe Box 832, Midland, Texas
(Address)

LEASE Ohio State WELL NO. 1 UNIT A S 1 T 19-S R 35-E

DATE WORK PERFORMED August 4, 1958 POOL Undesignated

This is a Report of: (Check appropriate block)

- [ ] Results of Test of Casing Shut-off
- [X] Beginning Drilling Operations
- [ ] Remedial Work
- [ ] Plugging
- [ ] Other

Detailed account of work done, nature and quantity of materials used and results obtained.

August 4, 1958, this well spudded.

FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

Original Well Data:

DF Elev. _____ TD _____ PBD _____ Prod. Int. _____ Compl Date _____

Tbng. Dia _____ Tbng Depth _____ Oil String Dia _____ Oil String Depth _____

Perf Interval (s) _____

Open Hole Interval _____ Producing Formation (s) _____

RESULTS OF WORKOVER:	BEFORE	AFTER
Date of Test		
Oil Production, bbls. per day		
Gas Production, Mcf per day		
Water Production, bbls. per day		
Gas-Oil Ratio, cu. ft. per bbl.		
Gas Well Potential, Mcf per day		

Witnessed by _____ _____ (Company)

OIL CONSERVATION COMMISSION

Name _____

Title _____

Date _____

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

Name _____

Position Agent

Company _____

Form C-103
(Revised 3-55)

NEW MEXICO OIL CONSERVATION COMMISSION
MISCELLANEOUS REPORTS ON WELLS
(Submit to appropriate District Office as per Commission Rule 1106)

COMPANY Ralph Lowe Box 832, Midland, Texas
(Address)

LEASE Ohio State WELL NO. 1 UNIT A S 1 T 19-S R 35-E

DATE WORK PERFORMED 8-16-58 POOL Undesignated

This is a Report of: (Check appropriate block)

- [ ] Beginning Drilling Operations
- [ ] Plugging
- [X] Results of Test of Casing Shut-off
- [ ] Remedial Work
- [ ] Other

Detailed account of work done, nature and quantity of materials used and results obtained.

August 16, 1958, 316 ft. of 13 3/8" H40-48#ST&C casing was set and cemented with 450 sacks regular cement that circulated to surface. After setting 24 hours casing was tested with 1000# pressure for a period of one hour indicating a complete shut off had been obtained.

RECEIVED
1958 AUG 19 AM 7:53
HOBBS OFFICE OCC

FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

Original Well Data:

DF Elev. _____ TD _____ PBD _____ Prod. Int. _____ Compl Date _____

Tbng. Dia _____ Tbng Depth _____ Oil String Dia _____ Oil String Depth _____

Perf Interval (s) _____

Open Hole Interval _____ Producing Formation (s) _____

RESULTS OF WORKOVER:	BEFORE	AFTER
Date of Test		
Oil Production, bbls. per day		
Gas Production, Mcf per day		
Water Production, bbls. per day		
Gas-Oil Ratio, cu. ft. per bbl.		
Gas Well Potential, Mcf per day		

Witnessed by _____ _____ (Company)

OIL CONSERVATION COMMISSION

Name _____

Title _____

Date _____

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

Name J. M. Dawson

Position Agent

Company _____

UPLICATE

HOBBS OFFICE OCC

Form C-103
(Revised 3-55)

NEW MEXICO OIL CONSERVATION COMMISSION
MISCELLANEOUS REPORTS ON WELLS
(Submit to appropriate District Office as per Commission Rule 1106)

COMPANY Ralph Lowe Box 832, Midland, Texas
(Address)

LEASE Ohio State WELL NO. 1 UNIT A S 1 T 19S R 35-E

DATE WORK PERFORMED August 20, 1958 POOL Undesignated

This is a Report of: (Check appropriate block)

- [ ] Beginning Drilling Operations
- [ ] Plugging
- [x] Results of Test of Casing Shut-off
- [ ] Remedial Work
- [ ] Other

Detailed account of work done, nature and quantity of materials used and results obtained.

August 20, 1958 set 4275' of 9 5/8 36#J-55 ST&C casing and cemented with 2500 sacks 6% cement 1/4 Flow Seal and 200 sacks neat that circulated. After setting 24 hours casing was tested with 1200# pressure for a period of one hour indicating a complete shut off had been obtained.

FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

Original Well Data:

DF Elev. _____ TD _____ PBD _____ Prod. Int. _____ Compl Date _____

Tbng. Dia _____ Tbng Depth _____ Oil String Dia _____ Oil String Depth _____

Perf Interval (s) _____

Open Hole Interval _____ Producing Formation (s) _____

RESULTS OF WORKOVER:	BEFORE	AFTER
Date of Test		
Oil Production, bbls. per day		
Gas Production, Mcf per day		
Water Production, bbls. per day		
Gas-Oil Ratio, cu. ft. per bbl.		
Gas Well Potential, Mcf per day		

Witnessed by _____ _____ (Company)

OIL CONSERVATION COMMISSION

Name _____

Title _____

Date _____

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

Name W M Taylor

Position Agent

Company Ralph Lowe

NEW [illegible]XICO OIL CONSERVATION COMM[illegible]ION
Santa Fe, New Mexico

Form C-101
Revised (12/1/55)

NOTICE OF INTENTION TO DRILL

HOBBS OFFICE COPY

Notice must be given to the District Office of the Oil Conservation Commission and approval obtained before drilling or recompletion begins. If changes in the proposed plan are considered advisable, a copy of this notice showing such changes will be returned to the sender. Submit this notice in QUINTUPLICATE. One copy will be returned following approval. See additional instructions in Rules and Regulations of the Commission. If State Land submit 6 Copies Attach Form C-128 in triplicate to first 3 copies of form C-101

Midland, Texas (Place) July 28, 1958 (Date)

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Gentlemen:

You are hereby notified that it is our intention to commence the Drilling of a well to be known as

RALPH LOWE (Company or Operator)

Ohio State (Lease), Well No. 1, in A (Unit). The well is located 990 feet from the East line and 990 feet from the North line of Section 1, T. 19-S, R. 35-E, NMPM.

(GIVE LOCATION FROM SECTION LINE) Undesignated Pool, Lea County

If State Land the Oil and Gas Lease is No. E-2253

If patented land the owner is

Address

We propose to drill well with drilling equipment as follows: Rotary

The status of plugging bond is $10,000.00 Blanket Form 39-A-1

Drilling Contractor Lowe Drilling Company

We intend to complete this well in the Devonian formation at an approximate depth of 12,200' feet

D	C	B	A X
E	F	G	H
L	K	J	I
M	N	O	P

CASING PROGRAM

We propose to use the following strings of Casing and to cement them as indicated:

Size of Hole	Size of Casing	Weight per Foot	New or Second Hand	Depth	Sacks Cement
17	13-3/8	50	New	350	Circulate
12-1/4	9-5/8	40	New	4350	Circulate
8-3/4	5-1/2	20	New	T.D.	1000

If changes in the above plans become advisable we will notify you immediately.

ADDITIONAL INFORMATION (If recompletion give full details of proposed plan of work.)

Approved ....., 19.....
Except as follows:

OIL CONSERVATION COMMISSION

By [signature]

Sincerely yours,

RALPH LOWE (Company or Operator)

By [signature]

Position AGENT

Send Communications regarding well to

Name RALPH LOWE

Address Box # 832, Midland, Texas

NEW MEXICO OIL CONSERVATION COMMISSION

Well Location and Acreage Dedication Plat

HOBBS OFFICE OCC
1958 JUL 27 PM

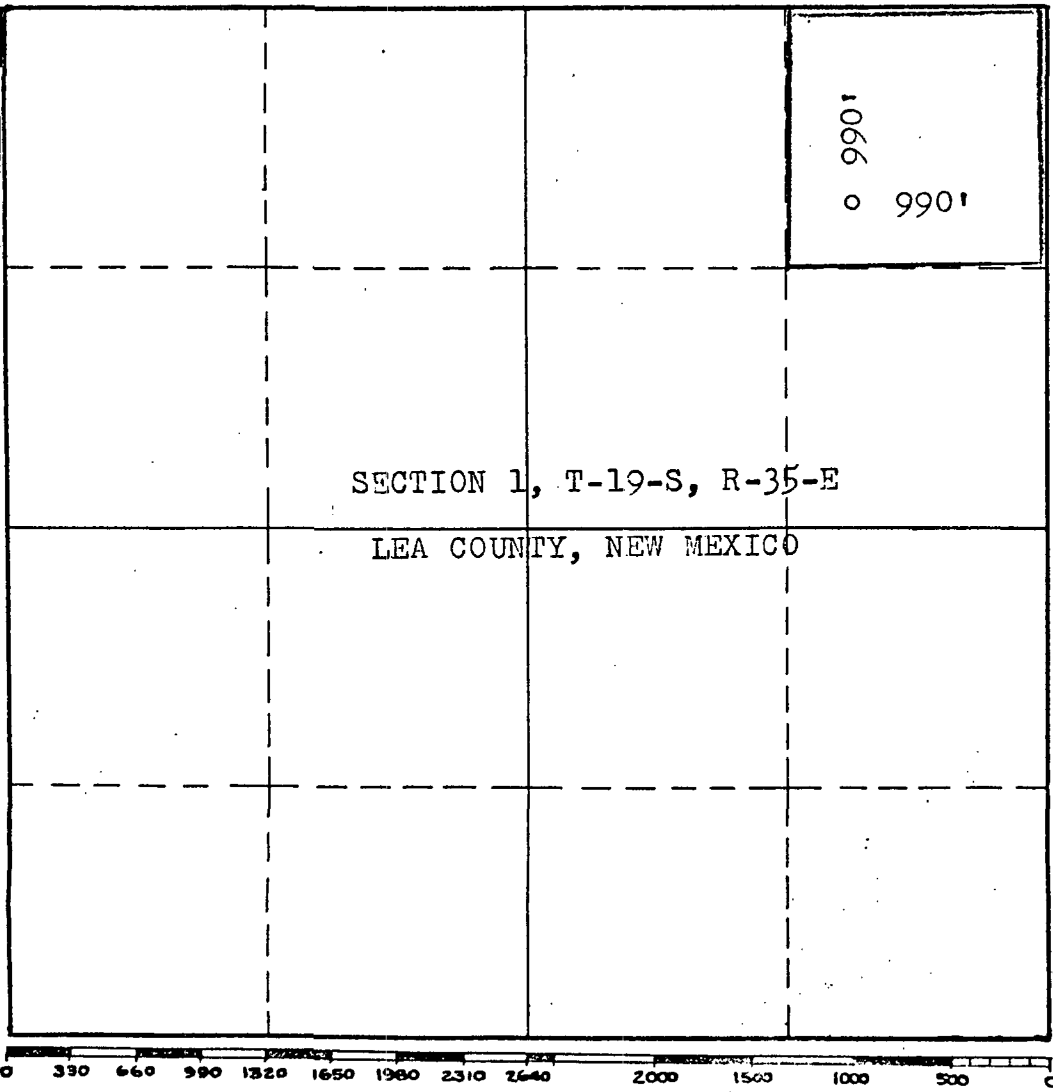
Section A. Date July 28, 1958

Operator RALPH LOWE Lease Ohio - State
Well No. 1 Unit Letter A Section 1 Township 19-S Range 35-E NMPM
Located 990 Feet From E Line, 990 Feet From North Line
County Lea G. L. Elevation 3830 Dedicated Acreage 40 Acres
Name of Producing Formation Devonian Pool Undesignated Wildcat

1. Is the Operator the only owner* in the dedicated acreage outlined on the plat below? Yes Yes No ____.
2. If the answer to question one is "no," have the interests of all the owners been consolidated by communitization agreement or otherwise? Yes ____ No ____. If answer is "yes," Type of Consolidation ____
3. If the answer to question two is "no," list all the owners and their respective interests below:

Owner	Land Description

Section. B



This is to certify that the information in Section A above is true and complete to the best of my knowledge and belief.

RALPH LOWE
(Operator)

(Representative) AGENT

Box 832 Midland, Texas.
Address

This is to certify that the well location shown on the plat in Section B was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed 7-25-58

Registered Professional Engineer and/or Land Surveyor.

Certificate No. 3__

INSTRUCTIONS FOR COMPLETION:

1. Operator shall furnish and certify to the information called for in Section A.

2. Operator shall outline the dedicated acreage for both oil and gas wells on the plat in Section B.

3. A registered professional engineer or land surveyor registered in the State of New Mexico or approved by the Commission shall show on the plat the location of the well and certify this information in the space provided.

4. All distances shown on the plat must be from the outer boundaries of Section.

5. If additional space is needed for listing owners and their respective interests as required in question 3, Section A, please use space below

* "Owner" means the person who has the right to drill into and to produce from any pool and to appropriate the production either for himself or for himself and another. (65-3-29 (e) NMSA 1953 Comp.)

W. W. STUDDERT
MEMBER
AMERICAN SOCIETY OF
CIVIL ENGINEERS

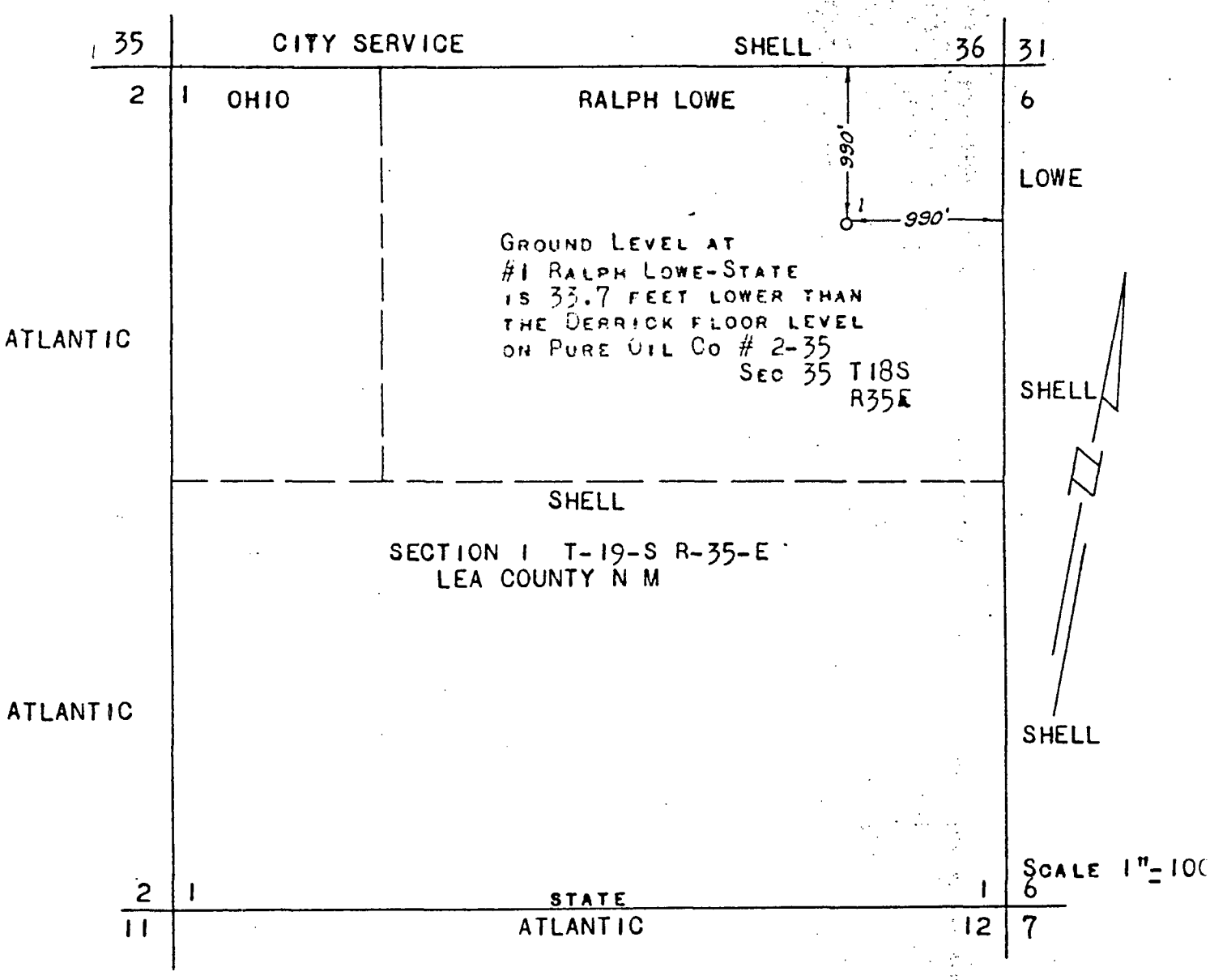
REGISTERED
& LAND SURVEYORS
ARIZONA
COLORADO
IDAHO
LOUISIANA
MONTANA
NEVADA
NEW MEXICO
OKLAHOMA
TEXAS
UTAH
WYOMING

HOBBS OFFICE OCC
1958 JUL 27 PM 1

STUDDERT ENGINEERING CO.

CIVIL ENGINEERS
221 SOUTH COLORADO
MIDLAND, TEXAS

MUTUAL
TELEPHONES 4-8682 & 2-1373



W W STUDDERT, CIVIL ENGINEER AND SURVEYOR
HEREBY CERTIFIES THAT THIS WELL LOCATION
WAS STAKED ON THE GROUND UNDER HIS SUPERVISION
AND THAT THIS PLAT IS TRUE AND CORRECT

STATE OF TEXAS
W. W. STUDDERT
118
REGISTERED
PUBLIC SURVEYOR

W W STUDDERT

JULY 21 1958

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

#2

NO. OF COPIES RECEIVED		
DISTRIBUTION		
SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-1-7

5a. Indicate Type of Lease: State [X] Fee [ ]

5. State Oil & Gas Lease No.: LG-1437

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. Unit Agreement Name:

OIL WELL [X] GAS WELL [ ] OTHER-

8. Farm or Lease Name: State "NO"

Name of Operator: Amoco Production Company

9. Well No.: 1

Address of Operator: P. O. Box 68 - Hobbs, NM 88240

10. Field and Pool, or Wildcat: Wildcat Bone Springs

Location of Well: UNIT LETTER E, 1980 FEET FROM THE North LINE AND 660 FEET FROM THE West LINE, SECTION 7 TOWNSHIP 19-S RANGE 36-E NMPM.

15. Elevation (Show whether DF, RT, GR, etc.): 3817.53' GL

12. County: Lea

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 [X]	REMEDIAL WORK [ ]	ALTERING CASING [ ]
TEMPORARILY ABANDON [ ]		COMMENCE DRILLING OPNS. [ ]	PLUG AND ABANDONMENT [ ]
PULL OR ALTER CASING [ ]	CHANGE PLANS [ ]	CASING TEST AND CEMENT JOB [ ]	
OTHER [ ]		OTHER [ ]	

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.

Propose to plug and abandon the subject well per the following:

Move in service unit and release packer set at 9,045' and pull tubing. Set CIBP at 9,100' and cap with 35' of Class C Neat cement. Spot 25 sx of Class C Neat cement from 7,400'-7,150' (Top of Bone Springs formation is at 7,320'). Spot 25 sx of Class C Neat cement from 5,400'-5,150'. Pull tubing and RIH with 3-1/8" hollow carrier casing gun. Perforate 4,200'-4,202' with 4 SPF and 90° phasing. RIH with tubing and packer. Set packer at 4,050'. Open bradenhead and establish injection rate with 10 ppg brine water. POH and RIH with tubing and cement retainer. Set retainer at 4,050' and cement squeeze with 50 sx of Class C Neat cement to tie back inside 5-5/8" casing at 4,050'. Spot 25 sx of Class C Neat cement from 2100'-1850'. Spot 25 sx Class C Neat cement from 600' to 350'. Spot 15 sx surface plug of Class C Neat cement. Erect abandonment marker and cap well. Clean location.

Note: Mud will be placed between all plugs using salt gel mud consisting of 10# brine with 25# gel/100 bbls water.

***Need to pull 5½ and plug or perforate at top of salt and circulate. All other plugs the same.

0+5 - NMOCD Hobbs
1 - J.R. Barnett Houston, Rm. 21.156
1 - F.J. Nash Houston, Rm. 4.206
1 - CMH

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

SIGNED Karla M. Herring TITLE Administrative Analyst DATE July 5, 1984

APPROVED BY Eddie Seay TITLE _____ DATE JUL 10 1984

CONDITIONS OF APPROVAL, IF ANY:

***SEE ABOVE

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

NO. OF COPIES RECEIVED		
DISTRIBUTION		
SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-1-

5a. Indicate Type of Lease
State [X] Fee [ ]

5. State Oil & Gas Lease No.
LG-1437

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. OIL WELL [X] GAS WELL [ ] OTHER-

7. Unit Agreement Name

2. Name of Operator
AMOCO PRODUCTION COMPANY

8. Farm or Lease Name
State NO

3. Address of Operator
P. O. Box 68, Hobbs, New Mexico 88240

9. Well No.
1

4. Location of Well
UNIT LETTER E , 1980 FEET FROM THE North LINE AND 660 FEET FROM THE West LINE, SECTION 7 TOWNSHIP 19-S RANGE 36-E NMPM.

10. Field and Pool, or Wildcat
Wildcat Bone Springs

15. Elevation (Show whether DF, RT, GR, etc.)
3817.53' GL

12. County
Lea

16. 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 [ ]		COMMENCE DRILLING OPNS. [ ]	PLUG AND ABANDONMENT [X]
PULL OR ALTER CASING [ ]	CHANGE PLANS [ ]	CASING TEST AND CEMENT JOB [ ]	
OTHER [ ]		OTHER [ ]	

17. 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.

MISU 8-6-84. Release packer and tubing. Ran cast iron bridge plug and set at 9100'. Capped with 35' cement and tested casing to 1000 PSI and held OK. Ran tubing and tagged cement at 9065'. Pulled tubing to 7400' and spotted 25 sx class C neat 5400'-5150'. Pulled tubing and perfed 4200'-4202' with 4 SPF. Circulate. Ran cement retainer and set at 4050'. Spotted 50 sx class C neat below retainer. Pulled tubing and perfed 2100'-2101' with 4 SPF. Circulate. Ran cement retainer and set at 1850'. Pump 425 sx class C neat and circulate 94 sx. Pulled tubing to 600' and spotted 25 sx class C neat to 350'. Pulled tubing to 150' and spotted 15 sx class C neat to surface. Cut off wellhead and installed dry hole marker.

O+5-NMOCD,H 1-J. R. Barnett, HOU 21.156 1-F. J. Nash, HOU Rm. 4.206 1-BFC

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

SIGNED Bonita Coble TITLE Administrative Analyst DATE 8-13-84

APPROVED BY Leonard R. Smith TITLE OIL & GAS INSPECTOR DATE DEC 14 1984

CONDITIONS OF APPROVAL, IF ANY:

EXHIBIT #10

INJECTION VOLUME SUMMARY

I.	1986	19,982 barrels brine
		108,965 barrels fresh water
	1987	4,350 barrels brine
	(June)	5,250 barrels fresh water
II.	1986	138,628 barrels brine
		60,781 barrels fresh water
	1987	72,315 barrels brine
	(June)	42,970 barrels fresh water

EXHIBIT #10

	Buckeye	Carlsbad	Hobbs
1982			
4th Quarter	18,455	72,745	70,690
3rd Quarter	11,095	87,570	46,462
2nd Quarter	32,145	115,825	54,944
1st Quarter	158,014	131,935	55,205
1981			
1st Quarter	87,143	98,872	76,251
2nd Quarter	72928	104,507	70,094
3rd Quarter	17442	121,754	86,186
4th Quarter	34,735	118,853	104,075
1985			
3rd Quarter	41,405	66945	41465
2nd Quarter	24,683	54895	114455
1st Quarter	20,059	51980	100,569
4th Quarter	49,292	44613	75,837
1984			
4th Quarter	51,255	54515	101,534
3rd Quarter	22,058	82930	35,874
2nd Quarter	17,671	48321	38,303
1st Quarter	12,428	38,648	79517
1983			
4th Quarter	14,120	47,625	103,771
3rd Quarter	21,081	49,460	86,146
2nd Quarter	25,798	52,590	48,186
1st Quarter	30,013	37,155	67,051

	Buckeye	Carlsbad	Hobbs
1980			
1st Quarter	119,266	74,926	
2nd Quarter	161, 011	101,135	
3rd Quarter	105, 895	74,148	28,821
4th Quarter	66, 323	127,008	13,845
1979			
1st Quarter	123,315	95,123	
2nd Quarter	101,556	67,315	
3rd Quarter	106, 354	115, 181	
4th Quarter	125, 953	92,926	
1978			
1st Quarter	52,006	181,570	
2nd Quarter	5,475	75,604	
3rd Quarter	64,790	167,337	
4th Quarter	96,761	98,178	
1977			
1st Quarter	42,032	50, 292	
2nd Quarter	40,184	72, 325	
3rd Quarter	43,353	107, 120	
4th Quarter	94,830	77,092	
1976			
1st Quarter	17,535		
2nd Quarter	20,667		
3rd Quarter	50,492	5,938	
4th Quarter	27,625	38,090	

	Buckeye	Carlsbad Holes
1975		
1st Quarter	18,556.5	
2nd Quarter	17,625	
3rd Quarter	22,973	
4th Quarter	13,629	
1974		
4th Quarter	55,218	
3rd Quarter	22,753	
2nd Quarter	16,142	
1st Quarter	15,632	
1973		
4th Quarter	16,055	
3rd Quarter	9,211	
2nd Quarter	21,968	
1st Quarter	10,707	
1972		
4th Quarter	20,527	
3rd Quarter	83,389	
2nd Quarter	109,814	
1st Quarter	129,120	
1971		
4th Quarter	90,712	
3rd Quarter	41,538	
2nd Quarter	54,563	
1st Quarter	47,545	

Buckeye Carlsbad Hobbs

1970
4th Quarter 17.924
3rd Quarter 18.054
2nd Quarter 44.079
1st Quarter 7.720

1969
4th Quarter 29.265
3rd Quarter 13.800
2nd Quarter 18.475
1st Quarter 12.702

1968
4th Quarter 20.894
3rd Quarter 23.497
2nd Quarter 30.921
1st Quarter 22.665

Pioneer - m14244
Total barrels for Drucker Brownell at Buckeye, starting at Jan. 1968 thru Dec. 1985 - 3,386,916.5 BBls. 529

United Chemicals Corp. m19264
Total barrels for Druckers Brownell at Carlsbad, starting, at July. 1976 thru Dec. 1985 - 3,103,096. BBls.

United International Inc. m-19739
Total barrels for Druckers Brownell at Hobbs, starting, at Aug. 1980 thru Dec. 1985 - 1,493,276. BBls.

EXHIBIT #11

DISCHARGE PLAN SIGNATORY REQUIREMENT

In response to Item 5-101-H, Discharge Plan Signatory Requirement, Unichem International herein submits the following:

5-101 DISCHARGE PLAN AND OTHER REQUIREMENTS:

H. (1a) For a Corporation: By a principal executive officer of at least the level of vice president, or a representative who performs similar policy-making functions for the corporation who has the authority to sign for the corporation...

Richard Brakey functions as a Vice President of Unichem International and is authorized to sign for the company in reference to the Discharge Plan Signatory Requirement. Mr. Brakey's signature is contained herein:

Richard Brakey, Vice President
Unichem International Inc.

EXHIBIT #11

TRUCKERS #1 BRINE STATION

Discharge Plan
Permit Submittal #3

December 11, 1987

UNICHEM
INTERNATIONAL

UNICHEM INTERNATIONAL

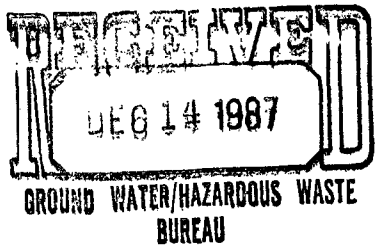
TRUCKERS #1 BRINE STATION

DISCHARGE PLAN PERMIT SUBMITTAL #3

Presented to:

STATE OF NEW MEXICO

Environmental Improvement Division



UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
HOBBS, NEW MEXICO 88240

Prepared by:

Wayne Price, Staff Engineer

UNICHEM
INTERNATIONAL

Home Office 707 N. Leech, P.O. Box 1499 / Hobbs, NM 88240 / Ph. 505/393-7751, TWX 910/986-0010

December 11, 1987 **VIA CERTIFIED MAIL: P 241 450 313**

John Parker, Water Resource Specialist
Ground Water Section
State of New Mexico
Environmental Improvement Division
P.O. Box 968, Runnels Building
Santa Fe, NM 87504-0968

SUBJECT: Truckers #1 Brine Station - Hobbs, New Mexico
Discharge Plan Submittal #3

Dear Mr. Parker:

The information contained herein is provided in response to the comments and information requests outlined in your letter of 2 November 1987.

Comment No. 1:

The Discharge Plan Signatory Requirement (Exhibit 11) lacks the certification: "I certify under penalty of law..." which should precede signature (5-101.H.2.).

Response:

Please refer to Exhibit #1, which represents the amended Discharge Plan Signatory Requirement in compliance with 5-101.H.2.

Comment No. 2:

The number of wells within the area of review and the status of these wells is difficult to determine for the Truckers #1 Brine Station. There appears to be more than two wells listed in Exhibit 8; however, the penciled-in legend at the top of the page states that the two wells are listed twice, even though the location for at least one of the wells is different. Please clarify (5-203.A.).

Response:

Please refer to Exhibit #2 for clarification of the actual wells and well locations within the area of review. The documenting information, as well as

the accompanying plat, has been provided by Mr. Delbert W. Nelson, District II Supervisor with the State Engineer's Office in Roswell.

Comment No. 3:

In order to determine the existence of possible conduits for fluid movement, an integral aspect of the Part V MIT requirements, Unichem International must commit to performing a cement bond log at some point during the five-year renewal period (5-204.B.2. and 5-205.A.4.b.).

Response:

This requirement has been noted and compliance agreed to. A cement bond log will be performed at some point during the five-year renewal period for Truckers #1.

Comment No. 4:

Unichem International needs to make a commitment to notify this office "prior to commencement of drilling, cementing and casing, well logging, mechanical integrity tests and any other well workover..." (5-205.A.5.).

Response:

Unichem International will notify the EID's office prior to any drilling, cementing and casing, well logging, mechanical integrity tests and any other well workover as required in Section 5-205.A.5. Per my telephone conversation with you, emergency work will be reported to the EID's office by telephone at the earliest possible time.

Comment No. 5:

Please provide a comparison of fracture pressure for salt at injection interval (approximately 2,100 feet) with the down-hole pressure resulting from the maximum operating pressure (300 psi for Truckers #1, 450 psi for Truckers #2) (5-206.A.1.).

Response:

Please refer to Exhibit #3. Steve Reed, Hydrologist with Reed & Associates, Inc., has prepared the response for this comment.

Comment No. 6:

Please provide a letter of authorization for Wayne Price so as to comply with report signatory requirements (5-208.C.1.).

Response:

Wayne Price is the Staff Engineer working for Unichem International and has

been duly authorized to gather and prepare any and all information necessary to provide compliance with Part V of the EID's Water Quality Control Commission (WQCC) Regulations for Truckers #1 Brine Station. He has full responsibility for coordinating all efforts for the purposes specified herein.

Richard Brakey, Vice President
Unichem International Inc.

Comment No. 7:

Unichem International needs to submit a plugging and abandonment plan for our review. This plan should also include decommissioning of surface facilities. Copies of the blanket plugging/surety bonds submitted for Truckers #1 and #2 (Exhibits 6 and 3 respectively) have been forwarded to our Legal Bureau for review. Please submit documentation that demonstrates the $50,000 sum of each bond is adequate to properly plug and abandon the brine wells (5-209.A.).

Response:

The following information represents a detailed breakdown on the cost that would be incurred by Unichem International if the brine well required plugging and removal of all associated equipment. Also included is an estimate for the provision of soil removal (if required); however, the cost involved in the event of ground water contamination has not been included.

DETAILED ESTIMATE

Oilfield service unit (pulling unit): --pull tubing; re-enter hole and set bridge plug; cement pump truck (stand-by time required - 1/2 day)	$ 750.00*
Oilfield service unit (pulling unit): --re-pull tubing; re-enter hole and set bridge plug near surface (if required); cement pump truck (stand-by time required - 1/2 day)	$ 750.00*
Oilfield service unit (pulling unit): --pull remaining tubing; dismantle well head; set P&A marker (1/2 day time required)	$ 750.00*

*The above prices were quoted by X-Pert Well Service Company located in Hobbs, New Mexico.

DETAILED ESTIMATE (Continuation...)

Two 7-5/8" bridge plugs at $1,500	$ 3,000.00*

*Price quoted by Packer Sales & Rental located in Hobbs, New Mexico.

Set two 200' cement plugs above bridge plugs using Class C neat cement (includes cement cost, time and labor for pump truck and driver	$ 1,958.00*

*Price quoted by Dowell-Schlumberger located in Hobbs, New Mexico.

Consulting engineer at $100/hour (8 hours)	$ 800.00

Remove and relocate the following a total distance of 20 miles:

--two 1,000 bbl tanks and three 400 bbl tanks	$ 2,500.00
--300' miscellaneous pipes and valves	$ 100.00
--one pump and house	$ 250.00
--miscellaneous electrical conduit and wire	$ 350.00
--three-phase power service (power company)	N/C
--two concrete unloading pads	$ 1,500.00

Remove 5% top soil:

--300' X 300' X .05 = 4,500 ft3 or 166 yards @ $10/yard	$ 1,666.00
--dump truck and loader (2 days @ $80/hour)	$ 1,280.00
TOTAL ESTIMATED COST:	**$ 15,654.00****

**Unless specified as a quote, all figures listed are in accordance with the 1987 National Construction Estimates.

Please note that the average P&A cost experienced by Arco Oil & Gas in Hobbs, New Mexico, has been approximately $5,000 for shallow wells (0'-3,000'); the approximate cost experienced by Chevron USA Inc., also located in Hobbs, has been in the range of $10,000-$20,000. Therefore, the figures provided for the detailed breakdown reflect a worst case condition scenario.

Comment No. 8:

Maps submitted for Truckers #1 and #2 depicting area of review lack reference

scale. Please submit maps including scales and with the 1/4 mile area of review drawn in (5-210.B.2.).

Response:

Please refer to Exhibit #4 for the map including the scale and 1/4-mile area of review. For reference purposes, the map and scale are directly proportional in size.

Comment No. 9:

Please provide maps showing vertical and horizontal limits of all ground water having less than 10,000 mg/l TDS (5-210.B.5.). Also, we need water quality information for water-bearing formations penetrated by brine well (3-106.C.3.).

Response:

Please refer to Exhibit #3. Steve Reed, Hydrologist with Reed & Associates, Inc., has prepared the response for this comment.

Comment No. 10:

Please provide generalized and specific maps and cross-sections depicting both the regional and site-specific geology (5-210.B.6. and 7.).

Response: Please refer to Exhibit #3. Steve Reed, Hydrologist with Reed & Associates, Inc., has prepared the response for this comment.

Comment No. 11:

Please provide a detailed contingency plan which at a minimum addresses: surface spills of brine and loss of mechanical integrity in the injection well (5.210.B.15.).

Response:

Unichem International's in-house contingency plan to address surface spills of brine and loss of mechanical integrity in the injection well includes the following:

Surface Spills: Surface spills will be immediately removed from the area and the cause of the spill remedied. The brine station is designed to minimize any such spills and the issue has already been addressed by the design factor.

To enhance protection of the area involved, the station is monitored on a daily basis. In the event of a surface spill, the station will be shut down to prevent any further spills and/or leaks leading to movement of fluids into the ground water. Unichem will notify the

EID and comply with all rules and regulations set forth by the WQCC for such an event.

As previously indicated, Unichem will perform clean-up of the affected area in a timely fashion per the EID's recommendations.

Mechanical Integrity: Unichem International maintains routine pressure and flow information in order to determine the potential loss of mechanical integrity. Additionally, routine mechanical integrity tests are performed to determine loss.

In the event that loss of mechanical integrity occurs, the well operations will be shut down immediately and the EID notified accordingly. The primary concern in the event of mechanical integrity loss will be the removal of pressure at the well head to prevent the potential of migration of well fluids into the ground water. The well will then be evaluated and subsequent repair(s) performed as necessary.

Unichem International will comply with the rules and regulations applicable to the movement of fluid into the ground water and will also comply with recommendations from the EID with respect to clean-up procedures as deemed necessary.

If you have any questions regarding the responses provided herein or the accompanying material, please do not hesitate to contact me.

Sincerely,

UNICHEM INTERNATIONAL INC.

Wayne Price
Staff Engineer

LWP:mms

Enclosure

EXHIBIT #1

EXHIBIT #1

AMENDED DISCHARGE PLAN SIGNATORY REQUIREMENT

In response to Item 5-101-H, Discharge Plan Signatory Requirement, Unichem International submits the following:

5-101 DISCHARGE PLAN AND OTHER REQUIREMENTS:

H. (1a) For a Corporation: By a principal executive officer of at least the level of vice president, or a representative who performs similar policy-making functions for the corporation who has the authority to sign for the corporation...

Richard Brakey functions as a Vice President of Unichem International and is authorized to sign for the company in reference to the Discharge Plan Signatory Requirement. Mr. Brakey's signature is contained herein:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Richard Brakey, Vice President
Unichem International Inc.

STATE OF NEW MEXICO

STATE ENGINEER OFFICE

ROSWELL

S. E. REYNOLDS
STATE ENGINEER

DISTRICT II
909 E. 2ND STREET
P.O. BOX 1717
ROSWELL, NEW MEXICO 88201

December 1, 1987

EXHIBIT #2

Files: L-3945; L-5434

EXHIBIT #2 (TRUCKERS #1)

Unichem International
P. O. Box 1499
Hobbs, NM 88240

Attention: Wayne Price

Gentlemen:

Our records indicate that well L-3945, permitted for the SW¼NE¼NE¼ of Section 1, Township 19 South, Range 35 East, was drilled July 29, 1958 and plugged according to plugging record filed August 24, 1959. Permit was granted June 21, 1963 to re-enter and use this well for drilling operation by T & T Incorporation under file No. L-3945 (2) and all authorized use under this filing terminated June 21, 1964.

Our records also indicate that well L-5434 is located in the SW¼NE¼NE¼ and well L-5434-S in the SE¼NW¼NE¼, both in Section 1, Township 19 South, Range 35 East. Attached is plat showing locations of these two wells.

Yours very truly,

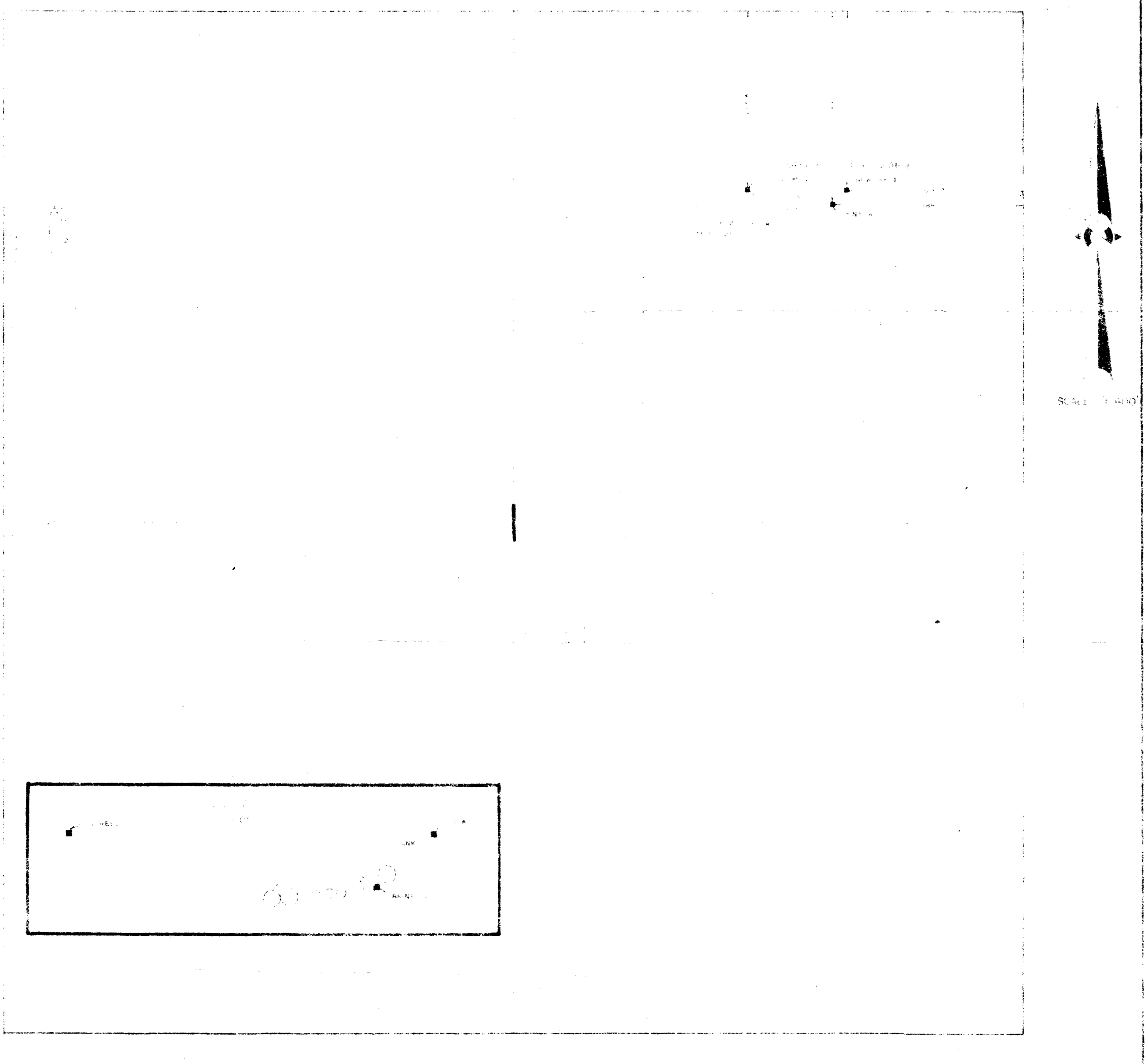
Delbert W. Nelson
District II Supervisor

DWN/fh
Encl.
cc: Santa Fe

PLAT OF UNDERGROUND WATER PROJECT TO ACCOMPANY ENGINEER'S REPORT ON (AMENDED)

APPLICATION TO APPROPRIATE UNDERGROUND WATER OF THE LEA COUNTY SHALLOW GROUND WATER BASIN

PERMIT NO. L-5434 & L-5434 ENLARGED — PIONEER WATER CO., INC. — PERMITTEE



AREAS UPON WHICH WATER HAS BEEN BENEFICIALLY APPLIED UNDER THE PROVISIONS OF THE PERMIT ARE DESCRIBED AS FOLLOWS:

SUBDIVISION	SEC	TWP	RGE	ACRES
[illegible]	[illegible]	19 S	35 E	

DURING THE 12 MONTH PERIOD FROM JULY 1, 19[illegible] TO JULY 1, 19[illegible] A TOTAL OF 3.5 ACRE FEET WERE DIVERTED AND APPLIED TO BENEFICIAL USE FOR PROSPECTING, MINING OR DRILLING OPERATIONS TO DISCOVER OR DEVELOPE NATURAL RESOURCES WITHIN AN AREA OF APPOXIMATE RADIUS OF 50 MILES FROM THE WELL.

I, JOHN W. WEST, HEREBY CERTIFY THAT I AM THE REGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR WHO PREPARED THE ABOVE MAP AND STATEMENT FROM FIELD NOTES OF ACTUAL SURVEYS CONDUCTED ON MAY 20 [illegible], 19[illegible] BY ME OR UNDER MY DIRECTION, AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

John W. West
JOHN W. WEST, NPE. & L.S.

LICENSE NO. 676
DATE 9-26-80

SEAL

FILE NO. L-5434 & L-5434 ENLARGED

TWP. 19 S RGE. 35 E SEC. 1

Amended L-5434 & L-5434-Enl. 19 S. 35 E. Sec. 1

friction loss
142, 27
ε
1:0 mi/ft gradient

EXHIBIT #2
TRUCKERS #1 BRINE STATION
PLAT OF UNDERGROUND WATER

REED & ASSOCIATES, INC.
V. STEVE REED
Executive Vice President

December 3, 1987

Mr. Wayne Price
Unichem International
707 Leech Street
Hobbs, NM 88240-8217

EXHIBIT #3 (TRUCKERS #1)

Dear Mr. Price:

In response to a letter dated November 2, 1987 from the New Mexico Environmental Improvement Division, concerning Unichem International's brine extraction wells, the following responses are provided:

Comment No. 5:

Please provide a comparison of fracture pressure for salt at injection interval (approximately 2,100 feet) with the down-hole pressure resulting from the maximum operating pressure (300 psi for Truckers #1, 450 psi for Truckers #2) (5-206.A.1.).

Response:

The laboratory Poissan's ratio for salt is 0.25. Using the equation below, the potential downhole fracture pressure at the top of the perforations for the two wells is calculated.

$$P_f = (S - P_o)(\gamma / 1 - \gamma) + P_o$$

P_f = fracture pressure (psi) at injection face
S = overburden pressure
P_o = pore pressure
γ = Poissan's ratio = 0.25
brine gradient = 0.52 psi/ft

Truckers #1

Top of perfs = 2140
S = 1.0 x 2140
P_o = 0.46 x 2140 = 984 psi
P_f = 1369 psi

Top hole fracture pressure
= 1369 psi-(2140ft x 0.52 psi/ft)
= 256 psi

Truckers #2

Top of perfs = 2400
S = 1.0 x 2400
P_o = 0.46 x 2400 = 1104 psi
P_f = 1532 psi

Top hole fracture pressure
= 1532 psi-(2400ft x 0.52 psi/ft)
= 284 psi

EXHIBIT #3

Friction loss = 142 psi

Total top hole fracture pressure = 398 psi

Maximum injection pressure = 300 psi

Friction loss = 276 psi

Total top hole fracture pressure = 560 psi

Maximum injection pressure = 450 psi

The injection face fracture pressure is calculated at 1,369 psi for Truckers #1 and 1,532 psi for Truckers #2. The top hole fracture pressure, including friction losses at the maximum injection rate, is 398 psi for Truckers #1 and 560 psi for Truckers #2, leaving a safety factor of 98 psi for Truckers #1 and 110 psi for Truckers #2.

In actuality, salt does not behave in situ as it does in laboratory bench tests. The 0.25 Poissan's ratio calculated for a laboratory sample is the result of stress hardening when a salt core is tested in the laboratory. However, salt in situ responds to stress by plastic flow, and does not fracture. It is our opinion that the operations of the two wells will not initiate fractures in the salt beds.

Comment No. 9:

Please provide maps showing vertical and horizontal limits of all ground water having less than 10,000 mg/l TDS (5-210.B.5.). Also, we need water quality information for water-bearing formations penetrated by brine well (3-106.C.3.).

Response:

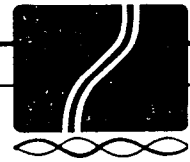
The base of the ground water with less than 10,000 total dissolved solids is shown on the attached cross sections. Ground water in the Permian rocks typically exceeds 3,000 parts per million (ppm) total dissolved solids. Ground water produced from the Ogallala in the Hobbs area contains dissolved solids less than 3,000 milligrams per liter (mg/l).

Comment No. 10:

Please provide generalized and specific maps and cross-sections depicting both the regional and site-specific geology (5-210.B.6 and 7).

Response:

Maps and cross sections showing the local geology are presented in Exhibits 1, 2, 3, and 4. **NOTE: Truckers #1 = Exhibits labeled as follows: Exhibit #3-1: Structure Contour Map; Exhibit #3-2: Cross Section Note; Exhibit #3-3: Cross Section A - A'.



Comment No. 12:

The chemical analysis of samples taken from the Trucker #2 monitor sump (Exhibit 7) indicates an exceedance of the 3-103 standards for magnesium, chloride and TDS. Please explain what has caused the violation of the standards and what plans you have to prevent further contamination.

Response:

Exhibit 7 of the Truckers #2 Brine Station submittal showed a chemical analysis of water produced from a sump that is connected to a leachate collection system beneath the brine pond. The total dissolved solids of water produced from this sump was 1,349 mg/l. Chloride concentration was 450 mg/l. Exhibit 8 shows that the brine in the pond has a total dissolved solids approaching 400,000 mg/l and the chloride concentration is in excess of 200,000 mg/l. Because of the significant difference in water quality between the brine in the pond and the water in the sump, it is our opinion that water in the sump is not derived from pond seepage. More likely, the source of the water is either a result of precipitation collecting in the sump or minor seepage of rainfall which has infiltrated around the sump.

Unichem will continue to monitor the sump on a quarterly basis and provide the EID with analytical results.

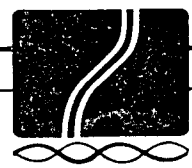
Very truly yours,

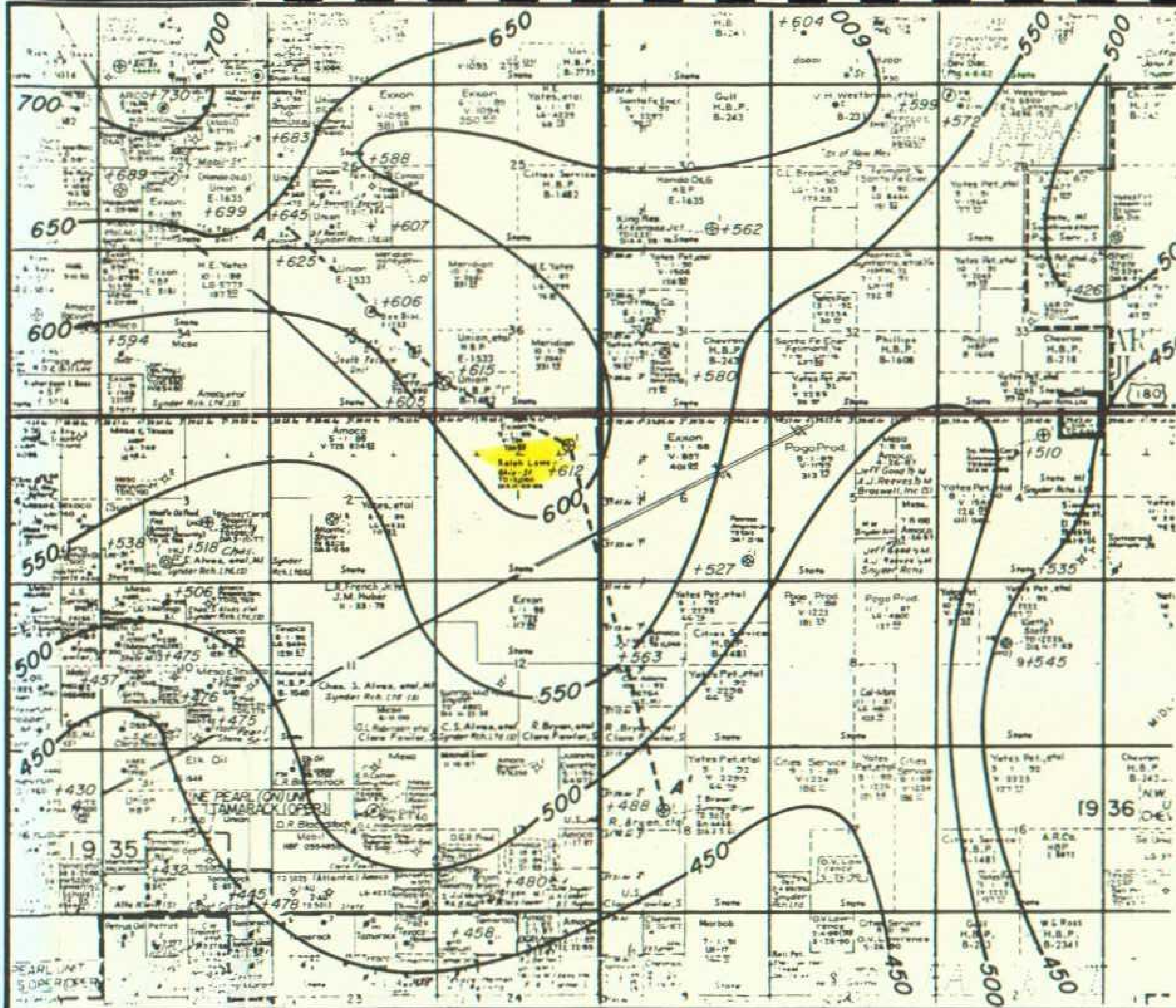
REED & ASSOCIATES, INC.

V. Steve Reed

VSR/kkm

Enclosures





SCALE
1" = 4000'

LEGEND

- • +612 ELEVATION TOP OF YATES
- A - - - A' CROSS SECTION LINE
- —450— STRUCTURE CONTOUR

EXHIBIT #3-1

LEA COUNTY, NEW MEXICO	DATE 12-3-87
UNICHEM INTERNATIONAL	REVISED
STRUCTURE CONTOUR MAP	CHECKED A.T.S.
TOP OF YATES	DRAWN BY Al Hndz.

REED & ASSOCIATES, INC.
HYDROLOGISTS & ENVIRONMENTAL CONSULTANTS
MIDLAND CORPUS CHRISTI AUSTIN

EXHIBIT #3-2

UNICHEM INTERNATIONAL
Cross Section Note

A 10,000 parts per million (ppm) line for total dissolved solids (TDS) is shown on the cross sections as being in the Dewey Lake formation. Above this line groundwater generally should have a TDS of less than 10,000 ppm. The Dewey Lake separates the Triassic Santa Rosa (Dockum group) from the Permian salt beds. According to Nicholson and Clebsch in "Geology and Ground-Water Conditions in Southern Lea County, New Mexico," Ground-Water Report 6, New Mexico Bureau of Mines and Mineral Resources, 1961, page 33, "The hydrologic significance of these red beds is not completely understood; however, it is doubtful that any wells in Lea County produce water from them. The lower limit of potable water may be somewhere within the stratigraphic interval. Further, the red beds probably retard the interchange of water between the evaporite-bearing rocks of the Permian and the sandstone aquifers of the overlying Dockum group."

Page 102 of the same report states, "Water samples from the oil-producing zones of the Paleozoic rocks of southern Lea County...are highly mineralized but range in salinity from less than 6,000 to nearly 300,000 ppm." Some instances of less than 10,000 ppm TDS are known to exist in oil producing zones in Lea County below the Dewey Lake redbeds. However, these occurrences should be considered as exceptions rather than the rule.

Analyses of waters from the Hobbs and Vacuum fields near Unichem operations are cited in Ground Water Report 6:

Township - Range	Pool Name	Source Formation	TDS
18-19S,37-38E	Hobbs	Grayburg-San Andres	21,566
17-18S,33-35E	Vacuum	Grayburg-San Andres	160,000

EXHIBIT #3-3

LEA COUNTY, NEW MEXICO	DATE 12·7·87
UNICHEM INTERNATIONAL	REVISED
CROSS SECTION A-A'	CHECKED A.T.S
	DRAWN BY AL Hernandez

Reed & Associates, Inc.
Hydrologists & Environmental Consultants
MIDLAND CORPUS CHRISTI AUSTIN

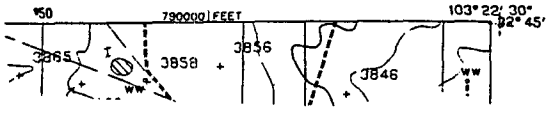
EXHIBIT #3-3
TRUCKERS #1 BRINE STATION
CROSS SECTION A - A'

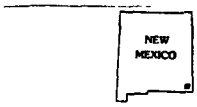
EXHIBIT #4

TRUCKERS #1 BRINE STATION

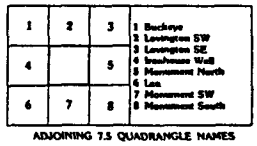
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

IRONHOUSE DRAW QUADRANGLE
NEW MEXICO–LEA CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)





QUADRANGLE LOCATION

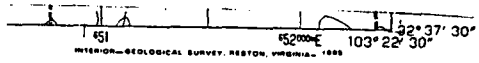


ADJOINING 7.5 QUADRANGLE NAMES

PRODUCED BY THE UNITED STATES GEOLOGICAL SURVEY
CONTROL BY ..... USGS, NOS/NOAA
COMPILED FROM AERIAL PHOTOGRAPHS TAKEN 1978
FIELD CHECKED ..... 1979. MAP EDITED 1985
PROJECTION ..... TRANSVERSE MERCATOR
GRID: 1000-METER UNIVERSAL TRANSVERSE MERCATOR ..... ZONE 13
10,000-FOOT STATE GRID TICKS ..... NEW MEXICO, EAST ZONE
UTM GRID DECLINATION ..... 0°51' EAST
1985 MAGNETIC NORTH DECLINATION ..... 9°30' EAST
VERTICAL DATUM ..... NATIONAL GEODETIC VERTICAL DATUM OF 1929
HORIZONTAL DATUM ..... 1927 NORTH AMERICAN DATUM

To place on the predicted North American Datum of 1983, move the projection lines as shown by dashed corner ticks (9 meters south and 45 meters east)

There may be private inholdings within the boundaries of any Federal and State Reservations shown on this map



INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1985

ROAD LEGEND

Improved Road .....
Unimproved Road .....
Trail .....

Interstate Route U.S. Route State Route

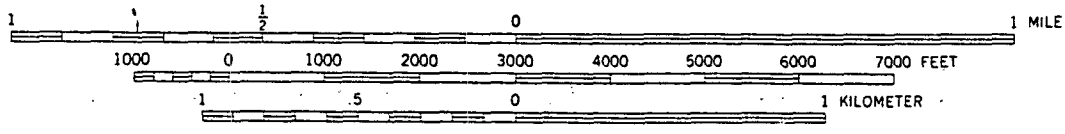
N/ 13-12

IRONHOUSE DRAW, NEW MEXICO

PROVISIONAL EDITION 1985

32103-F4-TF-024

SCALE 1:24 000



CONTOUR INTERVAL 10 FEET
SUPPLEMENTARY CONTOUR INTERVAL 5 FEET

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225
OR RESTON, VIRGINIA 22092

NOTE PLEASE NOTE THAT SCALE INDICATED ABOVE AND THE ACCOMPANYING MAP ARE DIRECTLY PROPORTIONAL IN SIZE. AS STATED AT THE TOP OF THIS SHEET, THE INFORMATION CONTAINED IN THIS EXHIBIT WAS OBTAINED FROM THE UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY.

EXHIBIT #4

EXHIBIT #4, CONTINUED

TRUCKERS #1 BRINE STATION