

**AP - 59**

**G35**  
**WORK PLAN**

**DATE:**  
**07-30-01**

OIL CONSERVATION DIV. **RICE Operating Company** OIL CONSERVATION DIV.

01 AUG -1 PM 1:12 122 West Taylor • Hobbs, New Mexico 88240  
Phone: (505)393-9174 • Fax: (505)397-1471 1:12

AP-59  
G35 Work Plan  
7-30-01

**CERTIFIED MAIL**

**RETURN RECEIPT NO. 7099 3220 0001 9928 4577**

July 30, 2001

Mr. Wayne Price  
NM Energy, Minerals, and Natural Resources Dept.  
Oil Conservation Division, Environmental Bureau  
1220 S. St. Francis Drive  
Santa Fe, NM 87504

1 R 0 332

RE: ABANDONMENT CLOSURE PLAN FOR VACUUM SWD SITE G-35  
Unit Letter G, Sec. 35, T17S, R35E NMPM  
Lea County, NM

Dear Mr. Price:

Rice Operating Company (ROC) takes this opportunity to submit the abandonment closure plan for the below-grade redwood tank and emergency overflow pit at the Vacuum Salt Water Disposal Facility G-35, located in Unit G, Sec. 35, T17S, R35E, Lea County, NM. This facility is located on State Land.

ROC is the service provider (operator) for the Vacuum Salt Water Disposal System and has no ownership of any portion of pipeline, well or facility. The Vacuum System is owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis. Replacement/closure projects of this magnitude require System Partner AFE approval and work begins as funds are received.

The Project AFE for the SWD G-35 Facility has been approved by the System Partners and work will commence at the G-35 site in August 2001. The SWD Well G-35 was plugged and abandoned on January 23, 2001, so the G-35 terminal facility will be permanently abandoned. The replacement terminal facility construction at SWD H-35 is nearly complete. When the facility at SWD H-35 is operational, the G-35 facility will be by-passed and closure work at G-35 will begin.

The Vacuum SWD Well G-35 facility is included in the ROC generic closure plan for emergency pits and below-grade redwood tanks and is the tenth ROC-operated facility to apply

under the generic plan. There is an emergency overflow pit at this facility. ROC expects to close the tank and pit area pursuant to NMOCD guidelines and the ROC generic work plan for below-grade redwood tanks. The enclosed C-103 form addresses this intention and defines the site-specific assessment for OCD guidelines. Supporting documentation is also enclosed.

As soon as the new facility at SWD H-35 is operational, the below-grade redwood tank at G-35 will be cleaned, dismantled and removed. The tank materials will be properly disposed at an approved oilfield waste facility and documentation will be included in the Final Closure Report.

ROC will schedule all major events with a 48-hour advance notice to the NMOCD. The Final Closure Report will follow at the end of the project.

Thank you for your consideration of this below grade redwood tank and emergency overflow pit closure plan.

RICE OPERATING COMPANY



Carolyn Doran Haynes  
Operations Engineer

Enclosures  
cc: LBG, DA, file

Mr. Chris Williams  
NMOCD, District I Office  
1625 N. French Drive  
Hobbs, NM 88240

Mr. Leon Anderson  
New Mexico State Land Office  
3830 N. Grimes, Suite C  
Hobbs, NM 88241

# RICE Operating Company

122 West Taylor • Hobbs, New Mexico 88240  
Phone: (505)393-9174 • Fax: (505) 397-1471

July 30, 2001

Mr. Leon Anderson  
New Mexico State Land Office  
3830 N. Grimes, Suite C  
Hobbs, NM 88240

RE: Vacuum SWD Facility H-35 Upgrade and G-35 Closure  
S/2 NE/4, Section 35-T17S-R35E  
Lea County, NM

Dear Mr. Anderson:

Rice Operating Company (ROC) appreciates opportunities to work with the New Mexico State Land Office in order to optimize and improve the operations of the salt water disposal systems of Lea County. It is our goal to keep landowners informed of situations that arise during routine operations concerning the land that the systems lease for the facility sites.


This letter is regarding the two 2.5-acre leased areas located in Unit Letters G and H, Section 35-T17S-R35E, Lea County, NM, where ROC operates the G-35 and H-35 Salt Water Disposal Wells for the Vacuum SWD System. The Leases are current.

For the Vacuum SWD System, the main terminal collection facility is located at the G-35 well site. This collection facility has served both SWD Wells G-35 and H-35. Because the SWD Well G-35 is plugged, the G-35 terminal facility site abandonment is scheduled to begin in August 2001. ROC is now completing facility construction at the SWD Well H-35 and new facility should be fully operational in early August. Once the H-35 SWD Facility is on-line, the redwood tank at G-35 will be eliminated and all equipment will be removed from the G-35 facility pad. The area will be evaluated for environmental impact and then remediated to levels designated and/or approved by the New Mexico Oil Conservation Division (NMOCD).

At the completion of the G-35 redwood tank closure, a copy of the NMOCD correspondence will be forwarded to you. If you have any questions, comments or concerns pertaining to the H-35 upgrade or G-35 abandonment, please don't hesitate to call me at the above phone number.

Sincerely,

Rice Operating Company



Carolyn Doran Haynes  
Operations Engineer  
cc LBG, DA, NMOCD (2), file

District I  
1625 N. French Dr., Hobbs, NM 87240  
District II  
811 South First, Artesia, NM 87210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

<p><b>SUNDRY NOTICES AND REPORTS ON WELLS</b> (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)</p>		<p>WELL API NO. 30-025-03033</p>
<p>1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other SWD Well <input type="checkbox"/></p>		<p>5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/></p>
<p>2. Name of Operator RICE OPERATING COMPANY</p>		<p>6. State Oil &amp; Gas Lease No.</p>
<p>3. Address of Operator 122 W. TAYLOR, HOBBS, NM 88240</p>		<p>7. Lease Name or Unit Agreement Name: VACUUM</p>
<p>4. Well Location Unit Letter <u>G</u>: <u>1986</u> feet from the <u>NORTH</u> line and <u>1982</u> feet from the <u>EAST</u> line Section <u>35</u> Township <u>17S</u> Range <u>35E</u> NMPM LEA County</p>		<p>8. Well No. G-35</p>
<p>10. Elevation (Show whether DR, RKB, RT, GR, etc.) 3899' GL; 3911' KB</p>		<p>9. Pool name or Wildcat SAN ANDRES</p>

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

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐  
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐  
PULL OR ALTER CASING ☐ MULTIPLE COMPLETION ☐

OTHER: Abandon well and facility site ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐  
COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐  
CASING TEST / CEMENT JOB ☐

OTHER: ☐

12. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Proposed work according to NMOCD approved generic closure plan for below-grade redwood tanks: Delineate site for contamination, remove redwood tanks, clean-up and abandon location pursuant to NMOCD guidelines. Work to begin early in September, 2001. All major events including boring, sampling events, will be coordinated to allow 48 hrs notice to NMOCD. SWD Well G-35 has been plugged and abandoned.

Information from the USGS groundwater database estimated depth to ground water at 50-51' and indicate closest water well to be in Unit Letter "G" of Sec. 35, T17S, R35E which is more than 200' from the facility at SWD Well G-35. Topographic maps show no indication of surface water bodies within 1000' of the G-35 facility. A site review indicated no water sources within 1000' of G-35.

Depth to GroundWater: <50' = 20; Water source within 1000' = 0; No surface water body within 1000' = 0  
Site Assessment = 20

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

SIGNATURE Carolyn Doran Haynes TITLE OPERATIONS ENGINEER DATE 7-30-01

Type or print name CAROLYN DORAN HAYNES

Telephone No. 505-393-9174

(This space for State use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

Conditions of approval, if any:

# **RICE** *Operating Company*

122 West Taylor • Hobbs, NM 88240  
Phone: (505) 393-9174 • Fax: (505) 397-1471

## **SITE PROFILE**

### **Location**

Vacuum SWD Facility G-35 is situated approximately 4.6 miles east and 1/2 mile south of Buckeye, NM. Maps of the area are included in this report.

### **Site History**

The site was used as a flow-through collection and injection facility for salt-water disposal of the Vacuum Salt Water Disposal System. The facility used one 28' diameter below-grade redwood tank as a flow-through collection vessel. There is an emergency overflow pit at this site, but any excess water automatically diverted to SWD Well H-35. A new fiberglass tank facility has been installed at the SWD Well H-35 site, which replaces the G-35 facility.

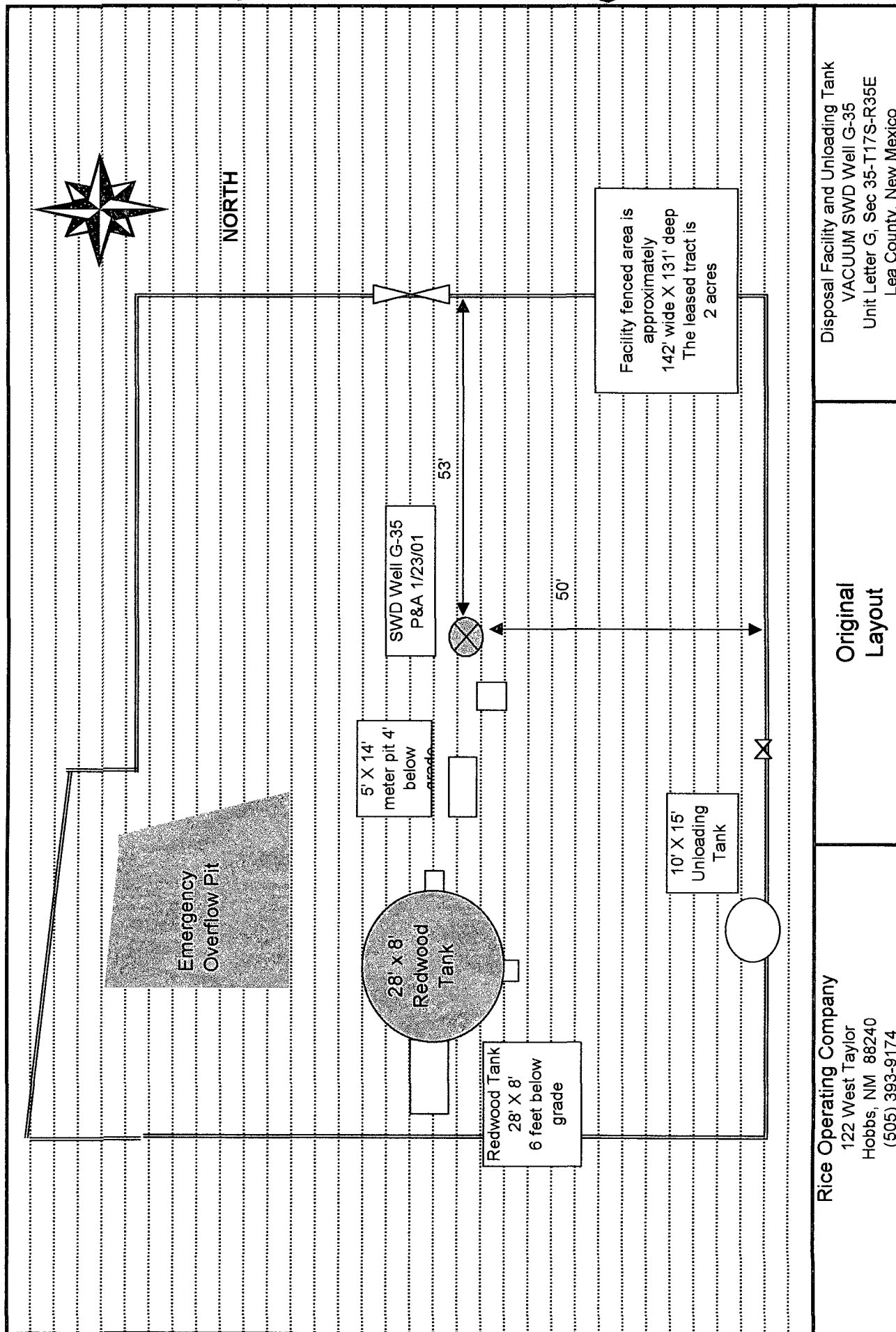
The SWD Well G-35 located at this site has been plugged and abandoned. A map of the facility is included in this report. The below-grade redwood tank will be removed and the area will be remediated pursuant to NMOCD guidelines and the generic redwood tank closure plan. This abandonment is scheduled to start September 2001 and be completed by December 2001.

### **Land Use**

This facility is on NM State Land. The 2.5-acre disposal facility site lease agreement is current and has been in effect since January 2001. The primary use of this land is oil and gas production. The topography is unremarkable.

### **Distance to Surface and Ground Water**

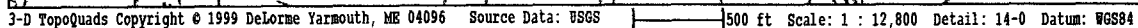
There are no domestic water wells within 200' of the facility. There are no windmills, water pumps or surface waters within 1000' of the facility. The vertical distance to groundwater at this site is estimated to be 50-56' BGS.



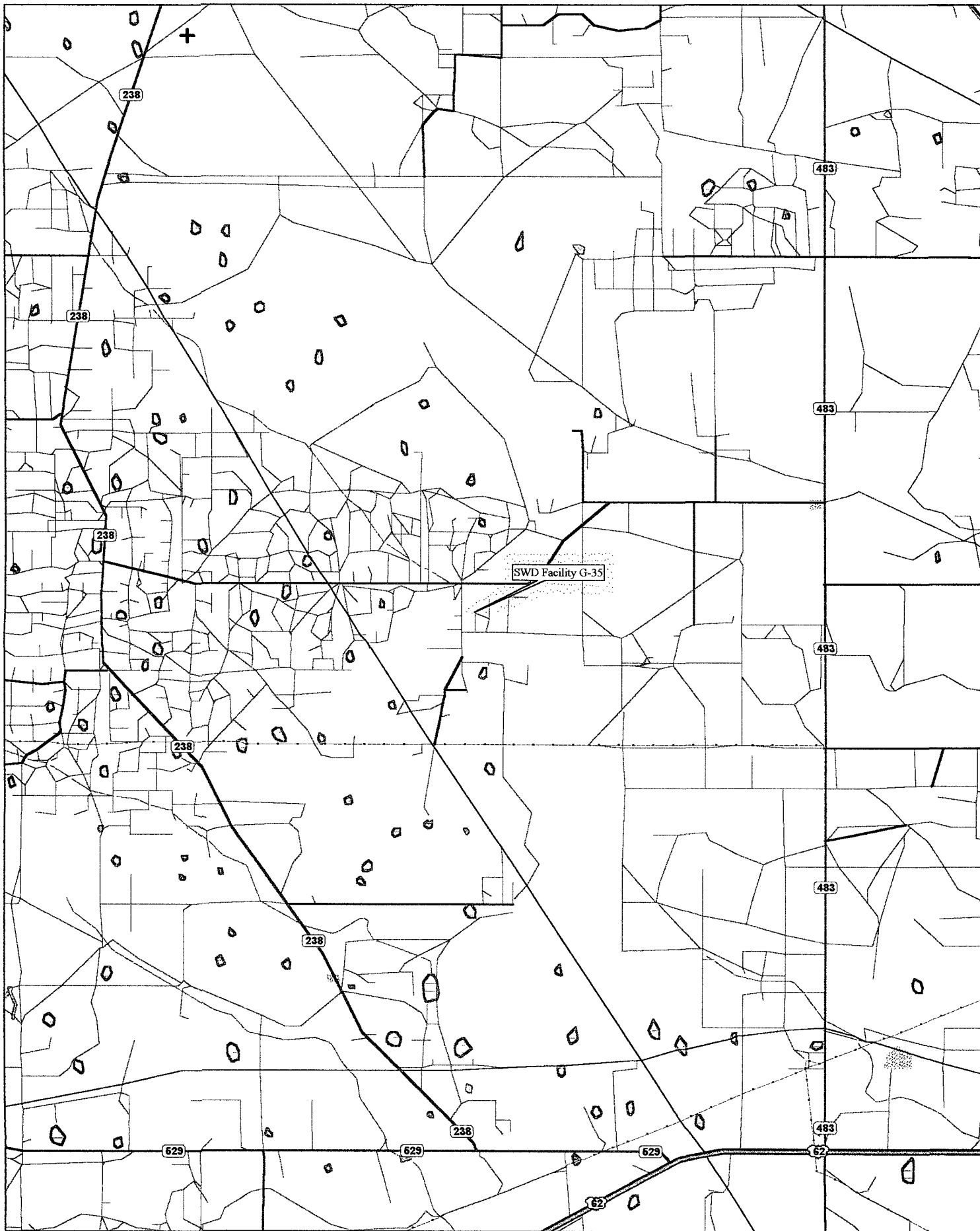
Rice Operating Company  
 122 West Taylor  
 Hobbs, NM 88240  
 (505) 393-9174

### Original Layout

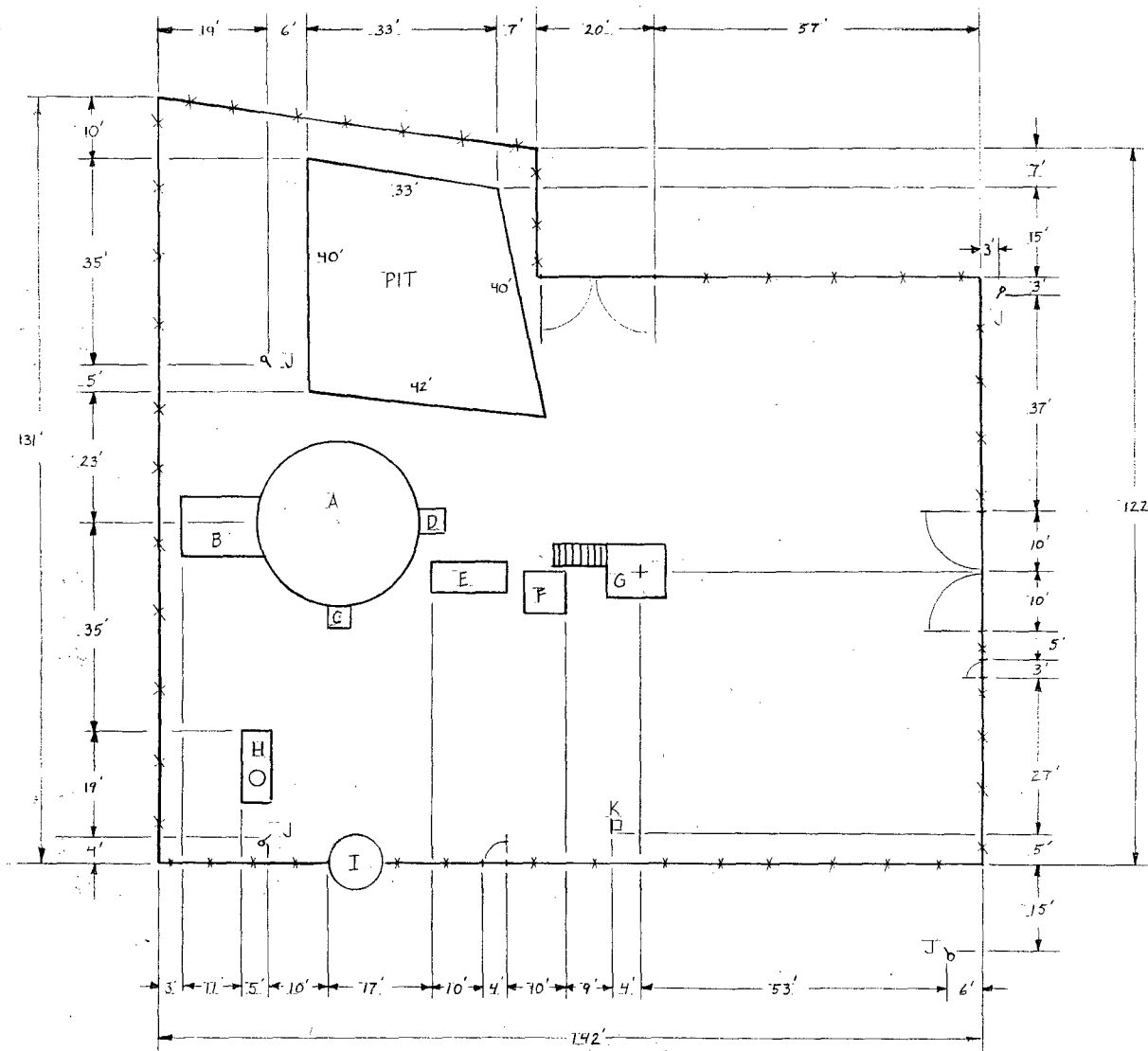
Disposal Facility and Unloading Tank  
 VACUUM SWD Well G-35  
 Unit Letter G, Sec 35-T17S-R35E  
 Lea County, New Mexico





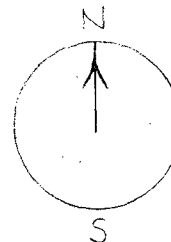


137



# LEGEND

- A 28' DIA. x 8' HIGH REDWOOD TANK 4'-6" BELOW GROUND
- B 13'x10'x4' DEEP REDWOOD TANK INLET BOX
- C 4'x4'x4' DEEP UNLOADING INLET BOX
- D 4'x4'x4' DEEP OUT LET BOX
- E 14'x5'x4' DEEP METER PIT
- F 7'x7'x4' DEEP JCT. BOX FOR REGULATING WATER TO G-35 AND F-35 WELLS
- G 9'x9' WELL CELLAR WITH 9'-6"x4' STAIR CASE
- H 5'x12'-6"x4' DEEP JCT. BOX WITH BOOT
- I 10' DIA. x 15' HIGH FIBERGLASS UNLOADING TANK W/STAIRWAY + LANDING
- J DEADMAN
- K HIGH LEVEL ALARM



SW 1/4, NE 1/4, SEC. 35, T17S, R35E  
LEA COUNTY, NM

DWN	VACUUM SWD WELL G-35	SCALE
SRT 7-17-01	SCHEMATIC OF LOCATION	1" = 20'
	RICE OPERATING COMPANY	DWG NO.
	HOBBS NEW MEXICO	

District I - (505) 393-6161  
 P. O. Box 1960  
 Hobbs, NM 88241-1960  
 District II - (505) 748-1283  
 811 S. First  
 Artesia, NM 88210  
 District III - (505) 334-6178  
 1000 Rio Brazos Road  
 Aztec, NM 87410  
 District IV - (505) 827-7131

New Mexico  
 Energy Minerals and Natural Resources Department  
 Oil Conservation Division  
 2040 South Pacheco Street  
 Santa Fe, New Mexico 87505  
 (505) 827-7131

Originated 6/27/97

Submit Original  
 Plus 1 Copy  
 to Santa Fe

PIT INVENTORY FORM

Operator: RICE OPERATING COMPANY

Address: 122 WEST TAYLOR

HOBBS NM 88240

Phone Number: (505) 393-9174

Previous Operator(s): None

Is the pit permitted: Yes ☐ No ☒

Unit Letter: G Section: 35 Township: 17S Range: 35E

County: Lea

Location Name: Vacuum Salt Water Disposal Well G-35

Number of wells to the pit: System Terminal Tanks (Varies)

Are the wells to the pit operated by one operator ☐ or multiple operators ☒

Total daily volume (in barrels) to the pit: 30

Pit Type: 1 below ground Redwood Terminal Tank

(Emergency, Production, Workover, Reserve/Drilling (greater than 6 months old), Flare, Blowdown, Separator, Dehydrator, Line Drip, BS&W/Tank Bottoms, Compressor, Pigging, Washdown, or other)

What types of wastes are accepted in the pit (Exempt, Non-exempt, Both, None): Exempt (production water)

Pit age (years): 30

Is the pit lined ☒ or unlined ☐

Type of liner (None, Synthetic, Clay): Redwood tanks on concrete pad

Is leak detection present: Yes ☒ No ☐ Observation boxes around tanks

Is the pit netted: Yes ☒ No ☐ Covered with Redwood top

Pit dimensions (LxWxD): 28" dia x 8" Ht

CERTIFICATION

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

Name: Roger Hall Title: Operations Engineer

Signature: Roger Hall Date: 10/31/97

District I - (505) 393-6161  
 P.O. Box 1980  
 Hobbs, NM 88241-1980  
 District II - (505) 748-1283  
 811 S. First  
 Artesia, NM 88210  
 District III - (505) 334-6178  
 1000 Rio Benzon Road  
 Aztec, NM 87410  
 District IV - (505) 827-7131

New Mexico  
 Energy Minerals and Natural Resources Department  
 Oil Conservation Division  
 2040 South Pacheco Street  
 Santa Fe, New Mexico 87505  
 (505) 827-7131

Originated 6/27/97

Submit Original  
 Plus 1 Copy  
 to Santa Fe

## PIT INVENTORY FORM

Operator: RICE OPERATING COMPANY

Address: 122 WEST TAYLOR  
HOBBS, NEW MEXICO 88240

Phone Number: (505) 393-9174

Previous Operator(s): None

Is the pit permitted: Yes ☒ No ☐

Unit Letter: G Section: 35 Township: 17S Range: 35E

County: Lea County

Location Name: Vacuum Salt Water Disposal System G-35

Number of wells to the pit: 1

Are the wells to the pit operated by one operator ☒ or multiple operators ☐

Total daily volume (in barrels) to the pit: None

Pit Type: Emergency  
 (Emergency, Production, Workover, Reserve/Drilling (greater than 6 months old), Flare, Blowdown, Separator, Dehydrator,  
 Line Drip, BS&W/Tank Bottoms, Compressor, Pigging, Washdown, or other)

What types of wastes are accepted in the pit (Exempt, Non-exempt, Both, None): Exempt (production water)

Pit age (years): 30

Is the pit lined ☐ or unlined ☒

Type of liner (None, Synthetic, Clay): None

Is leak detection present: Yes ☐ No ☒

Is the pit netted: Yes ☐ No ☒

Pit dimensions (LxWxD): 60' X 60' X 4'

## CERTIFICATION

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

Name: Roger Hall Title: Operations Engineer

Signature: Roger Hall Date: 10/28/97

6-35

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88211-0719

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

OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

Permit No. H-62  
(For Division Use Only)

APPLICATION FOR EXCEPTION TO DIVISION ORDER R-8952  
FOR PROTECTION OF MIGRATORY BIRDS Rule 8(b), Rule 105(b), Rule 312(h), Rule 313, or Rule 711(f)

Operator Name: Rice Engineering Corporation

Operator Address: 122 W. Taylor, Hobbs, New Mexico 88240

Lease or Facility Name Vacuum SWD System Well G-35 Location G 35 17S 35E  
Size of pit or tank: 60'x60'x4' deep, approx. 2500 bbls.  
Ut. Ltr. Sec. Twp. Rge

Operator requests exception from the requirement to screen, net or cover the pit or tank at the above-described facility.

x The pit or tank is not hazardous to migratory waterfowl. Describe completely the reason pit is non-hazardous.  
The pit is used only in emergencies such as major well remedial work.  
Normally kept empty.

- 1) If any oil or hydrocarbons should reach this facility give method and time required for removal:

Method: Vacuum truck

Time: Within 24 hours of discovery

- 2) If any oil or hydrocarbons reach the above-described facility the operator is required to notify the appropriate District Office of the OCD with 24 hours.

Operator proposes the following alternate protective measures:

CERTIFICATION BY OPERATOR: I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature S. A. Haktanir Title Division Manager Date 7-26-90

Printed Name S. A. Haktanir Telephone No. 393-9174

FOR OIL CONSERVATION DIVISION USE

Date Facility Inspected 8/7/90

Inspected by Eddie W. [Signature]

Approved by \_\_\_\_\_

Title \_\_\_\_\_

Date 8/26/90

# RICE Operating Company

122 West Taylor • Hobbs, New Mexico 88240  
Phone: (505)393-9174 • Fax: (505) 397-1471

**CERTIFIED MAIL**  
**RETURN RECEIPT NO. Z 577 009 529**

February 23, 2000

Mr. Wayne Price  
NM Energy, Minerals and Natural Resources Department  
Oil Conservation Division, Environmental Bureau  
2040 S. Pacheco  
Santa Fe, NM 87505

Re: Revision: Generic Closure Plan for Existing Pits and Below-Grade Redwood Tanks


Mr. Price:

As discussed in our telephone conversation February 22, Rice Operating Company (ROC) is submitting a further revision of the generic work plan for closing redwood tanks and emergency overflow pits that are presently inventoried in the ROC-operated SWD systems in Lea County. (ROC has no ownership of pipelines, wells, or facilities. Each system is owned by a consortium of oil producers, System Partners, who provide operating capital based on percent ownership or usage. Closure projects require AFE approval and work begins as funds are received.)

The revisions ROC proposes involve the on-site disposal of non-impacted concrete when practical and the use of a compacted clay layer rather than poly-liner for lining excavations. Also proposed is a revision to the closure procedure, adding an OCD verbal approval step in order for ROC to timely continue with installation of new surface facilities.

Closure reports for two locations, F-29 (two-year sampling of groundwater) and H-35 (closed), have been processed with the OCD. The P-25 location closure report has been submitted. Locations C-2 and L-21 are in remediation activity right now and Donna Williams has visited both sites. The C-2 site excavation will be managed with RE Environmental and the L-21 site will be managed with Whole Earth. ROC expects to be able to schedule final sampling for early March at both sites. The AFE has been approved for two additional sites in the Eunice-Monument-Eumont area with work start-up planned for early summer.

Thank you for your consideration of these revisions. If you have any questions, please call.



Carolyn Doran Haynes  
Operations Engineer

Cc KH; file; Ms. Donna Williams, OCD District I, Hobbs, NM

## Closure Plan for Below Grade Redwood Tank

1. Submit C-103 form to NMOCD along with the site-specific location, site assessment, work plan, time schedule, sampling and testing plan, etc., all pursuant to NMOCD guidelines.
2. Procure soil samples from 3' below bottom of tanks (9-11' below grade) at tank sides.
  - A. If soil samples are < 100ppm TPH and < 250ppm Chlorides, proceed to Step 4.
  - B. If soil samples are > 100ppm THP or > 250ppm Chlorides, proceed to Step 3.
3. Delineate any portion of tank site that is > 100ppm TPH or > 250ppm Chlorides with a backhoe or soil boring machine, obtaining samples for field and lab analysis at 5' intervals.
  - A. When field analysis of bored-sample determines < 100ppm TPH and < 250ppm Cl, boring will be suspended pending laboratory analysis confirmation. Proceed to Step 4.
  - B. If these parameter levels are not identified, then boring and sampling will continue to ground water. Upon reaching groundwater, the borehole will be cased and developed. Ground water samples will be procured and tested for major cations and anions, TDS and BETX levels. If ground water is found to exceed the WQCC standards, NMOCD will be notified immediately and the closure plan will move into Rule 19 procedures.
4. Write AFE to System Partners as directed by results of delineation of redwood tank site and of emergency pit (if both are at facility). Await approval and funding for site closing.
5. Move onto SWD facility site with temporary tank system. Re-route fluid flow from below grade redwood tanks into the temporary tank system. Plumb to SWD well.
6. Empty and clean redwood tanks, properly disposing of any BS & W. Excavate sides of redwood tanks to allow for working space to manipulate tank support banding. Remove redwood tanks reserving boards for proper disposal.
7. Excavate ramp into redwood tank hole. Remove and properly dispose of concrete base if impacted. If concrete is not impacted, use as fill (below plow depth) in excavation area.
8. Remove impacted soil (as practical) to eliminate hot spots; dispose per NMOCD guidelines.
9. Procure random 5-point composite bottom sample from 3' below tank bottom and random 4-point composite side sample for lab TPH, Benzene, and BTEX testing.
  - A. If <100ppm TPH; BTEX, Benzene <10ppm; <250ppm Chlorides; proceed to Step 11.
  - B. If >100ppm TPH; BTEX, Benzene >10ppm; >250ppm Chlorides; in the vadose zone but not reaching groundwater, proceed to Step 10.
10. Evaluate site for risk assessment: delineate to assess depth and horizontal extent of impact corresponding to NMOCD guidelines for site assessment value; excavate bottom and sides as practical to minimize risk; install compacted clay liner to meet or exceed 95% of a Proctor Test ASTM-D-698 with permeability (hydraulic conductivity) equal or less than  $1 \times 10^{-7}$  cm/sec for containment/isolation of impact.
11. Discuss results/risk assessment with NMOCD for verbal approval to proceed with backfill/installation of new tanks and plumbing within engineered secondary containment system.
12. Apply to NMOCD for closure of redwood tank site per NMOCD guidelines and site results.

## Closure Plan for Permitted Emergency Pits

1. Submit C-103 form to NMOCD along with the site-specific location, site assessment, work plan, time schedule, sampling and testing plan, etc., all pursuant to NMOCD guidelines.
2. Remove and properly dispose of visibly contaminated soil pursuant to NMOCD guidelines.
3. Procure soil samples from surface and 3' below excavation bottom and excavation sides.
  - A. If soil samples are < 100ppm TPH and < 250ppm Chlorides, proceed to Step 6.
  - B. If soil samples are > 100ppm THP or > 250ppm Chlorides, proceed to Step 4.
4. Delineate any portion of excavation that is > 100ppm TPH or > 250ppm Chlorides with a backhoe or soil boring machine, obtaining samples for field and lab analysis at 5' intervals.
  - A. When field analysis of bored-sample determines < 100ppm TPH and < 250ppm Cl, boring will be suspended pending laboratory analysis confirmation. Proceed to Step 5.
  - B. If these parameter levels are not identified, then boring and sampling will continue to ground water. Upon reaching groundwater, the borehole will be cased and developed. Ground water samples will be procured and tested for major cations and anions, TDS and BETX levels. If ground water is found to exceed the WQCC standards, NMOCD will be notified immediately and the closure plan will move into Rule 19 procedures.
5. Write AFE to System Partners as directed by results of delineation of redwood tank site and of emergency pit (if both are at facility). Await approval and funding for site closing
6. Remove impacted soil (as practical) to eliminate hot spots; dispose per NMOCD guidelines.
7. Procure random 5-point composite bottom sample and random 4-point composite side sample for laboratory TPH, Benzene, and BTEX testing.
  - A. If <100ppm TPH; BTEX, Benzene <10ppm; <250ppm Chlorides; proceed to Step 9.
  - B. If >100ppm TPH; BTEX, Benzene >10ppm; >250ppm Chlorides; in the vadose zone but not reaching groundwater, proceed to Step 8.
8. Evaluate site for risk assessment: delineate to assess depth and horizontal extent of impact corresponding to NMOCD guidelines for site assessment value; excavate bottom and sides as practical to minimize risk; install compacted clay liner to meet or exceed 95% of a Proctor Test ASTM-D-698 with permeability (hydraulic conductivity) equal or less than  $1 \times 10^{-7}$  cm/sec for containment/isolation of impact.
9. Discuss results/risk assessment with NMOCD for verbal approval to proceed with backfill.
10. Apply to NMOCD for closure of permitted emergency pit site per NMOCD guidelines and site results.



# NEW MEXICO STATE LAND OFFICE

## SALT WATER DISPOSAL EASEMENT

SALT WATER DISPOSAL  
EASEMENT NO. SWD-035

THIS AGREEMENT, dated this 24<sup>th</sup> day of January, 2001, made and entered into between the State of New Mexico, acting by and through the undersigned, its Commissioner of Public Lands, hereinafter called the grantor, and Rice Operating Company, of 122 West Taylor, Hobbs, New Mexico 88240, hereinafter called the grantee,

WITNESSETH:

That, whereas, the said grantee has filed in the Land Office an application for salt water disposal easement and has tendered the sum of \$500.00, together with the sum of \$30.00 application fee;

NOW, THEREFORE, in consideration of the foregoing tender, receipt of which is acknowledged, and the covenants herein, grantor does grant to the grantee a salt water disposal easement for the sole and only purpose of underground disposal of salt water produced in connection with oil and gas operations, together with the right to make such reasonable use of the land as may be necessary to dispose of said salt water. Said easement shall cover the following described lands:

INSTITUTION	SECTION	TOWNSHIP	RANGE	SUBDIVISION	ACRES
C.S.	35	17S	35E	Portion Within SW $\frac{1}{4}$ NE $\frac{1}{4}$	2.50

TO HAVE AND TO HOLD said lands and privileges hereunder for a term of FIVE years from the date first above written, subject to all terms and conditions hereinafter set forth:

1. Grantee shall pay the grantor the sum of \$500.00 annually, in advance.

2. With the consent of the grantor and payment of a fee of \$30.00, the grantee may surrender or relinquish this salt water disposal easement to the grantor; provided, however, that this surrender clause shall become absolutely inoperative immediately and concurrently with the filing of any suit in any court or law or equity by the grantor or grantee or any assignee to enforce any of the terms of this salt water disposal easement.

3. The grantee, with the prior written consent of the grantor, may assign his salt water disposal easement in whole only. Upon approval of the assignment, in writing, by the grantor, the grantee shall stand relieved from all obligations to the grantor with respect to the lands embraced in the assignment, and the grantor shall likewise be relieved from all obligations to the assignor as to such tracts, and the assignee shall succeed to all of the rights and privileges of the assignor with respect to such tracts and shall be held to have assumed all of the duties and obligations of the assignor to the grantor as to such tracts.

4. The grantor may cancel this salt water disposal easement for non-payment of annual consideration or for violation of any of the terms and covenants hereof; provided, however, that before any such cancellation shall be made, the grantor must mail to the grantee or assignee, by registered mail, addressed to the post office address of such grantee or assignee, shown by the records, a thirty-day notice of intention to cancel said salt water disposal easement, specifying the default for which the salt water disposal easement is subject to cancellation. No proof of receipt of notice shall be necessary and thirty days after such mailing, the grantor may enter cancellation unless the grantee shall have sooner remedied the default.

5. The grantee shall furnish copies of records and such reports and plats of his operations, including any and all data relating to geological formations as the grantor may reasonably deem necessary to his administration of the lands.

6. Grantee may make or place such improvements and equipment upon the land as may reasonably be necessary to dispose of salt water, and upon termination of this salt water disposal easement for any reason, grantee may remove such improvements and equipment as can be removed without material injury to the premises; provided, however, that all sums due the grantor have been paid and that such removal is accomplished within one year of the termination date or before such earlier date as the grantor may set upon thirty days written notice to the grantee. All improvements and equipment remaining upon the premises after the removal date, as set in accordance with this paragraph, shall be forfeited to the grantor without compensation. All pipelines constructed hereunder shall be buried below plow depth.

7. This salt water disposal easement is made subject to all the provisions and requirements applicable thereto which are to be found in various acts of the legislature of New Mexico and the rules of the Commissioner of Public Lands of the State of New Mexico, the same as though they were fully set forth herein, and said laws and rules, so far as applicable to this salt water disposal easement, are to be taken as a part hereof.

8. All the obligations, covenants, agreements, rights and privileges of this salt water disposal easement shall extend to and be binding and inure to the benefit of the lawful and recognized assigns or successors in interest of the parties hereto.

9. Grantee shall post with grantor a bond or undertaking in an amount required by grantor in favor of the owner of improvements lawfully located upon the lands herein to secure payment of damage, if any, done to such improvements by reason of grantee's operations.

10. Payment of all sums due hereunder shall be made at the office of the Commissioner of Public Lands, 310 Old Santa Fe Trail, P. O. Box 1148, Santa Fe, New Mexico 87504-1148.

11. Grantee, including his heirs, assigns, agents, and contractors shall at their own expense fully comply with all laws, regulations, rules, ordinances, and requirements of the city, county, state, federal authorities and agencies, in all matters and things affecting the premises and operations thereon which may be enacted or promulgated under the governmental police powers pertaining to public health and welfare, including but not limited to conservation, sanitation, aesthetics, pollution, cultural properties, fire, and ecology. Such agencies are not to be deemed third party beneficiaries hereunder; however, this clause is enforceable by the grantor as herein provided or as otherwise permitted by law.

12. Grantee shall save and hold harmless, indemnify and defend the State of New Mexico, the Commissioner of Public Lands, and his agent or agents, in their official and individual capacities, of and from any and all liability claims, losses, or damages arising out of or alleged to arise out of or indirectly connected with the operations of grantee hereunder, off or on the herein above described lands, or the presence on said lands of any agent, contractor or sub-contractor of grantee.

AFFIRMATION OF GEOLOGIC, ENGINEERING & HYDROLOGIC INVESTIGATION: I hereby affirm that the available geologic and engineering data have been examined and no evidence has been found of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

IN WITNESS WHEREOF, the State of New Mexico has hereunto signed and caused its name to be signed by its Commissioner of Public Lands, thereunto duly authorized with the seal of his office affixed, and the grantee has signed this agreement to be effective the day and year above written.

STATE OF NEW MEXICO

BY: Ray Powell  
RAY POWELL, M.S., D.V.M.  
COMMISSIONER OF PUBLIC LANDS

Zilla Porter Padilla  
Director

Trenedy S. Grovey  
GRANTEE

(PERSONAL ACKNOWLEDGMENT)

STATE OF \_\_\_\_\_ )  
 ) ss.  
COUNTY OF \_\_\_\_\_ )

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by \_\_\_\_\_.

(ACKNOWLEDGMENT BY ATTORNEY-IN-FACT)

STATE OF \_\_\_\_\_ )  
 ) ss.  
COUNTY OF \_\_\_\_\_ )

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, as attorney-in-fact on behalf of \_\_\_\_\_.

(ACKNOWLEDGMENT BY CORPORATION)

STATE OF NEW MEXICO )  
 ) ss.  
COUNTY OF LEA )

The foregoing instrument was acknowledged before me this 23RD day of JANUARY, 2001, by TRENEDY S. GROVEY, GENERAL MANAGER  
(NAME) (TITLE)  
of RICE OPERATING COMPANY.  
(CORPORATION)

My Commission Expires: FEB. 16, 2002

Notary Public: Jo Ann Souell



# RICE Operating Company

122 West Taylor • Hobbs, New Mexico 88240  
Phone: (505)393-9174 • Fax: (505) 397-1471

May 9, 2001

Mr. Leon Anderson  
New Mexico State Land Office  
3830 N. Grimes, Suite C  
Hobbs, NM 88240

RE: Vacuum SWD Facility H-35 Upgrade and G-35 Closure  
S/2 NE/4, Section 35-T17S-R35E  
Lea County, NM

Dear Mr. Anderson:

Rice Operating Company (ROC) appreciates opportunities to work with the New Mexico State Land Office in order to optimize and improve the operations of the salt water disposal systems of Lea County. It is our goal to keep landowners informed of situations that arise during routine operations concerning the land that the systems lease for the facility sites.

This letter is regarding the two 2.5-acre leased areas located in Unit Letters G and H, Section 35-T17S-R35E, Lea County, NM, where ROC operates the G-35 and H-35 Salt Water Disposal Wells for the Vacuum SWD System. The Leases are current.

For the Vacuum SWD System, the main terminal collection facility is located at the G-35 well site. This collection facility has served both SWD Wells G-35 and H-35. Because ROC has abandoned the SWD Well G-35, the G-35 terminal facility site is scheduled to be cleared before March 2002. ROC must first set facility equipment within secondary containment at the SWD Well H-35, which presently has no collection vessels. When the H-35 facility upgrade is operational, the redwood tank at G-35 will be eliminated and all equipment will be removed from the facility pad. The area will be evaluated for environmental impact and then remediated to levels designated and/or approved by the New Mexico Oil Conservation Division (NMOCD).

At the start and completion of the G-35 redwood tank closure, a copy of the NMOCD correspondence will be forwarded to you. If you have any questions, comments or concerns pertaining to the H-35 upgrade, please don't hesitate to call me at the above phone number.

Sincerely,

Rice Operating Company



Carolyn Doran Haynes  
Operations Engineer  
cc LBG, file

**Price, Wayne, EMNRD**

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**From:** Price, Wayne, EMNRD  
**Sent:** Thursday, April 27, 2006 3:57 PM  
**To:** 'Randall Hicks'  
**Cc:** 'Kristin Pope'; 'Dale Littlejohn'  
**Subject:** RE: G-35-F-35 SWD

Yes, approved!

---

**From:** Randall Hicks [mailto:r@rthicksconsult.com]  
**Sent:** Thursday, April 27, 2006 2:53 PM  
**To:** Price, Wayne, EMNRD  
**Cc:** 'Kristin Pope'; 'Dale Littlejohn'  
**Subject:** G-35-F-35 SWD

Wayne

This email confirms our discussion of the minor modification to the Abatement Plan for the above-referenced sites. You verbally agreed to our proposal to install 2 monitoring wells: one east of F-35 (F-2 on the attached map) and one east of G-35 (G-2). We plan to install these wells during the second week in May. After we measure water levels in the area and verify ground water flow direction and evaluate the laboratory results of sampling, we will install the next three monitor wells. We believe that two of the next three will be southeast of the release sites (F-3 and G-3), but we wish to confirm the flow direction and chemistry before we put in the holes. We will provide a brief report to NMOCD with the data and our proposed locations for the next three holes, which we will probably schedule for drilling in July or August.

Does this accurately reflect our conversation of today and at the hearing of last week?

Randy Hicks  
505-266-5004  
cell: 505-238-9515

Confidentiality Notice: This electronic communication and any accompanying documents contain information belonging to the sender, which may be confidential, legally privileged, and exempt from disclosure under applicable law. The information is intended only for the use of the individual or entity to which it is addressed, as indicated above. If you are not the intended recipient, any disclosure, copying, distribution, or action taken in reliance on the information contained in this electronic communication is strictly prohibited. If you have received this transmission in error, please notify us immediately by telephone and return the original message to us at the address listed above. Thank you.

4/28/2006

**Price, Wayne, EMNRD**

---

**From:** Price, Wayne, EMNRD  
**Sent:** Friday, April 28, 2006 11:11 AM  
**To:** 'Katie Lee'  
**Cc:** Randall Hicks; 'Dale Littlejohn'; Kristin Pope  
**Subject:** RE: Vacuum: G-35 & F-35 NMOCD Case #1R0330 & 1R0332

Approved!

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

From: Katie Lee [mailto:katie@rthicksconsult.com]  
Sent: Friday, April 14, 2006 4:32 PM  
To: Price, Wayne, EMNRD  
Cc: Randall Hicks; 'Dale Littlejohn'; Kristin Pope  
Subject: Vacuum: G-35 & F-35 NMOCD Case #1R0330 & 1R0332

Dear Mr. Price,

Attached, please find our minor modifications to the Stage 1 & 2 Abatement Plan for the above referenced site, along with two modified plates.

If you have any questions or concerns, please do not hesitate to contact us.

Best regards,

Katie Lee  
Staff Scientist  
R.T. Hicks Consultants, Ltd.  
901 Rio Grande Blvd. NW F-142  
Albuquerque, NM 87104

Office Phone: 505-266-5004  
Fax: 505-266-0745

# R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

April 11, 2006

**Wayne Price**

NMOCD Environmental Bureau Chief

1220 South St. Francis Drive

Santa Fe, New Mexico 87505

**Via E-mail**

RE: F-35 SWD & G-35 SWD, T17S, R35E; NMOCD Case #: 1R0330 & 1R0332

Dear Mr. Price,

This letter presents our proposal for a minor modification to the Stage 1 & 2 Abatement Plan submitted to your office on January 12, 2005. We propose a minor expansion of the characterization plan: the addition of three (3) additional wells. We propose a minor relocation of the originally proposed wells (see revised Plate 2 of the Abatement Plan, attached):

Well F-2 – located 800 feet east of F-35 and 800 feet west of the G-35 site

Well G-2 – located about 1000 feet east of G-35

We also revised our potentiometric surface map for the area as Xcel Energy advised us that SPS-26, an Xcel supply well, was mis-located. The corrected map is attached. After we complete, develop, purge and sample these new wells in addition to the proposed sampling effort described in the Stage 1 & 2 Plan, we will re-draw the potentiometric surface map and re-evaluate the water chemistry hypotheses presented in the Plan. We will then submit a short letter report with the new data and maps to NMOCD that also informs of our intent to drill:

F-3 – located about 400 feet directly down gradient of the F-35 site,

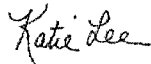
G-3 – located about 500 feet directly down gradient of the G-35 site, and

G-4 – located down gradient from the G-35 site, at a location to be determined, based upon the newly acquired data

Until we conduct the first phase of the field assignment, we believe it is premature to select locations for these additional wells. We look forward to completing phase 1 of the field assignment, full-scale testing of the sand filter component of the point-of-use water treatment system and then moving forward with the second phase of the proposed investigation and full-scale testing of the RO unit proposed for the point-of-use treatment system. Please contact me, if you have any questions regarding this minor modification.

Sincerely,

R.T. Hicks Consultants, Ltd.



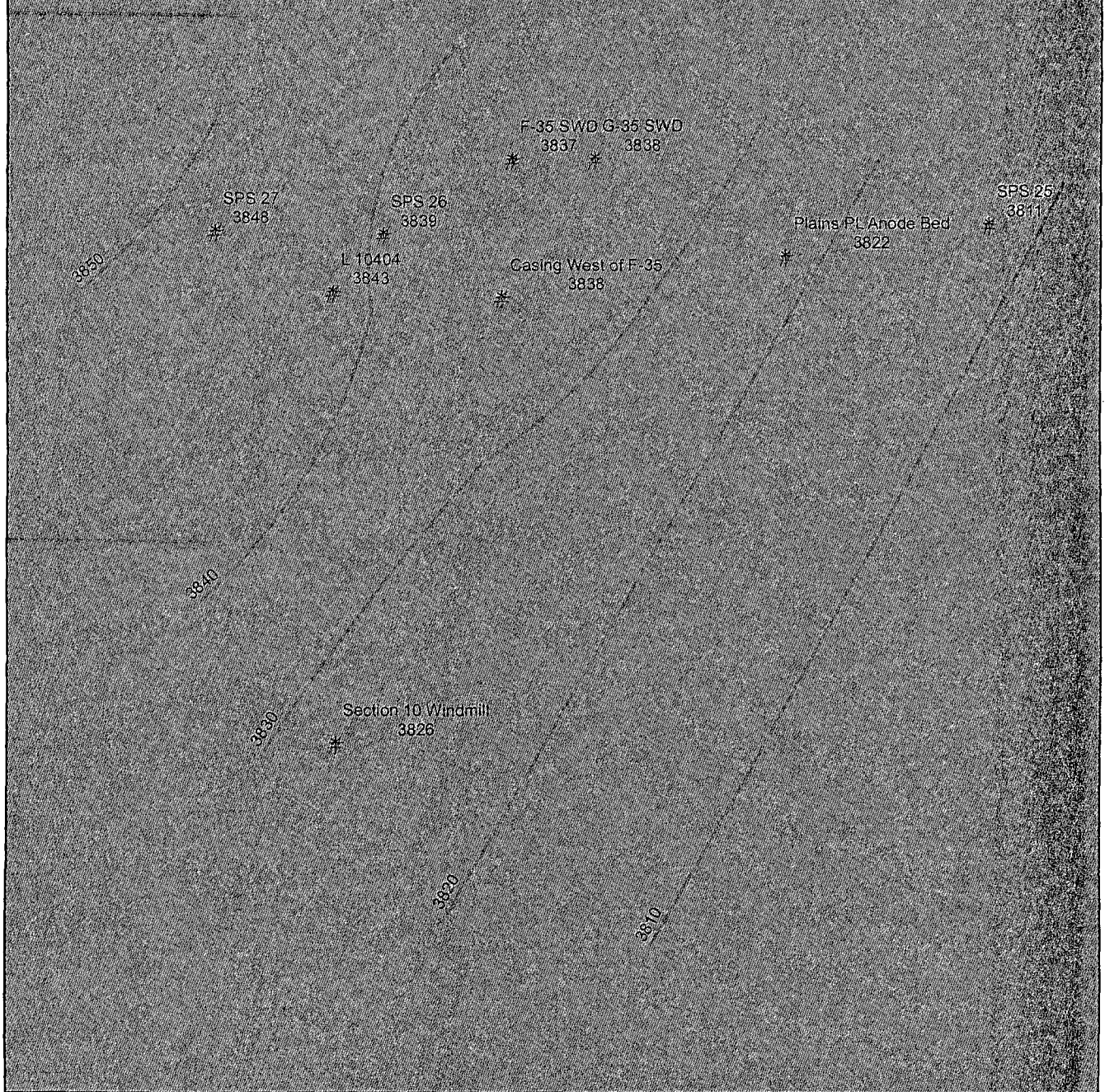
Katie Lee

Staff Scientist

Copy: Rice Operating Company

# Legend

- Isocontour Line (feet msl)
- # Well ID; Depth to Groundwater



0 0.5 1 2 Miles

1

**R.T. Hicks Consultants, Ltd**  
901 Rio Grande Blvd NW Suite F-142  
Albuquerque, NM 87104  
Ph: 505.266.5004

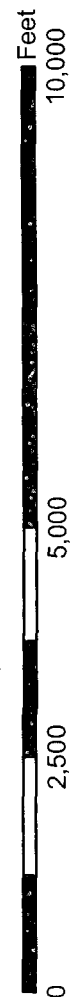
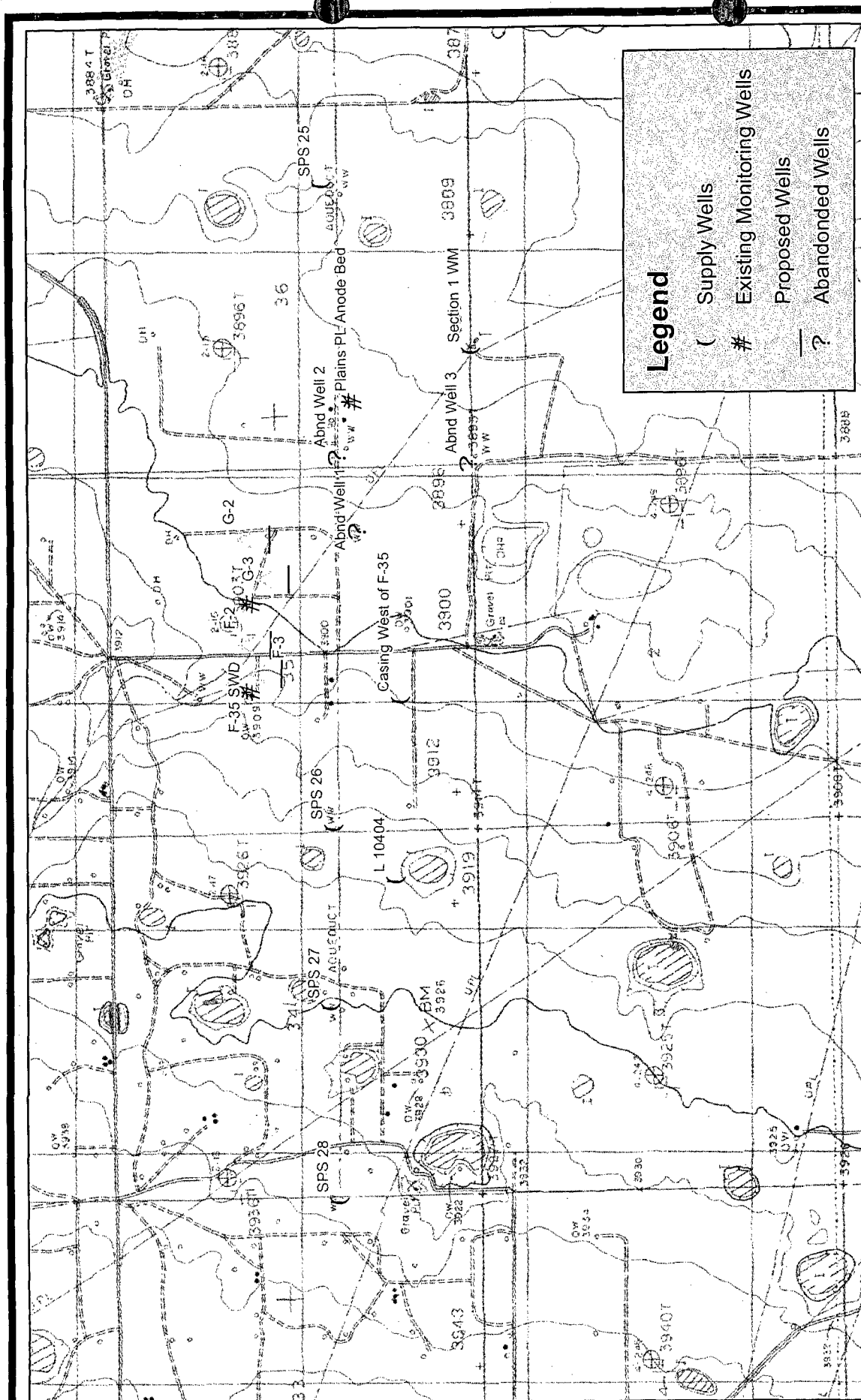
Local Potentiometric Surface Map

Plate 5

ROC: Stage 1 & 2 Abatement Plan G-35/F-35

April 2006





**R.T. Hicks Consultants, Ltd**  
 901 Rio Grande Blvd NW Suite F-142  
 Albuquerque, NM 87104  
 Ph: 505.266.5004

**G-35/F-35 Nearby Wells and Proposed Monitoring Wells**

ROC: Stage 1 & 2 Abatement Plan G-35/F-35

## **Price, Wayne, EMNRD**

---

**From:** Price, Wayne, EMNRD  
**Sent:** Wednesday, November 23, 2005 9:24 AM  
**To:** Price, Wayne, EMNRD; Carolyn Doran Haynes (riceswd@leaco.net)  
**Cc:** Sanchez, Daniel J., EMNRD; Sheeley, Paul, EMNRD  
**Subject:** RE: Abatement Plan requirement for Vacuum G-35/F35

Corrected version. The AP's are due Dec 30, 2005.

---

**From:** Price, Wayne, EMNRD  
**Sent:** Wednesday, November 23, 2005 9:15 AM  
**To:** Carolyn Doran Haynes (riceswd@leaco.net)  
**Cc:** Sanchez, Daniel J., EMNRD; Sheeley, Paul, EMNRD  
**Subject:** Abatement Plan requirement for Vacuum G-35/F35



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**

Governor

**Joanna Prukop**

Cabinet Secretary

**Mark E. Fesmire, P.E.**

Director

Oil Conservation Division

November 23, 2005

Carolyn Doran Haynes  
Rice Operating Company  
122 West Taylor  
Hobbs, New Mexico 88240

Re: Sites with confirmed Groundwater Contamination

Dear Ms. Haynes:

During our recent technical meeting held on November 03, 2005 ROC provided OCD with a list of projects with NMOCD Approval Pending. Two of these sites were the G-35/F-35. The ICP submitted by R.T. Hicks Consultants on 03/29/05 indicates that groundwater is impacted. Pursuant to the New Mexico Oil Conservation Division rule 19.15.1.19 (Rule 19) Prevention and Abatement of Water Pollution requires all responsible persons who are abating water pollution in excess of the standards shall do so pursuant to an abatement plan approved by the director.

Therefore, Rice Operating Company is hereby required to submit individual abatement plans for OCD approval by December 30, 2005 for each of the following sites:

**Vacuum Sites:**

G-35 SWD Vacuum	UL	G	Sec 35, T17s, R35E	1R0332
F-35 SWD Vacuum	UL	G	Sec 35, T17s, R37E	1R0330

After OCD receives the plans each site will be assigned a new Abatement Plan number (AP#) for tracking purposes. If you have any questions please do not hesitate to contact me at 505-476-3493 or E-mail [DJSanchez@state.nm.us](mailto:DJSanchez@state.nm.us); or contact Wayne Price of my staff at 505-476-3487 or e-mail [WPRICE@state.nm.us](mailto:WPRICE@state.nm.us).

Sincerely;

*Wayne Price* FOR DANIEL SANCHEZ

Daniel Sanchez

Enforcement and Compliance Manager

Cc: OCD Hobbs office

# R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

March 29, 2005

Wayne Price  
NMOCD Environmental Bureau  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505  
Via E-mail and Federal Express

RE: G-35 Investigation Characterization Plan

Dear Wayne:

1R0330  
ADD F-35  
LOSK IS IN 1R0332

On behalf of Rice Operating Company, R.T. Hicks Consultants, Ltd. is pleased to submit the attached G-35 Investigation Characterization Plan.

If you have any questions or concerns about the enclosed report, please let us know.  
Thank you for your time.

Sincerely,  
R.T. Hicks Consultants, Ltd.

*Katie Lee*

Katie Lee  
Associate Scientist

Copy: Rice Operating Company