

DATE IN 3/10/06	SUSPENSE	ENGINEER WILL JONES	LOGGED IN 3/10/06	TYPE SWD 1025	APP NO. PTD50606956712
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ABOVE THIS LINE FOR DIVISION USE ONLY

**NEW MEXICO OIL CONSERVATION DIVISION**  
 - Engineering Bureau -  
 1220 South St. Francis Drive, Santa Fe, NM 87505



**ADMINISTRATIVE APPLICATION CHECKLIST**

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

**Application Acronyms:**

- [NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]  
 [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]  
 [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]  
 [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]  
 [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]  
 [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

- [1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]  
 [A] Location - Spacing Unit - Simultaneous Dedication  
 NSL  NSP  SD
- Check One Only for [B] or [C]  
 [B] Commingling - Storage - Measurement  
 DHC  CTB  PLC  PC  OLS  OLM
- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
 WFX  PMX  SWD  IPI  EOR  PPR
- [D] Other: Specify \_\_\_\_\_
- [2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply  
 [A]  Working, Royalty or Overriding Royalty Interest Owners  
 [B]  Offset Operators, Leaseholders or Surface Owner  
 [C]  Application is One Which Requires Published Legal Notice  
 [D]  Notification and/or Concurrent Approval by BLM or SLO  
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office  
 [E]  For all of the above, Proof of Notification or Publication is Attached, and/or,  
 [F]  Waivers are Attached

2006 MAR 10 PM 3 06

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

**Note: Statement must be completed by an individual with managerial and/or supervisory capacity.**

Ocean Munds-Dry      Ocean Munds-Dry      Attorney      3-10-06  
 Print or Type Name      Signature      Title      Date  
 omundsdry@hollandhart.com  
 e-mail Address



March 10, 2006

**HAND-DELIVERED**

Mark E. Fesmire, P.E.  
Director  
Oil Conservation Division  
New Mexico Department of Energy,  
Minerals and Natural Resources  
1220 South Saint Francis Drive  
Santa Fe, New Mexico 87505

Re: C-108 Application of Nearburg Producing Company for Authorization to Inject Produced Water into its CC Federal No. 3 Well, 1822 FSL and 532 FWL of Section 9, Township 18 South, Range 27 East, NMPM, Eddy County, New Mexico

Dear Mr. Fesmire:

Please find attached one (1) original and one (1) copy of Nearburg Producing Company's Form C-108 Application for Authorization to Inject. Nearburg seeks authorization to dispose of off-lease disposal water by injecting into its CC Federal No. 3 Well.

On the date this application was filed, notice was provided to the owner of the surface of the land on which the disposal well is to be located and to each leasehold operator within one-half mile of the well by providing each with a copy of this application by certified mail and advising each that they have 15 days from the date of the notice letter to file an objection with the Santa Fe Office of the Oil Conservation Division and that, if no objection is received by the Division, the application will be approved. A copy of the notice letter is attached as Exhibit A. A notice affidavit is attached as Exhibit B.

Proof of publication as required in Division Rule 701(C) is attached as Exhibit C.

A copy of this application has also been sent to the Artesia District Office.

HOLLAND & HART  LLP

Your attention to this matter is appreciated.

Sincerely,

*Ocean Munds-Dry*

Ocean Munds-Dry  
Attorney for Nearburg Producing Company

Enclosures

cc: Bob Shelton  
Artesia District Office

**HOLLAND & HART**<sup>LLP</sup>



**Ocean Munds-Dry**  
omundsdry@hollandhart.com

March 10, 2006

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

**Land Owner:**

Bureau of Land Management  
Carlsbad Field Office  
320 East Greene Street  
Carlsbad, New Mexico 88220

**Leasehold Operators:**

Devon Energy Corporation  
20 North Broadway, Suite 1500  
Oklahoma City, OK 73102

BP America Production Company  
P.O. Box 1089  
Eunice, New Mexico 88231

**Re: Application of Nearburg Producing Company for Administrative Approval  
of Salt Water Disposal (CC Federal No. 3 Well), Eddy County, New Mexico**

Ladies and Gentlemen:

This letter is to advise you that Nearburg Producing Company is in the process of filing the enclosed application with the New Mexico Oil Conservation Division seeking authorization to dispose of produced water into its CC Federal No. 3 well at a surface location of 1822 feet from the South line and 532 feet from the West line (Unit L) of Section 9, Township 18 South and Range 27 East, NMPM, Eddy County, New Mexico. The sources of the produced water will be from wells in the area that produce from the Red Lake Field Glorieta and Yeso formations.

Nearburg Production Company proposes to convert the subject well to water disposal into the San Andres formation, which is currently under waterflood in the West Red Lake Unit whose boundary is 532 feet west of the well. The initial injection will be at 800 pounds per square inch and a maximum surface injection pressure of 1484 pounds per square inch is proposed by Nearburg Producing Company. The average daily injection rate will be 500 barrels of water and the maximum daily injection rate will be 1000 barrels of water.

**EXHIBIT A**

**Holland & Hart LLP**

Phone [505] 988-4421 Fax [505] 983-6043 [www.hollandhart.com](http://www.hollandhart.com)

110 North Guadalupe Suite 1 Santa Fe, NM 87501 Mailing Address P.O. Box 2208 Santa Fe, NM 87504-2208

Aspen Billings Boise Boulder Cheyenne Colorado Springs Denver Denver Tech Center Jackson Hole Salt Lake City Santa Fe Washington, D.C. ♻

HOLLAND & HART<sup>LLP</sup>



If you have any questions concerning this application, you may contact Brian Huzzey at (432) 686-8235 (Ext. 206) or at Nearburg Producing Company, 3300 North "A" Street, Building 2, Suite 120, Midland, Texas, 79705.

Objections to this application or requests for hearing must be filed with the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico, 87505 within fifteen (15) days of the date of this letter. If no objection is received within fifteen (15) days after the Division Director receives this application, the application will be approved.

Sincerely,

*Ocean Munds-Dry*

Ocean Munds-Dry  
Attorney for Nearburg Producing Company

Enclosures

cc: Mr. Bob Shelton

BEFORE THE OIL CONSERVATION DIVISION  
NEW MEXICO ENERGY, MINERALS AND  
NATURAL RESOURCES DEPARTMENT

ADMINISTRATIVE APPLICATION OF NEARBURG PRODUCING COMPANY FOR  
AUTHORIZATION TO INJECT PRODUCED WATER INTO ITS CC FEDERAL NO. 3  
WELL, EDDY COUNTY, NEW MEXICO

AFFIDAVIT

STATE OF NEW MEXICO        )  
) ss.  
COUNTY OF SANTA FE )

Ocean Munds-Dry, attorney in fact and authorized representative of Nearburg  
Producing Company, the Applicant herein, being first duly sworn, upon oath, states that  
notice of the above-referenced Application was mailed to the interested parties shown on  
Exhibit "A" attached hereto in accordance with Oil Conservation Division Rules, and that  
true and correct copies of the notice letter and proof of notice are attached hereto.

Ocean Munds-Dry  
Ocean Munds-Dry

SUBSCRIBED AND SWORN to before me this 10<sup>th</sup> day of March, 2006.



OFFICIAL SEAL  
LISAMARIE ORTIZ  
NOTARY PUBLIC-STATE OF NEW MEXICO  
My commission expires 1/14/07

[Signature]  
Notary Public

My Commission Expires:

January 14, 2007

EXHIBIT B

**BEFORE THE OIL CONSERVATION DIVISION  
NEW MEXICO ENERGY, MINERALS AND  
NATURAL RESOURCES DEPARTMENT**

**ADMINISTRATIVE APPLICATION OF NEARBURG PRODUCING COMPANY FOR  
AUTHORIZATION TO INJECT PRODUCED WATER INTO ITS CC FEDERAL NO. 3  
WELL, EDDY COUNTY, NEW MEXICO**

**EXHIBIT A**

Bureau of Land Management  
Carlsbad Field Office  
320 East Greene Street  
Carlsbad, New Mexico 88220

Devon Energy Corporation  
20 North Broadway, Suite 1500  
Oklahoma City, OK 73102

BP America Production Company  
P. O. Box 1089  
Eunice, New Mexico 88231



March 16, 2006

2006 MAR 16 PM 1 56

**HAND-DELIVERED**

Mark E. Fesmire, P.E.  
Director  
Oil Conservation Division  
New Mexico Department of Energy,  
Minerals and Natural Resources  
1220 South Saint Francis Drive  
Santa Fe, New Mexico 87505

Re: C-108 Application of Nearburg Producing Company for Authorization to Inject Produced Water into its CC Federal No. 3 Well, 1822 FSL and 532 FWL of Section 9, Township 18 South, Range 27 East, NMPM, Eddy County, New Mexico

Dear Mr. Fesmire:

Please find attached as Exhibit C, an Affidavit of Publication to Nearburg Producing Company's Form C-108 Application for Authorization to Inject. This exhibit should be included as part of the application submitted on March 10, 2006.

Your attention to this matter is appreciated.

Sincerely,

Ocean Munds-Dry  
Attorney for Nearburg Producing Company

**Affidavit of Publication**

State of New Mexico,  
County of Eddy, ss.

Dawn Higgins, being first duly sworn, on oath says:

That she is Business Manager of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

March 8	2006
	2006
	2006
	2006

That the cost of publication is \$57.85 and that payment thereof has been made and will be assessed as court costs.

*Dawn Higgins*

Subscribed and sworn to before me this

8 day of March, 2006  
*Stephanie Dobson*

My commission Expires on \_\_\_\_\_



March 8, 2006

**LEGAL NOTICE**

Nearburg Producing Company, 3300 North "A" Street, Building 2, Suite 120, Midland, Texas, 79705, is in the process of filing an Application with the New Mexico Oil Conservation Division seeking

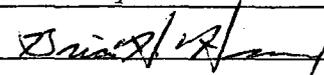
authorization to convert and inject produced water into CC Federal No. 3 at a surface location of 1822 feet from the south line and 532 feet from the west line (Unit 1) of Section 9, Township 18 South and Range 27 East, NMPM, Eddy County, New Mexico. The sources of the disposed water will be from oil and gas wells in the area that produce from the Red Lake Field Glorieta and Yeso formations. The water will be injected into the San Andres formation, which is currently under waterflood in the West Red Lake Unit whose boundary is 532' west of the CC Federal No. 3. The maximum surface injection pressure will be 1484 pounds per square inch, and the maximum injection rate will be 1000 barrels of water per day. Any interested party with questions or comments may contact Brian Huzzey at Nearburg Producing Company at the above address, or call 432-684-8235, extension 204. Objections to this Application or Requests for Hearing, must be filed with the Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, New Mexico, 87505 within fifteen (15) days of the date of the publication of this notice.

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: Secondary Recovery Pressure Maintenance XX Disposal Storage  
Application qualifies for administrative approval? Yes No
- II. OPERATOR: Nearburg Producing Company  
ADDRESS: 3300 N A St., Bldg 2, Ste 120, Midland, TX 79705  
CONTACT PARTY: Brian Huzzey PHONE: 432/686-8235
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.  
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? Yes XX No  
If yes, give the Division order number authorizing the project: \_\_\_\_\_
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
  2. Whether the system is open or closed;
  3. Proposed average and maximum injection pressure;
  4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
  5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- \*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- \*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- \*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: Brian Huzzey

TITLE: Sr. Staff Engineer

SIGNATURE: 

DATE: March 6, 2006

E-MAIL ADDRESS: bhuzzey@nearburg.com

- \* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: \_\_\_\_\_

### III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

### XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

**NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.**

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**NOTICE:** Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

**CC FEDERAL NO. 3**

**SAN ANDRES**

**APPLICATION FOR AUTHORIZATION TO INJECT**

**APPLICATION FOR AUTHORIZATION TO INJECT**  
(continuation)

**III. WELL DATA**

See attached "As Is" and "Proposed" Injection Well Data Sheets  
(Attachments 1-3)

**IV. IS THIS AN EXPANSION OF AN EXISTING PROJECT?**

No

**V. MAP**

See attached maps with ½ mile and 2 mile radius circles  
(Attachments 4-5)

**VI. WELLS WITHIN THE AREA OF REVIEW**

There are 33 wells that penetrate the proposed San Andres injection zone within the Area of Review. See the attached Area of Review well data tabulation sheet (Attachment 6) for the details on these wells including the wellbore diagrams on the three P&A wells (Attachments 7-9)

**VII. PROPOSED OPERATIONS**

Overall Objective:

Nearburg Producing Company is proposing the following work on the temporarily abandoned CC Federal No. 3 in Unit L, Section 9, T18S-R27E, Eddy County, New Mexico for the purpose of converting the well to water disposal in the San Andres.

- Drill up the CIBP at 1850' and clean out the wellbore to the top of the cement plug (3 sacks) set above the CIBP at 2810'.
- Acidize the existing San Andres perforations from 1928'-2193' OA to remove any cement damage caused by the March 2005 cement squeeze work on the perforations from 1928'-2057' (note that before the cement squeeze work in March 2005, the perforations from 1928'-2193' OA were first broken down with acid using pin-point packers, then acidized with 66 bbls of 15% NEFE acid with 60 ball sealers, and then frac'd down casing with 60,000 gals of Lightning 25 and 140,000 lbs of 12/20 sand).
- Run 2-7/8" internally coated tubing with a packer set within 100' of the top-most perforation at 1928'.
- Dispose of Yeso and Glorieta water from new wells to be drilled in Sections 32 and 33, T17S-R27E.

1. Proposed average and maximum daily rate and volume of fluids to be injected.

**500 BWPD and 1000 BWPD, respectively**

2. The system is closed or open.

**Open**

3. Proposed average and maximum injection pressure.

**800 psi and 1484 psi, respectively**

**The above maximum pressure is based on an average 0.77 psi/ft wellhead pressure gradient to the top perforation at 1928'. It is requested that this pressure gradient be granted to Nearburg based on fracture gradient and wellhead pressure gradient data submitted by Devon on eight of their West Red Lake San Andres Waterflood Unit injection wells in 1997. The data submitted is contained in Division Order WFX-708 and resulted in the OCD granting Devon wellhead pressures ranging from 0.6 to 0.9 psi/ft for additional unit injection wells. The wells listed in their application directly offset CC Federal No. 3 to the northwest. Please see Attachment 10 that summarizes the data contained in Devon's injection applications and the resulting OCD Division Order.**

4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than re-injected produced water.

**Disposal water will come from new Red Lake Yeso and Glorieta wells (Glorieta-Yeso Pool) drilled in Sections 32 and 33, T17S-R27E. The water will be injected into the San Andres formation in CC Federal No. 3. Attachments 11 and 12 report the water analyses for the Yeso, San Andres, and Glorieta-Yeso respectively. Overall, Nearburg has been advised by MCI Chemicals and Consulting that carbonate scaling and iron sulfides may be a problem, but both are easily dealt with and extremely economical to treat.**

5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water.

**Twelve wells currently produce only from the San Andres within one half mile of CC Federal No. 3.**

## **VIII. GEOLOGICAL DATA**

### **Injection Zone:**

**Geologic Name: San Andres of the Red Lake Queen-Grayburg-San Andres Pool**

**Lithologic Detail: Porous Shelf Dolomite**

**Thickness: +/-1400'**

**Depth: Based on geologic reports from 8 wells within ½ mile of CC Federal No. 3, the top of San Andres occurs at an average subsea depth of +2159' (or 1320' average measured depth – the topography is relative flat in this area with an average KB elevation of 3479')**

**Oil/Water Contact: Unknown to Nearburg**

**Sources of Drinking Water Overlying the Proposed Injection Zone:**

**Geologic Names: Unknown to Nearburg**

**Depth to Bottom of Sources: The deepest fresh water well in T18S-R27E is 305' located in Section 31 according to the New Mexico Office of the State Engineer website. Other wells in the township have been drilled to +/- 90'.**

**Sources of Drinking Water Underlying the Proposed Injection Zone:**

**None**

#### **IX. PROPOSED STIMULATION PROGRAM**

**The San Andres has already been adequately stimulated as outlined above. Therefore, plans are to only acidize the existing San Andres perforations from 1928'-2193' OA to remove any cement damage caused by the March 2005 cement squeeze work on the perforations from 1928'-2057'**

#### **X. LOGS AND TEST DATA**

**Well data has been filed with the OCD**

#### **XI. ANALYSIS OF FRESH WATER WELLS WITHIN ONE MILE OF DISPOSAL WELL**

**No fresh water well is located within one mile of the proposed disposal well according to records obtained from the website of the New Mexico Office of the State Engineer.**

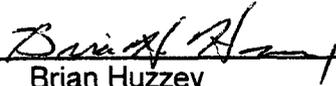
#### **XII. AFFIRMATIVE STATEMENT OF NON-COMMUNICATION BETWEEN DISPOSAL ZONE AND ANY UNDERGROUND SOURCES OF DRINKING WATER.**

**Re: Proposed CC Federal No. 3 San Andres Disposal Well**

**We have examined the available, seismic, geologic, and engineering data and find no evidence of open faults or any other hydraulic connection between the disposal zone and any underground source of drinking water.**

Nearburg Producing Company

Date: March 6, 2006

  
\_\_\_\_\_  
Brian Huzzey  
Senior Staff Engineering

*Attachments*

1. **“As Is” injection well data sheet with wellbore diagram**
2. **“Proposed” injection well data sheet with wellbore diagram**
3. **Injection well data sheet**
4. **Map with well locations**
5. **Map with lease data**
6. **“Area of Review” tabulation sheet**
7. **Empire Abo Unit No. 4 wellbore diagram**
8. **Empire Abo Unit No. 6 wellbore diagram**
9. **Abo Chalk Bluff Draw Unit No. 12 wellbore diagram**
10. **Summary of Devon’s Application to Inject**
11. **Yeso and San Andres water analysis**
12. **Glorieta-Yeso water analysis**

"AS IS"

INJECTION WELL DATA SHEET

Side 1

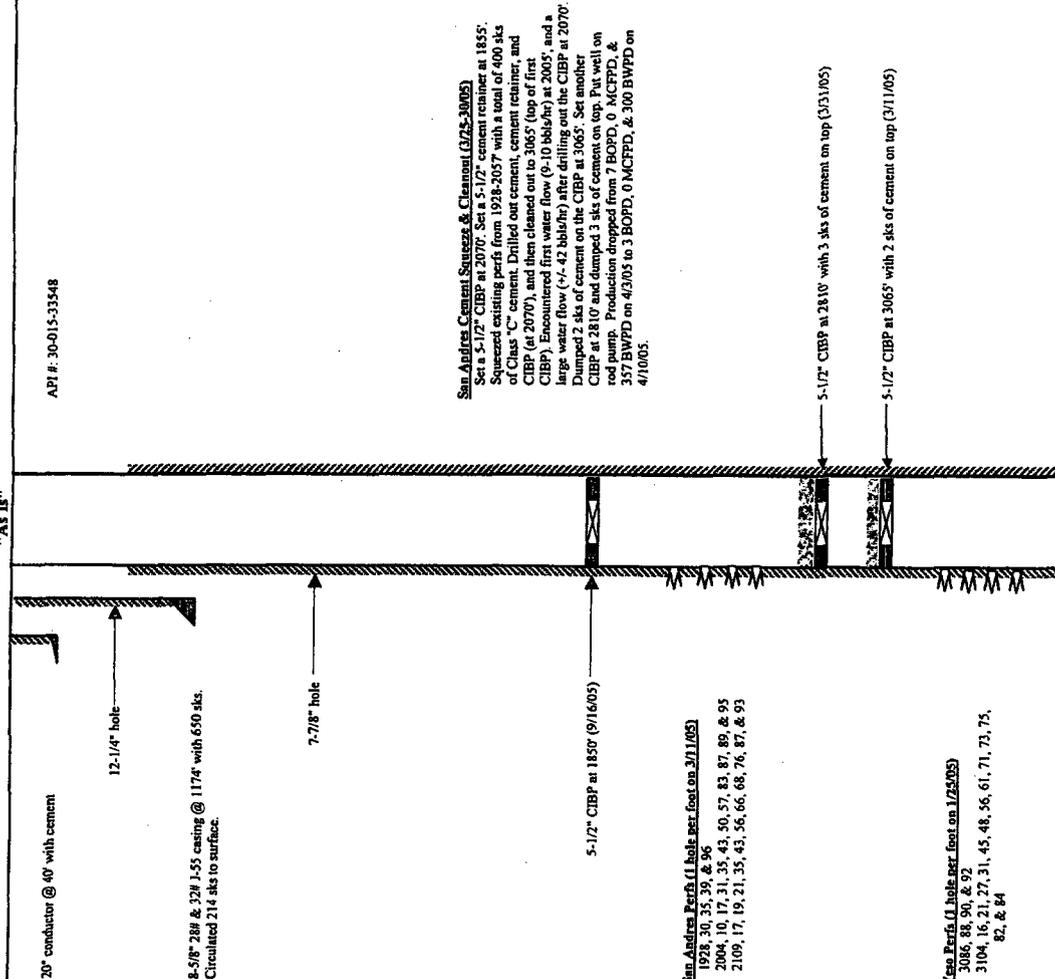
OPERATOR: Nearburg Producing Company

WELL NAME & NUMBER: CC Federal No 3 (30-015-33548)

WELL LOCATION: 1822 ESL & 532 FWL  
 FOOTAGE LOCATION: "As Is"

UNIT LETTER: L SECTION: 9 TOWNSHIP: 18S RANGE: 27E

Hole Size: 12-1/4 Casing Size: 8-5/8 ft<sup>3</sup>  
 Cemented with: 650 SX. 07 Method Determined: Circulated  
 Top of Cement: Surface Production ~~Intermediate~~ Casing  
 Hole Size: 7-7/8 Casing Size: 5-1/2 ft<sup>3</sup>  
 Cemented with: 550 SX. 07 Method Determined: Circulated  
 Top of Cement: Surface Method Determined: Circulated



San Andres Cement Squeeze & Cleanout (3/25-30/05)  
 Set a 5-1/2" CIBP at 2070'. Set a 5-1/2" cement retainer at 1855'.  
 Squeezed existing perfs from 1928-2057' with a total of 400 sks  
 of Class "C" cement. Drilled out cement, cement retainer, and  
 CIBP (at 2070'), and then cleaned out to 3065' (top of first  
 CIBP). Encountered first water flow (9-10 bbl/hr) at 2005', and a  
 large water flow (4-42 bbl/hr) after drilling out the CIBP at 2070'.  
 Dumped 2 sks of cement on the CIBP at 3065'. Set another  
 CIBP at 2810' and dumped 3 sks of cement on top. Put well on  
 rod pump. Production dropped from 7 BOPD, 0 MCFPD, &  
 357 BWPD on 4/3/05 to 3 BOPD, 0 MCFPD, & 300 BWPD on  
 4/10/05.

San Andres Perfs (1 hole per foot on 3/11/05)  
 1928, 30, 35, 39, & 95  
 2004, 10, 17, 31, 35, 43, 50, 57, 83, 87, 89, & 95  
 2109, 17, 19, 21, 35, 43, 56, 66, 68, 76, 87, & 93

San Andres Perfs (1 hole per foot on 1/25/05)  
 3086, 88, 90, & 92  
 3104, 16, 21, 27, 31, 45, 48, 56, 61, 71, 73, 75,  
 82, & 84

5-1/2" 14# K-55 casing @ 3398' with 550 sks.  
 Circulated 6 sks to surface (note that prior to the  
 squeeze cement work on 3/25-30/05, the CBL log  
 indicated bad cement and free pipe from 1180-1620')

Note: Prior to the San Andres cement squeeze work on  
 March 25-30, 2005, the CBL log indicated bad cement  
 and free pipe from 1180-1620'.

Total Depth: 3400' Injection Interval: 1928 feet to 2193

(Perforated or Open Holes indicate which)

"PROPOSED"

INJECTION WELL DATA SHEET

Side 1

OPERATOR: Nearburg Producing Company

WELL NAME & NUMBER: 1822 ESL & 532 FWL CC Federal No 3 (30-015-33548)

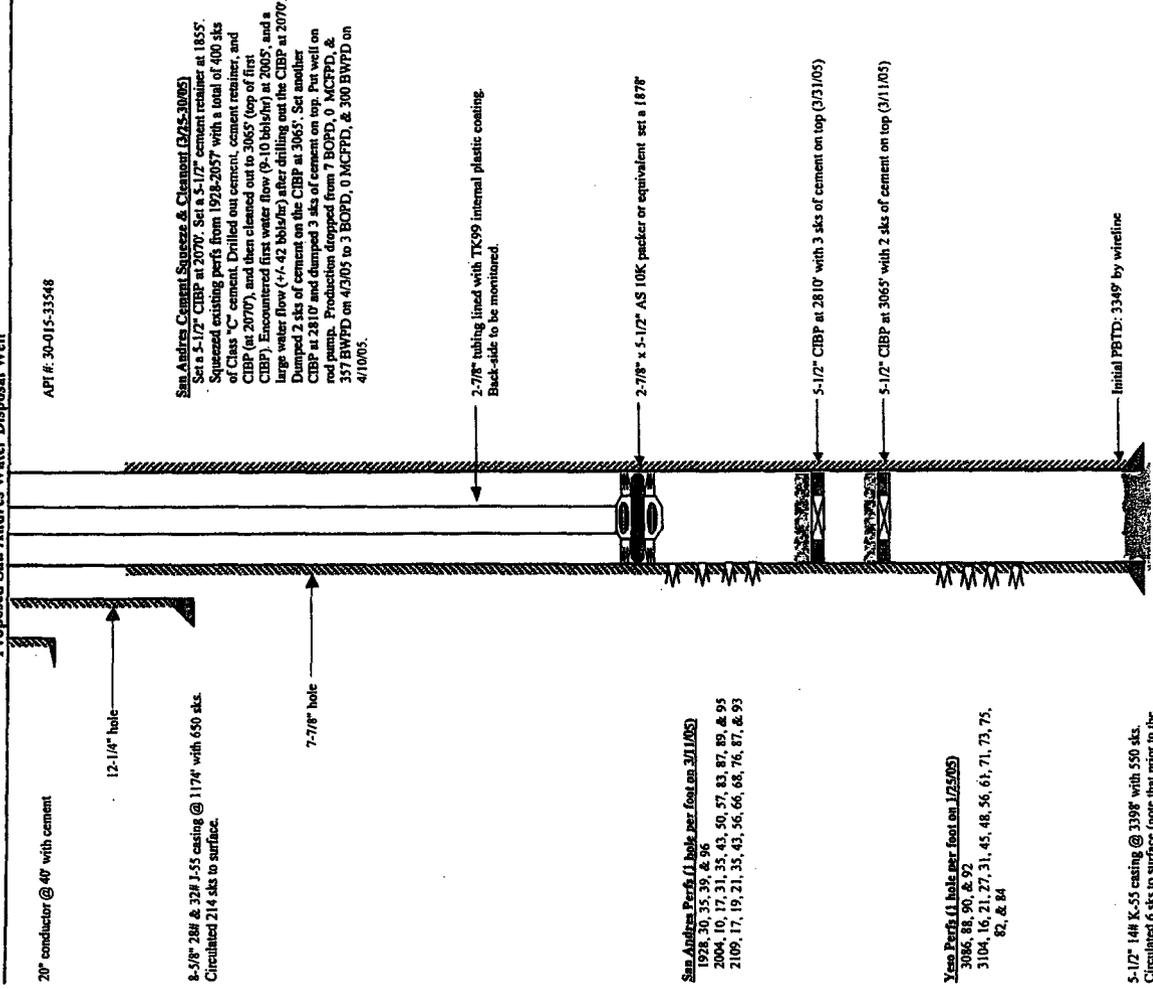
WELL LOCATION: 1822 ESL & 532 FWL UNIT LETTER L SECTION 9 TOWNSHIP 18S RANGE 27E  
"Proposed San Andres Water Disposal Well" FOOTAGE LOCATION

WELL CONSTRUCTION DATA  
Surface Casing

Hole Size: 12-1/4 Casing Size: 8-5/8  
 Cemented with: 650 SX. or ft  
 Top of Cement: Surface Method Determined: Circulated  
 Production Intermediate Casing

Hole Size: 7-7/8 Casing Size: 5-1/2  
 Cemented with: 550 SX. or ft  
 Top of Cement: Surface Method Determined: Circulated

Total Depth: 3400' Injection Interval  
1928 feet to 2193



San Andres Perfs (1 hole per foot on 3/11/05)  
 1928, 30, 35, 39, & 96  
 2004, 10, 17, 31, 35, 43, 50, 57, 83, 87, 89, & 95  
 2109, 17, 19, 21, 35, 43, 56, 66, 68, 76, 87, & 93

Yeso Perfs (1 hole per foot on 1/25/05)  
 3086, 88, 90, & 92  
 3104, 16, 21, 27, 31, 45, 48, 56, 61, 71, 73, 75,  
 82, & 84

5-1/2" 14# X-55 casing @ 3398' with 550 sks.  
 Circulated 6 sks to surface (note that prior to the  
 squeeze cement work on 3/25-30/05, the CBL log  
 indicated bad cement and free pipe from 1180-1620')

(Perforated or Open Holes indicate which)

PROPOSED  
**INJECTION WELL DATA SHEET**

Tubing Size: 2-7/8 Lining Material: TK99 Internal Plastic Coating

Type of Packer: 2-7/8 x 5-1/2 "AS" 10K packer or equivalent

Packer Setting Depth: 1878'

Other Type of Tubing/Casing Seal (if applicable): \_\_\_\_\_

Additional Data

1. Is this a new well drilled for injection? \_\_\_\_\_ Yes xx No \_\_\_\_\_

If no, for what purpose was the well originally drilled? Originally drilled to 3400' and completed first as a Yeso producer and then later as a San Andres producer. Both zones were uneconomic to produce with high water cuts.

2. Name of the Injection Formation: San Andres

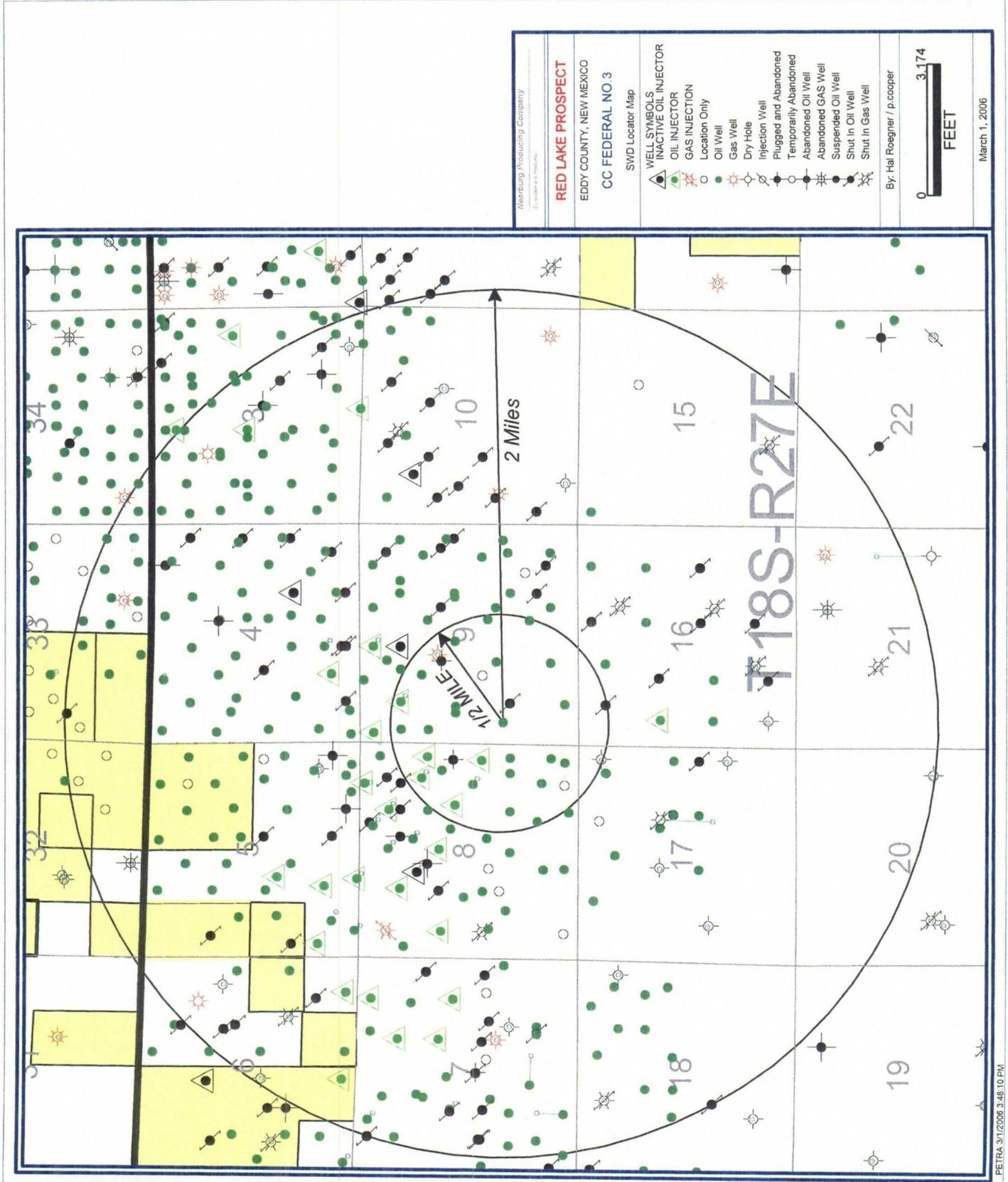
3. Name of Field or Pool (if applicable): Red Lake Queen-Grayburg-San Andres

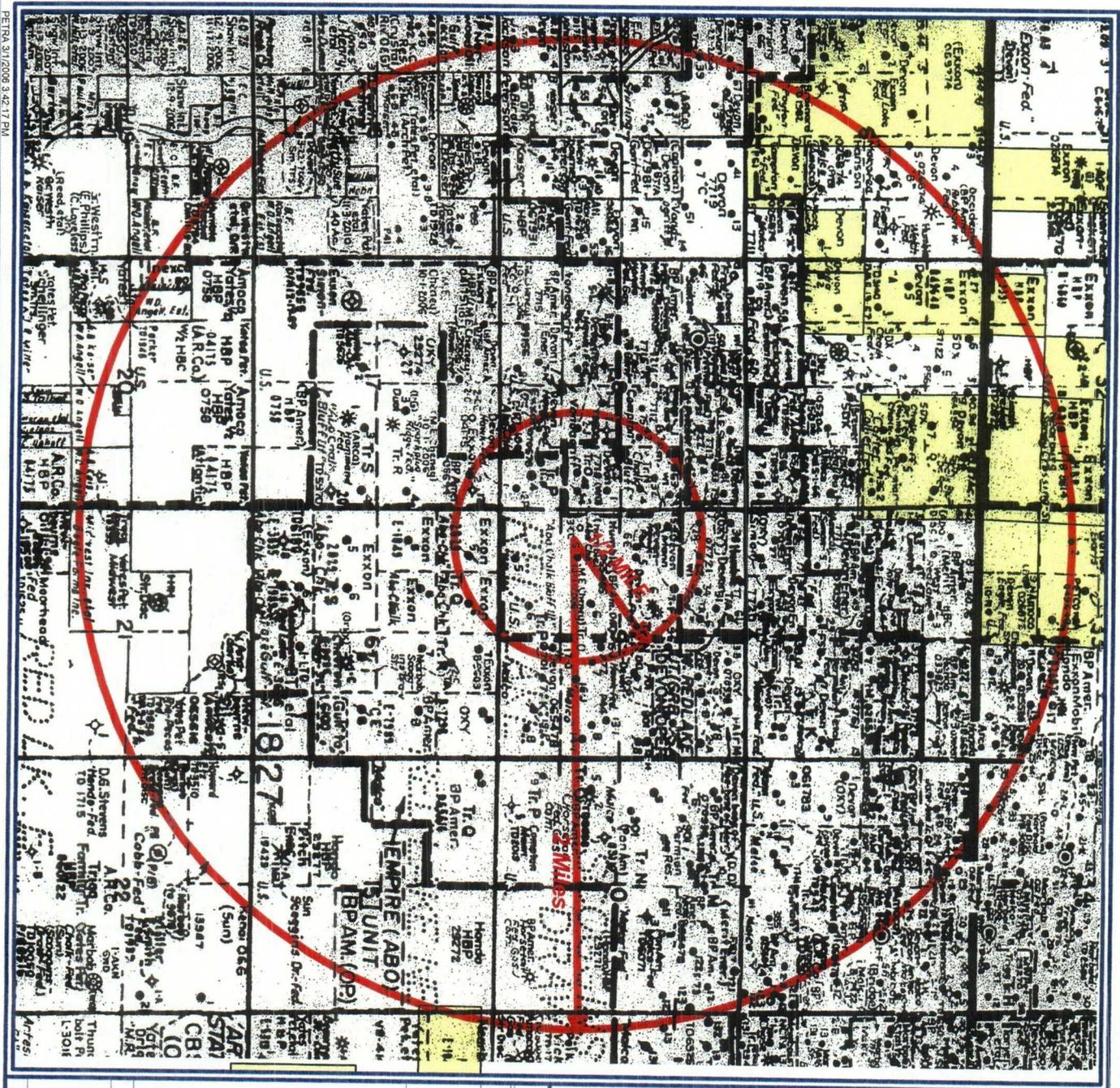
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. Well was perforated and tested in the Yeso from 3086-3184 (OA). These perforations are currently below 2 CIBPs at 3065 (2 sxs cmt on top) and at 2810 (3 sxs cmt on top).

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Underlying within the "Area of Review": Yeso, Abo,

Atoka, Morrow and Pennsylvanian (zone not specified)

Overlying within the "Area of Review": Premier





**RED LAKE PROSPECT**  
 EDDY COUNTY, NEW MEXICO  
 CC FEDERAL NO.3  
 SWD Locator Map

▲	WELL SYMBOLS
▲	INACTIVE OIL INJECTOR
▲	OIL INJECTOR
▲	GAS INJECTION
○	Location Only
○	Oil Well
○	Gas Well
○	Dry Hole
○	Injection Well
○	Plugged and Abandoned
○	Temporarily Abandoned
○	Abandoned Oil Well
○	Suspended Oil Well
○	Shut In Oil Well
○	Shut In Gas Well

By: Hal Reagner / D.cooper  
 0 3.174  
 FEET  
 March 1, 2006

CC FEDERAL NO. 3 PROPOSED SAN ANDRES WATER DISPOSAL WELL													
"AREA OF REVIEW" WELL DATA TABULATION SHEET													
Well	API # 30-015-	Location	TD (PBITD) Feet	Date TD Reached M/D/Y	Hole Sizes Inches	Casing Sizes Inches	Setting Depths Feet	Cement Sacks	Top of Cement <sup>1</sup> Feet	Perforations Feet	Well Type	Current Status	Comments
Empire Abo Unit No. 4	00823	2260' FNL 400' FEL 8-18S-27E Unit H	9580	07/05/57	11 7-7/8	11-3/4 8-5/8 5-1/2	570 3088 9580	750 1100 1090	Surface Surface 3960' (TS) ✓	Abo 5176-5418 OA Pennsylvanian 9505-9555 OA	Abo Oil - Penn Gas Producer	P&A	See attached P&A wellbore diagram.
Empire Abo Unit No. 4A	00824	660' FSL 330' FEL 8-18S-27E Unit P	5591 (5555)	10/31/60	11 NR	8-5/8 4-1/2	1529 5591	800 800	Surface NR OK ✓	5346-5480 OA	Abo Oil Producer	Active	Suspect that reported perms from 5500-5510', which swabbed all water, have been squeezed or are below a bridge plug.
Empire Abo Unit No. 4B	00825	1650' FSL 330' FEL 8-18S-27E Unit I	5576 (5545)	1/17/61	11 7-7/8	8-5/8 4-1/2	1534 5576	800 850	Surface 400' (TS) ✓	5370-5400	Abo Oil Producer	Active	
Empire Abo Unit No. 5	00839	330' FSL 990' FWL 9-18S-27E Unit M	5768 (5740)	5/10/60	11 NR	8-5/8 4-1/2	1519 5768	750 1050	Surface 900' (TS) ✓	5378-5674 OA	Abo Oil Producer	Active	
Empire Abo Unit No. 5A	00840	2310' FNL 990' FWL 9-18S-27E Unit E	5666 (5639)	05/06/60	11 NR	8-5/8 4-1/2	1518 5665	750 800	Surface 300' (TS) ✓	5548-5572 OA	Abo Oil Producer	Active	
Empire Abo Unit No. 5B	00841	1650' FSL 990' FWL 9-18S-27E Unit L	5700 (5677)	06/07/60	11 NR	8-5/8 4-1/2	1501 5700	800 800	Surface Surface ✓	5569-5597 OA	Abo Oil Producer	Inactive	Last reported production date is 2/04.
Empire Abo Unit No. 5C	00901	660' FNL 990' FWL 16-18S-27E Unit D	5700 (5666)	06/22/60	11 NR	8-5/8 4-1/2	1527 5700	800 800	Surface Surface ✓	5396-5610 OA	Abo Oil Producer	Temporarily Abandoned	On 12/20/04, a CIBP was set at 5366' and capped with 35' of cement.
Empire Abo Unit "N" No. 6	00836	1980' FNL 1980' FWL 9-18S-27E Unit F	5703	02/27/60	11 NR	8-5/8 4-1/2	1481 5703	700 350	Surface 3720' (?) OK ✓	5475-5608 OA	Abo Oil Producer	P&A	See attached P&A wellbore diagram.

Empire Abo Unit No. 6A	00835	1980' FSL 1980' FWL 9-18S-27E Unit K	5717 (5686)	2/2/60	11 NR	8-5/8 4-1/2	1476 5717	750 350	Surface 3730' (Calc.)	5348-5560 OA (Currently open)	Abo Oil Producer	Active	Perfs at 5600-5628' are under a RPB set at 5590' on 6/28/04. Casing hole at 3670' squeezed with 1000 sacks cement on 7/1/04. Currently open perfs were added on 7/6/04.
Empire Abo Unit No. 6B	00837	660' FSL 1980' FWL 9-18S-27E Unit N	5790 (5761)	3/11/60	11 NR	8-5/8 4-1/2	1497 5789	700 350	1078' (TS) 3910' (TS)*	5490-5682 OA	Abo Oil Producer	Active	*On 4/15/94, perfed 4 holes at 3880' and squeezed with 630 sacks of cement. Circulated 113 sacks to the surface.
West Red Lake Unit No. 26	00821	2340' FSL 400' FEL 8-18S-27E Unit I	2125 (?)	4/12/38	NR NR NR NR	10 8-5/8 7 4-1/2	580 1140 1336 2125	NR NR NR 325	Surface Surface (Est) NR Surface	1884-2081 OA	San Andres Water Injector	Active	Very old well with no drilling or completion data reported in OCD Online. The data that is reported here came largely from an "Area of Review" table contained in Administrative Order WFX-708
West Red Lake Unit No. 28	00834	990' FNL 330' FWL 9-18S-27E Unit D	2001 (1973)	10/27/49	NR NR NR	8-5/8 7 5-1/2	1123 1568 1909	75 100 100	Surface (Est) 440' (Calc) 1375' (Est)	1943-1958 Open Hole	San Andres Oil Producer	Active	Very old well with no drilling or completion data reported in OCD Online. The data that is reported here came largely from an "Area of Review" table contained in Administrative Order WFX-708
West Red Lake Unit No. 32	24638	1980' FNL 660' FEL 8-18S-27E Unit H	2156 (2109)	12/6/83	11 7-7/8	8-5/8 5-1/2	353 2156	300 625	Surface Surface	1953-2055 OA	San Andres Oil Producer	Active	Perfed, stimulated, tested, and squeezed off (240 total sacks of cement in 3 tries) the Premier sand from 1236-42' and 1300-13' in 6/84.
West Red Lake Unit No. 36	27474	1630' FNL 330' FEL 8-18S-27E Unit H	3000 (2903)	8/25/93	12-1/4 7-7/8	8-5/8 5-1/2	1137 2999	655 430	Surface 150' (Est.)	1657-2104 OA	San Andres Water Injector	Active	In 9/95, added and stimulated Premier sand perfs from 1290-1298'. Commingled with existing and new San Andres perfs. In 3/97, squeezed the Premier sand perfs with 100 sacks of cement. Stimulated new and existing San Andres perfs and converted the well to water injection (injection packer at 1589').
West Red Lake Unit No. 47	28471	2310' FNL 1510' FEL 8-18S-27E Unit G	2250 (2199)	9/30/95	12-1/4 7-7/8	8-5/8 5-1/2	1099 2249	550 365	Surface Surface	1656-2070 OA	San Andres Water Injector	Active	In 3/97, stimulated new and existing San Andres perfs and converted the well to water injection (injection packer set at 1588').
West Red Lake Unit No. 48	28277	1650' FSL 710' FEL 8-18S-27E Unit I	2249 (2191)	2/2/95	12-1/4 7-7/8	8-5/8 5-1/2	1151 2249	550 375	Surface Surface	1868-2128 OA	San Andres Oil Producer	Active	
West Red Lake Unit No. 62	28734	990' FNL 990' FWL 9-18S-27E Unit D	2400 (2357)	4/2/96	12-1/4 7-7/8	8-5/8 5-1/2	1015 2400	500 460	Surface Surface	1894-2132 OA	San Andres Water Injector	Active	In 4/99, stimulated new and existing San Andres perfs and converted the well to water injection (injection packer set at 1796').

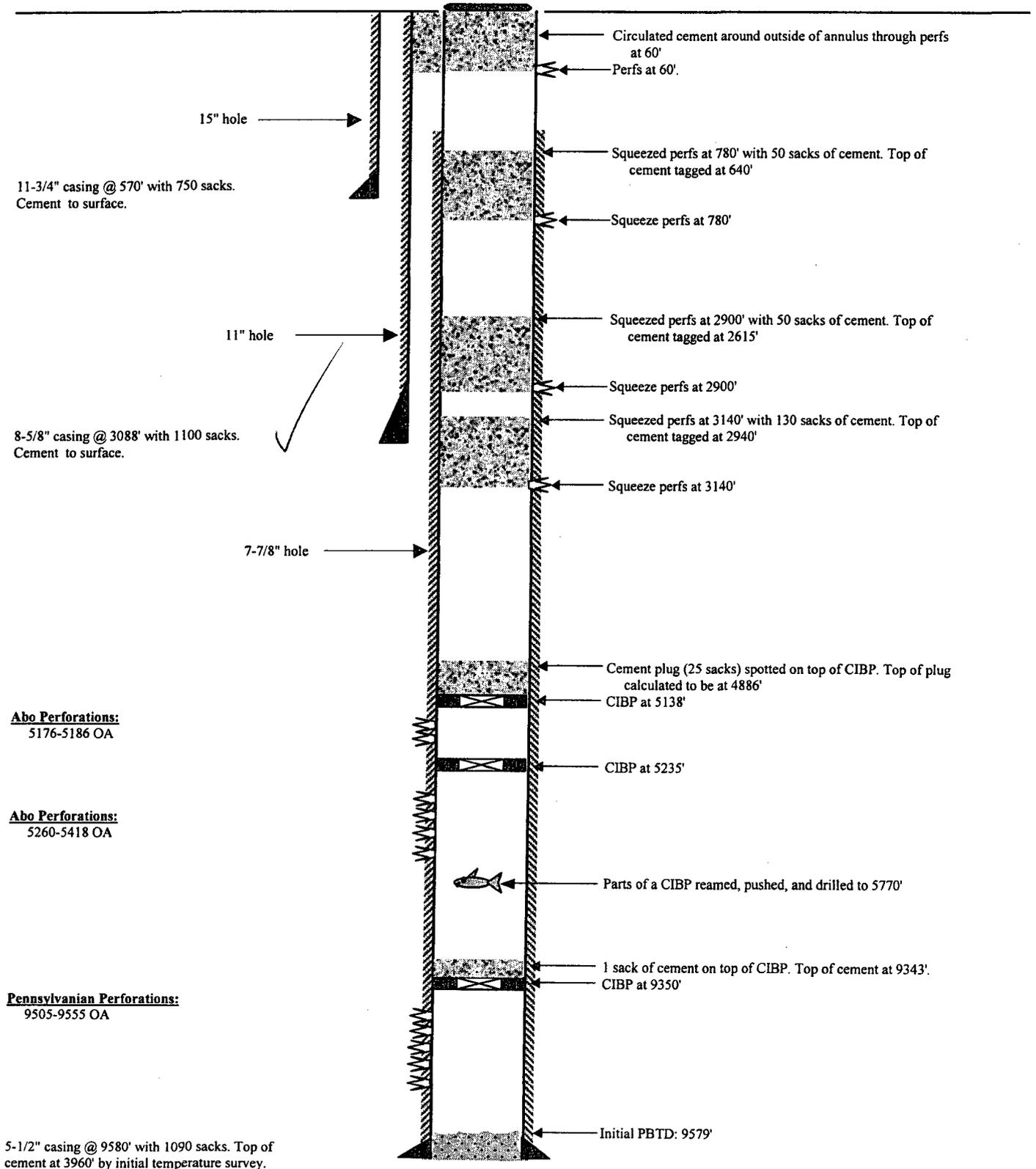
West Red Lake Unit No. 63	28733	1500' FNL 850' FEL 8-18S-27E Unit H	2250 (2206)	4/8/96	12-1/4 7-7/8	8-5/8 5-1/2	1008 2250	550 400	20' Surface ✓	1656-2068 OA	San Andres Water Injector	Active	In 3/97, stimulated new and existing San Andres perfs and converted the well to water injection (injection packer set at 1580')
West Red Lake Unit No. 64	28782	2550' FSL 990' FEL 8-18S-27E Unit I	2350 (2311)	4/16/96	12-1/4 7-7/8	8-5/8 5-1/2	1033 2350	550 460	Surface Surface ✓	1689-2126 OA	San Andres Oil Producer	Active	
Hawk "6J" Federal No. 2	29049	1650' FSL 1650' FEL 8-18S-27E Unit J	2300 (2254)	9/15/96	12-1/4 7-7/8	8-5/8 5-1/2	1087 2299	500 400	Surface Surface ✓	1293-2074 OA	San Andres - Premier Oil Producer	Active	One perf at 1293' is in the Premier sand.
Hawk "9E" Federal No. 5	29025	1650' FNL 330' FWL 9-18S-27E Unit E	2411 (2364)	8/18/96	12-1/4 7-7/8	8-5/8 5-1/2	1095 2410	500 425	Surface Surface ✓	1674-2128 OA	San Andres Oil Producer	Active	
Hawk "9E" Federal No. 6	29097	2310' FNL 750' FWL 9-18S-27E Unit E	2400 (2352)	9/25/96	12-1/4 7-7/8	8-5/8 5-1/2	1112 2399	500 450	Surface Surface ✓	1758-2190 OA	San Andres Oil Producer	Active	
Hawk "9F" Federal No. 7	29026	1500' FNL 1650' FWL 9-18S-27E Unit F	2400 (2352)	8/24/96	12-1/4 7-7/8	8-5/8 5-1/2	1011 2399	600 500	Surface Surface ✓	1580-2225 OA	San Andres Oil Producer	Active	
Hawk "9F" Federal No. 8	29093	2310' FNL 2460' FWL 9-18S-27E Unit F	2500 (2454)	10/24/96	12-1/4 7-7/8	8-5/8 5-1/2	1065 2499	500 575	Surface Surface ✓	1534-2288 OA	San Andres Oil Producer	Active	
Hawk "8O" Federal No. 9	29069	990' FSL 1885' FEL 8-18S-27E Unit O	2250 (2200)	10/1/96	12-1/4 7-7/8	8-5/8 5-1/2	1087 2249	500 400	Surface Surface ✓	1658-2092 OA	San Andres Oil Producer	Active	
Hawk "8P" Federal No. 11	29027	890' FSL 940' FEL 8-18S-27E Unit P	2350 4000 (3954)	8/12/96 6/4/00	12-1/4 7-7/8 4-3/4	8-5/8 5-1/2 4	1096 2346 2246-4000	550 450 90	Surface Surface ✓ 2225' (Est)	San Andres 1646-2140 OA Yeso 2940-3562 OA	San Andres - Yeso Oil Producer	Active	Original perfs from 1293-1509 OA were squeezed in 5/00 before the well was deepened to and completed in the Yeso with a 4" liner. The Yeso was downhole commingled with existing San Andres perfs effective 6/22/00.
Hawk "8P" Federal No. 12	29057	330' FSL 430' FEL 8-18S-27E Unit P	2400 (2352)	9/20/96	12-1/4 7-7/8	8-5/8 5-1/2	1099 2399	500 425	Surface Surface ✓	1426-2184 OA	San Andres Oil Producer	Active	

Hawk "9J" Federal No. 15	28516	2180' FSL 2290' FEL 9-18S-27E Unit J	2650 (2600)	8/21/97	12-1/4 7-7/8	8-5/8 5-1/2	1151 2650	550 525	Surface Surface	1580-2371 OA	San Andres Oil Producer	Active
Hawk "9O" Federal No. 17	29484	1170' FSL 2310' FEL 9-18S-27E Unit O	2649 (2611)	5/2/97	12-1/4 7-7/8	8-5/8 5-1/2	1184 2649	550 500	Surface Surface	1576-2360 OA	San Andres Oil Producer	Active
CC Federal No. 3	33548	1822' FSL 532' FWL 9-18S-27E Unit L	3400 (3349)	12/22/04	12-1/4 7-7/8	8-5/8 5-1/2	1174 3398	650 550	Surface Surface	San Andres 1928-2193 OA Yeso 3086-3184 OA	San Andres - Yeso Oil Producer	Temporarily Abandoned
CC Federal No. 5	34163	2310' FSL 1650' FWL 9-18S-27E Unit K	3334 (3269)	10/20/05	12-1/4 7-7/8	8-5/8 5-1/2	1186 3334	525 945	Surface Surface	2146-2226 OA	San Andres Oil Producer	Temporarily Abandoned
Mann Federal No. 1	25357	1880' FNL 2130' FWL 9-18S-27E Unit F	9811 (9480)	9/17/85	17-1/2 11 7-7/8	13-3/8 8-5/8 5-1/2	509 2100 9811	550 750 1675	Surface Surface 1000' (TS)	9251-9256	Atoka Gas Producer	Active
Abo Chalk Bluff Draw Unit No. 12	00915	550' FNL 350' FEL 17-18S-27E Unit A	5694	7/3/60	11 NR	8-5/8 4-1/2	1513 5694	800 800	Surface 1000' (TS)	5470-5569 OA	Abo Oil Producer	P&A
<sup>1</sup> Top of cement abbreviations: TS = Temperature Survey Calc = Calculated Est = Estimated ? = How determined not recorded NR = Not recorded												

**WELLBORE SCHEMATIC**

**FIELD:** Red Lake  
**WELL:** Empire Abo Unit No. 4  
**OPERATOR:** BP America Production Company  
**SEC:** 8 **TWP:** 18S **RGE:** 27E  
**LOCATION:** 2260<sup>th</sup> FNL and 400 FEL, Unit H

**COMPLETED:** P&A - 8/12/04  
**BY:** Roegner - 1/13/06  
**KB:**  
**GL:** KB Ele:  
**API #:** 30-015-00823



**Abo Perforations:**  
5176-5186 OA

**Abo Perforations:**  
5260-5418 OA

**Pennsylvanian Perforations:**  
9505-9555 OA

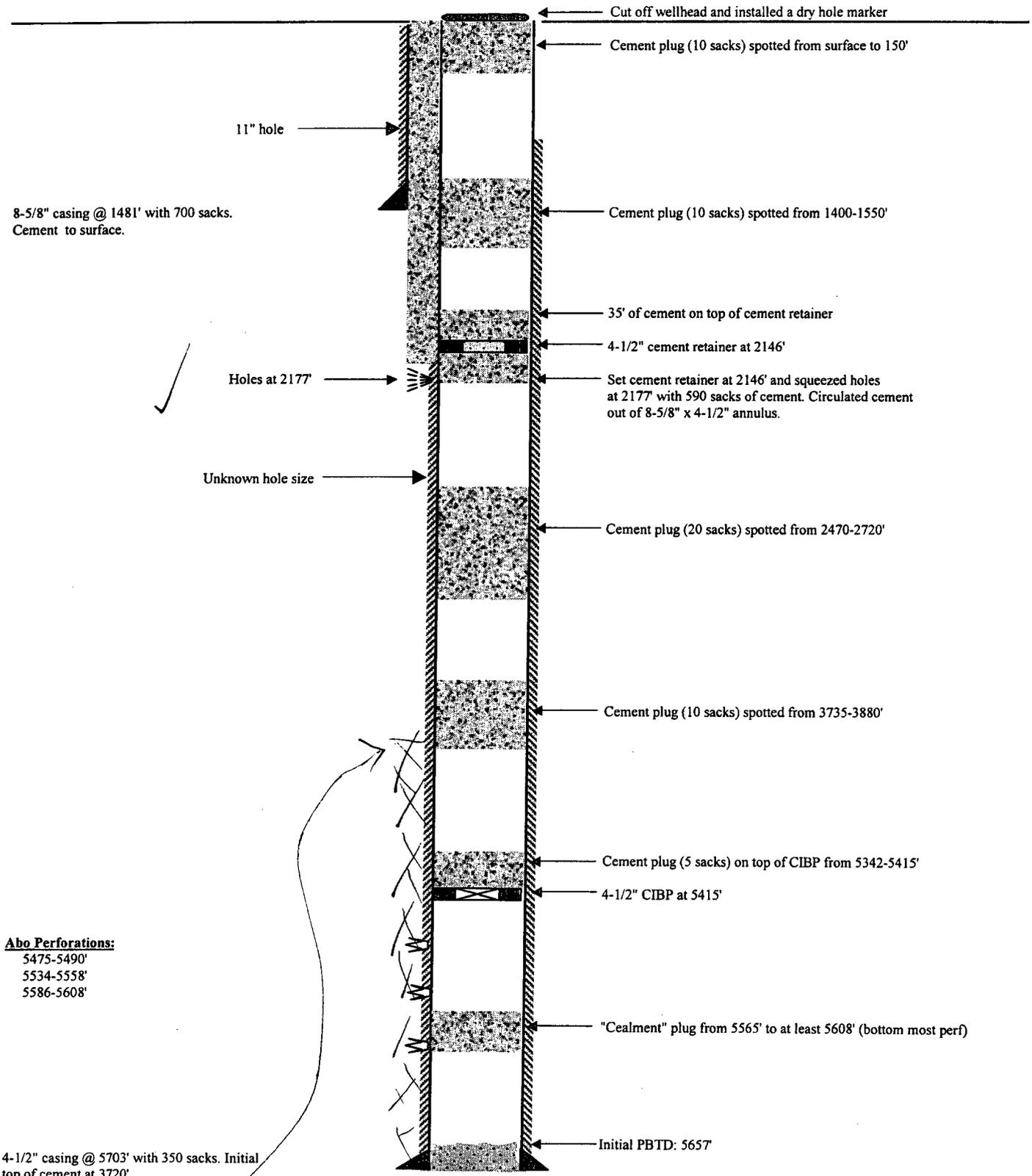
5-1/2" casing @ 9580' with 1090 sacks. Top of cement at 3960' by initial temperature survey.

ID: 9580' on  
07/05/57

# WELLBORE SCHEMATIC

**FIELD:** Red Lake  
**WELL:** Empire Abo Unit "N" No. 6  
**OPERATOR:** Arco Oil & Gas Company  
**SEC:** 9 **TWP:** 18S **RGE:** 27E  
**LOCATION:** 1980' FNL and 1980' FWL, Unit F

**COMPLETED:** P&A - 10/2/92  
**BY:** Roegner - 1/12/06  
**KB:**  
**GL:** KB Ele:  
**API #:** 30-015-00836



**Abo Perforations:**

5475-5490'  
 5534-5558'  
 5586-5608'

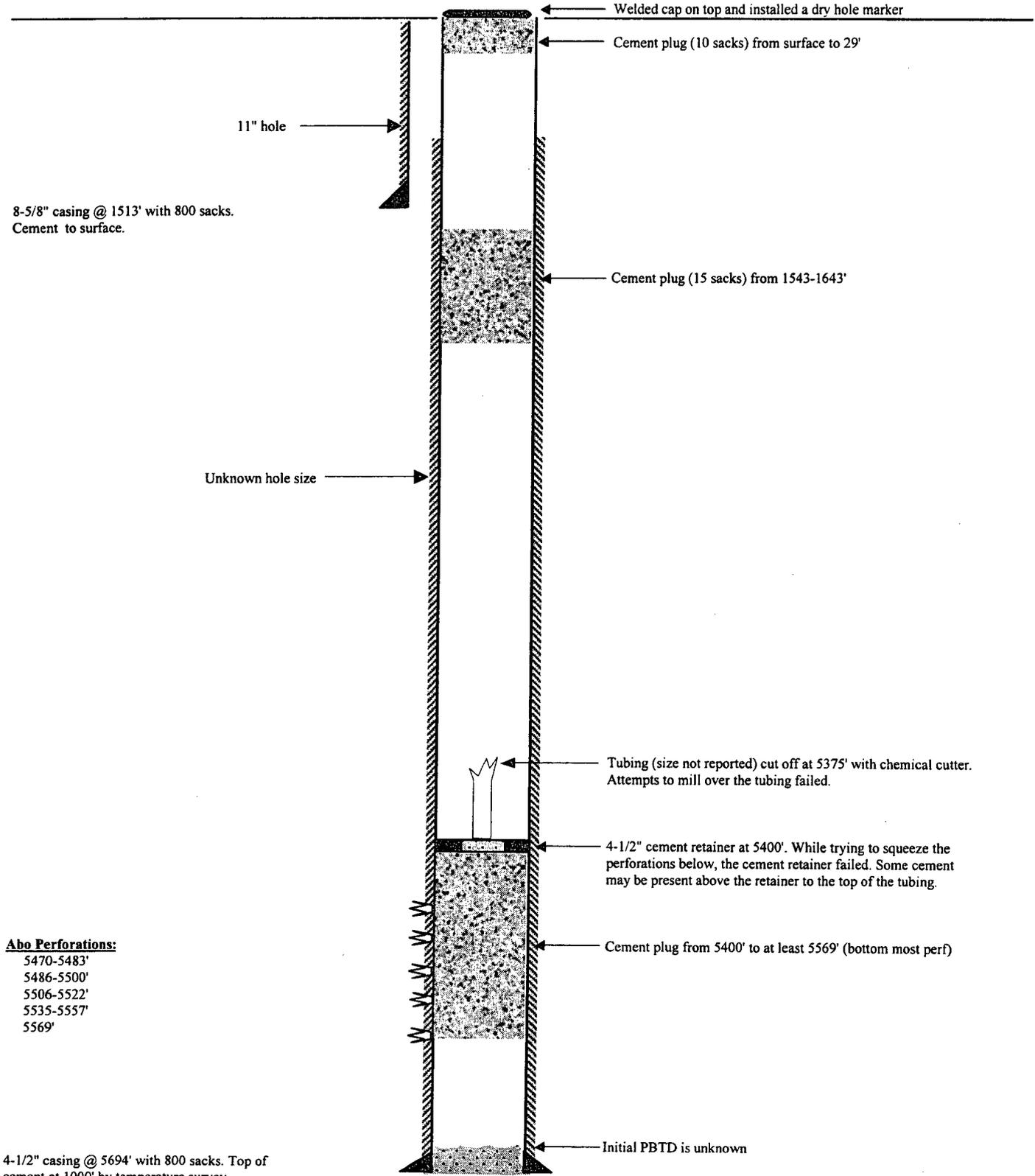
4-1/2" casing @ 5703' with 350 sacks. Initial top of cement at 3720'.

TD: 5703' on  
 02/27/60

# WELLBORE SCHEMATIC

**FIELD:** Red Lake  
**WELL:** Abo Chalk Bluff Draw Unit No. 12  
**OPERATOR:** Humble Oil & Refining Company  
**SEC:** 17 **TWP:** 18S **RGE:** 27E  
**LOCATION:** 550' FNL and 350' FEL, Unit A

**COMPLETED:** P&A - 9/11/60  
**BY:** Roegner - 1/12/06  
**KB:**  
**GL:** KB Ele:  
**API #:** 30-015-00915



**Abo Perforations:**  
 5470-5483'  
 5486-5500'  
 5506-5522'  
 5535-5557'  
 5569'

4-1/2" casing @ 5694' with 800 sacks. Top of cement at 1000' by temperature survey.

TD: 5694' on  
07/03/60

**SUMMARY OF DEVON'S APPLICATIONS TO INJECT  
AT PRESSURES ABOVE 0.2 PSI/FT IN THEIR  
WEST RED LAKE WATERFLOOD UNIT**

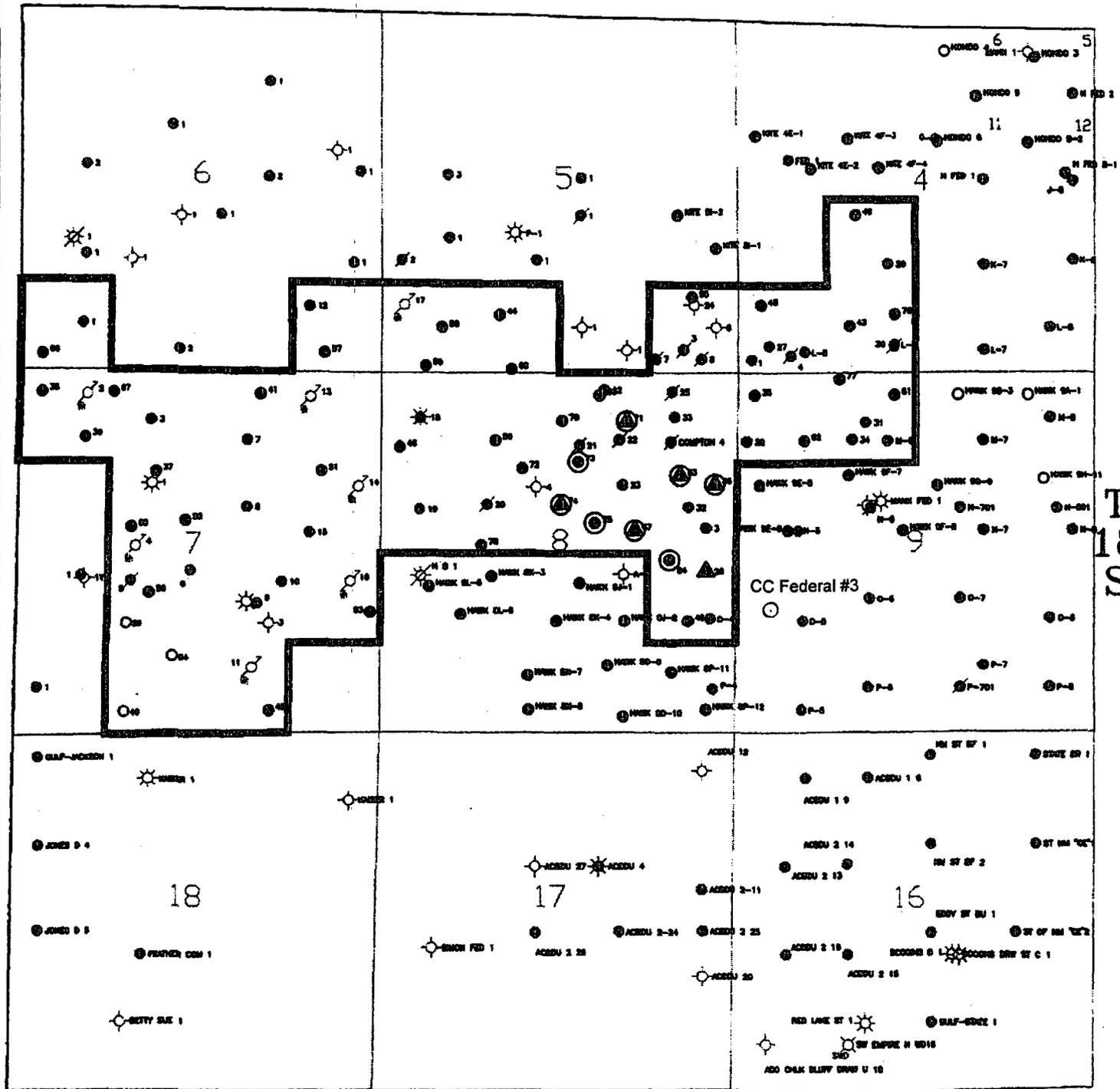
**Table 1 was attached to a January 28, 1997 cover letter from Devon to the OCD that contained their "Applications for Authorization to Inject" into six additional wells in the West Red Lake Waterflood Unit. Devon stated in that cover letter that the data contained in this table were based on the frac gradients obtained from stimulation treatments on eight wells in the area.**

**Figure 1 was also attached to Devon's January 28, 1997 cover letter and shows the locations of the eight wells from which frac gradient information was obtained and reported on their Table 1. The location of CC Federal No. 3 has been added to their map to show its proximity to the eight wells with frac gradient data.**

**Exhibit "A" was attached to a March 12, 1997 Administrative Order No. WFX-708 approving Devon's applications to inject into six additional wells in their West Red Lake Waterflood Unit. The table provides for well specific injection pressure gradients ranging from 0.6 psi/ft to 0.9 psi/ft.**

<b>TABLE I</b>			
<b>AVERAGE INJECTION WELLHEAD PRESSURE GRADIENTS</b>			
<b>WEST RED LAKE UNIT</b>			
<b>W. RED LAKE UNIT WELL NO.</b>	<b>DEPTH TO TOP PERF (FT)</b>	<b>FRAC GRADIENT (PSI/FT)</b>	<b>WELLHEAD PRESSURE GRADIENT (PSI/FT)</b>
36	1657	1.22	0.75
47	1656	1.11	0.64
63	1656	1.24	0.77
64	1689	1.25	0.78
71	1194	1.23	0.76
73	1552	1.19	0.72
74	1196	1.41	0.94
75	1580	1.32	0.85
<b>Average</b>	<b>1522</b>	<b>1.24</b>	<b>0.77</b>

R 27 E



T  
18  
S

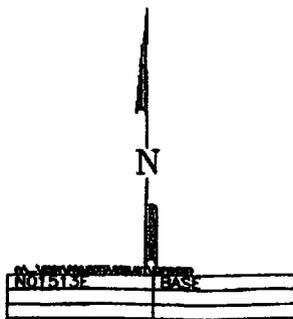
**devon**  
NEW ENERGY

**WEST RED LAKE UNIT**  
EDDY COUNTY, NEW MEXICO

**FIGURE 1**

- △ PROPOSED INJECTOR
- FRAC GRADIENT INFORMATION

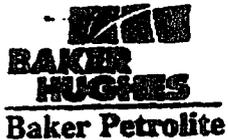
Scale in Feet  
1000 0 1000 2000 3000 400



**EXHIBIT "A"**  
**DIVISION ORDER NO. WFX-708**  
**WEST RED LAKE UNIT WATERFLOOD PROJECT**  
**APPROVED INJECTION WELLS**

Well Name	Well ID	Well Type	Well Status	Well Depth	Well Diameter	Well Completion	Well Pressure	Well Pressure		
West Red Lake Unit	26	2340' FSL & 400' FEL	I	8-18S-27E	N/A	1972'-2081'	1875'	2 3/8"	.75 psi/ft	1479 PSIG
West Red Lake Unit	36	1630' FNL & 330' FEL	H	36-18S-27E	1290'-1298'	1657'-2104'	1575'	2 3/8"	.71 psi/ft	1176 PSIG
West Red Lake Unit	47	2310' FNL & 1510' FEL	G	8-18S-27E	N/A	1656'-2068'	1575'	2 3/8"	.60 psi/ft	994 PSIG
West Red Lake Unit	63	1500' FNL & 850' FEL	H	8-18S-27E	N/A	1656'-2065'	1575'	2 3/8"	.75 psi/ft	1242 PSIG
West Red Lake Unit	71	710' FNL & 1650' FEL	B	8-18S-27E	1194'-1196'	1268'-1996'	1200'	2 3/8"	.72 psi/ft	913 PSIG
West Red Lake Unit	74	1930' FNL & 2600' FEL	G	8-18S-27E	1196'-1225'	1517'-1996'	1450'	2 3/8"	.90 psi/ft	1365 PSIG

All wells in Eddy County, New Mexico



Analysis: 24190

## Water Analysis Report from Baker Petrolite

<b>Summary of Mixing Waters</b>		
<b>Sample Number</b>	133534	112088
<b>Company</b>	DEVON ENERGY	DEVON ENERGY
<b>Lease Well Sample Location</b>	HAWK 8 WELL #3 WELLHEAD  <i>yeso</i>	HAWK 7 BATTERY FWKO  <i>SAN ANDRES</i>
<b>Anions (mg/L)</b>		
Chloride	106,253	99,569
Bicarbonate	573	497
Carbonate	0.00	0.00
Sulfate	3,912	4,489
Phosphate	0.00	0.00
Borate	0.00	0.00
Silicate	0.00	0.00
<b>Cations (mg/L)</b>		
Sodium	67,918	63,725
Magnesium	369	509
Calcium	1,749	1,770
Strontium	36.0	49.0
Barium	0.06	0.10
Iron	48.0	0.40
Potassium	523	269
Aluminum	0.00	0.00
Chromium	0.00	0.00
Copper	0.00	0.00
Lead	0.00	0.00
Manganese	0.00	0.00
Nickel	0.00	0.00
<b>Anion/Cation Ratio</b>	<b>1.00</b>	<b>1.00</b>
<b>TDS (mg/L)</b>	<b>181,381</b>	<b>170,877</b>
<b>Density (g/cm)</b>	<b>1.12</b>	<b>1.11</b>
<b>Sampling Date</b>	<b>10/26/99</b>	<b>7/28/99</b>
<b>Account Manager</b>	<b>CURRY PRUIT</b>	<b>CURRY PRUIT</b>
<b>Analyst</b>	<b>JOANNA RAGAN</b>	<b>JOANNA RAGAN</b>
<b>Analysis Date</b>		<b>8/4/99</b>
<b>pH at time of sampling</b>	<b>5.90</b>	<b>7.90</b>
<b>pH at time of analysis</b>		
<b>pH used in Calculations</b>	<b>5.90</b>	<b>7.90</b>



**MILLER CHEMICALS, INC.**

Post Office Box 298  
 Artesia, N.M. 88211-0298  
 (505) 746-1919 Artesia Office  
 (505) 392-2893 Hobbs Office  
 (505) 746-1918 Fax  
 mci@plateautel.net

WATER ANALYSIS REPORT

Company : Nearburg  
 Address :  
 Lease :  
 Well :  
 Sample Pt. : Glorietta Yeso

Date : 1/25/06  
 Date Sampled : 1/25/06  
 Analysis No. :

ANALYSIS		mg/L		* meq/L
1. pH	6.0			
2. H2S	0			
3. Specific Gravity	1.105			
4. Total Dissolved Solids		157232.7		
5. Suspended Solids				
6. Dissolved Oxygen				
7. Dissolved CO2				
8. Oil In Water				
9. Phenolphthalein Alkalinity (CaCO3)				
10. Methyl Orange Alkalinity (CaCO3)				
11. Bicarbonate	HCO3	878.4	HCO3	14.4
12. Chloride	Cl	92868.0	Cl	2619.7
13. Sulfate	SO4	3125.0	SO4	65.1
14. Calcium	Ca	5600.0	Ca	279.4
15. Magnesium	Mg	975.3	Mg	80.2
16. Sodium (calculated)	Na	53784.8	Na	2339.5
17. Iron	Fe	1.3		
18. Barium	Ba	0.0		
19. Strontium	Sr	0.0		
20. Total Hardness (CaCO3)		18000.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt	X meq/L	= mg/L
+-----+				
279  *Ca <----- *HCO3   14	Ca (HCO3) 2	81.0	14.4	1167
-----  /----->  -----	CaSO4	68.1	65.1	4429
80  *Mg -----> *SO4   65	CaCl2	55.5	200.0	11096
-----  <-----/  -----	Mg (HCO3) 2	73.2		
2339  *Na -----> *Cl   2620	MgSO4	60.2		
+-----+	MgCl2	47.6	80.2	3820
Saturation Values Dist. Water 20 C	NaHCO3	84.0		
CaCO3 13 mg/L	Na2SO4	71.0		
CaSO4 * 2H2O 2090 mg/L	NaCl	58.4	2339.5	136720
BaSO4 2.4 mg/L				

REMARKS:



**MILLER CHEMICALS, INC.**

Post Office Box 298  
 Artesia, N.M. 88211-0298  
 (505) 746-1919 Artesia Office  
 (505) 392-2893 Hobbs Office  
 (505) 746-1918 Fax  
 mci@plateautel.net

SCALE TENDENCY REPORT

Company	: Nearburg	Date	: 1/25/06
Address	:	Date Sampled	: 1/25/06
Lease	:	Analysis No.	:
Well	:	Analyst	:
Sample Pt.	: Glorietta Yeso		

STABILITY INDEX CALCULATIONS  
 (Stiff-Davis Method)  
 CaCO3 Scaling Tendency

S.I. = 0.4 at 70 deg. F or 21 deg. C  
 S.I. = 0.5 at 90 deg. F or 32 deg. C  
 S.I. = 0.6 at 110 deg. F or 43 deg. C  
 S.I. = 0.6 at 130 deg. F or 54 deg. C  
 S.I. = 0.7 at 150 deg. F or 66 deg. C

\*\*\*\*\*

CALCIUM SULFATE SCALING TENDENCY CALCULATIONS  
 (Skillman-McDonald-Stiff Method)  
 Calcium Sulfate

S = 3152 at 70 deg. F or 21 deg C  
 S = 3363 at 90 deg. F or 32 deg C  
 S = 3508 at 110 deg. F or 43 deg C  
 S = 3570 at 130 deg. F or 54 deg C  
 S = 3580 at 150 deg. F or 66 deg C

Respectfully submitted, Josh Miller

**Jones, William V., EMNRD**

**From:** Jones, William V., EMNRD  
**Sent:** Monday, March 20, 2006 4:20 PM  
**To:** 'omundsdry@hollandhart.com'  
**Cc:** Macquesten, Gail, EMNRD; Ezeanyim, Richard, EMNRD; Arrant, Bryan, EMNRD; Catanach, David, EMNRD  
**Subject:** SWD Application: CC Federal Well No. 3 30-015-33548

Ms.Munds-Dry, Esq.  
Holland & Hart LLP

Your application on behalf of Nearburg Producing Company was received here on March 10, 2006.

We have reviewed the application and have the following

Major problems:

- 1) Nearburg Producing Co (OGRD 15742) has 7 inactive wells out of 181 total wells and is therefore not eligible for approval of an injection permit.
- 2) Our records show that SDX or FDW, Inc is the operator of this well. When will Nearburg obtain a change of operator?

Concerns after the Major Problems are overcome:

- 1) In regards to the request for an initial injection pressure limit gradient of 0.77 psi/ft which is over the normal 0.2 psi/ft based on analogous wells nearby:

While it is common for shallow wells to have large fracture gradients, the data in this case should be specific to the well itself. This well is being permitted as a simple disposal well and not as a well to aide in secondary recovery operations. If Nearburg wants an increased pressure limit immediately, please run a valid step rate test to prove that the fracture pressure is higher than 0.2. In addition, send the treatment report containing the ISIP of the acid job done prior to the fracture treatment on this well in this same interval. Since it is apparent that Nearburg will be requesting a MUCH higher pressure limit at this shallow depth, the injection permit will also require periodic injection surveys. The application referenced WFX-708 as containing the analogous reasoning. This permit does not contain the actual ISIPs that the table in the permit references. In addition, Devon promised to run periodic injection surveys. Our records for this permit do not show that Devon ever ran these promised surveys. I am surprised this injection pressure increase was granted on the reference of such sparse data and without going to hearing.

Due to Rule 40, this application cannot be processed and will be cancelled. Please let me know when the change of operator occurs and the inactive wells return to compliance and at that time, request that this application be reinstated. I will retain the paperwork in anticipation that this may be re-instated.

Regards,

William V. Jones P.E.

Engineering Bureau

Oil Conservation Division

Santa Fe

*resolved 3/30/06*

*Part of Nearburg (OK)*

*well still at 0.2 psi/ft*



ENERGY CORPORATION

20 North Broadway, Suite 1500  
Oklahoma City, Oklahoma 73102-8260

Telephone 405/235-3611  
FAX 405/552-4550

January 28, 1997

State of New Mexico  
Energy, Minerals and Natural Resources Department  
Oil Conservation Division  
2040 South Pacheco  
Santa Fe, NM 88505

Attention: Ben Stone

**RE: West Red Lake Unit #26, #36, #47, #63, #71, & #74  
Section 8-T18S-R27E  
Eddy County, New Mexico**

Gentlemen:

Enclosed please find our Application for Authorization to Inject for each of the above captioned wells.

Devon Energy Corporation also requests that the maximum injection pressures for these wells be higher than .2 psi per foot of depth to the uppermost injection perforation. This request is based on the data in Table I which shows the frac gradients obtained from stimulation treatments on wells in the area. Figure I is a map showing the location of the proposed injectors and the wells used in this study.

The frac gradient is used to calculate the maximum surface injection pressure (injection wellhead pressure gradient x depth to the uppermost perforation = maximum surface injection pressure) that can be attained without fracturing the formation. Provided the calculated wellhead pressure gradient is not exceeded, the formation cannot be fractured and injection fluids will be contained in the formation. This has been confirmed through injection surveys run on existing injection wells in the unit.

Based on the attached information, Devon respectfully request that the **maximum wellhead pressure gradient for the proposed injection wells be .77 psi per foot of depth to the uppermost perforation.** This is the average for the eight wells in the area of interest. We will also periodically run injection surveys to ensure that injection is confined to the San Andres formation.

c:\wrlupmt

1

? NOT DONE

**Injection Permit Checklist**

**SWD Order Number** 1025 **Dates:** Division Approved \_\_\_\_\_ District Approved \_\_\_\_\_

**Well Name/Num:** CC FEDERAL #3 **Date Spudded:** 2004

**API Num:** (30-) 015-33548 **County:** EDDY

**Footages:** 1822 FSL 532 FWL **Sec** 9 **Tsp** 185 **Rge** 27E

**Operator Name:** NEARBURG PRODUCING COMPANY **Contact:** BRIAN HUZZEY  
BHUZZEY@nearburg.com  
**Operator Address:** 3300 N A ST. BLDG 2 SUITE 120 OCEAN MOUNDS-DRY (HEA)  
MIDL, TX, 79705 OMUNDS DRY @ HOLLAND HART.COM

15748

	Hole/Pipe Sizes	Depths	Cement	Top/Method
Surface				
Intermediate				
Production				1928
Last DV Tool				3856
Open Hole/Liner				386
Plug Back Depth				

**Diagrams Included (Y/N):** Before Conversion  After Conversion   
**Checks (Y/N):** ELogs in Imaging  Well File Reviewed

Intervals:	Depths	Formation	Producing (Yes/No)
Salt/Potash	OK		
Capitan Reef	North of Reef		
In Reef, Cliff House, Etc:			
Formation Above	GBG		
Top Inj Interval	1928	SA	
Bottom Inj Interval	2193	SA	
Formation Below	G-LOR		

*operator = FDW, #10  
 need change of  
 Operator  
 Bot of SA = ? OK  
 of FRM 1930-1940 = SW?*

**Water Analysis Included (Y/N):** Fresh Water  Injection Zone  Disposal Waters   
**Affirmative Statement Included (Y/N):**

**Surface Owner:** BLM **Mineral Owner(s):**   
**Checks (Y/N):** Newspaper Notice  Well Table  Adequate Well Table   
**Adequate Certified Notice:** Surface Owner  AOR Owners  CID/Potash/Others \_\_\_\_\_  
**AOR Num Active Wells:** 30 **Repairs?** \_\_\_\_\_ **Producing in Injection Interval:** Yes  
**AOR Number of P&A Wells:** 3 **Diagrams Included?**  **Repairs Required?** \_\_\_\_\_

*N needed:  
 SIP on ACID  
 JOB  
 +  
 Step Rate Test  
 7/182 wells  
 OUT of Cycle*

**Data to Generate New AOR Table**  **New Table Generated? (Y/N)**

	STR	E-W Footages	N-S Footages
Wellsite			
Northeast			
North			
Northwest			
West			
Southwest			
South			
Southeast			
East			

**Conditions of Approval:**  
 1. INT Profile +  
 2. inj profile each TIME max  
 3. inj flow is instead

**RBDMS Updated (Y/N)** \_\_\_\_\_  
**UIC Form Completed (Y/N)** \_\_\_\_\_  
**This Form completed** \_\_\_\_\_



37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
Premier Sand	1259'	1305'	Sandstone
San Andres	1610'	2085'	Dolomite
		DEPTH	ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.. (continued from the front)
			N/A

38. GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH
Bowers	493'	+2992
Queen	685'	+2800
Grayburg	1034'	+2451
Premier	1259'	+2226
San Andres	1305'	+2180

RECEIVED  
AUG 12 12 30 PM '96

**Jones, William V., EMNRD**

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**From:** Barton, Van, EMNRD  
**Sent:** Thursday, March 30, 2006 11:02 AM  
**To:** Macquesten, Gail, EMNRD; Jones, William V., EMNRD  
**Cc:** Gum, Tim, EMNRD  
**Subject:** RE: Nearburg

Nearburg did "walk" the number 11 through. I do think the rest of the story needs to be told. Nearburg did the physical work on the well over a year ago. The paper work they sent in was incorrect, physically impossible, and something that could not be approved. I gave them a courtesy call, instead of just denying it. About 5 months after that they came to the office to see why the well was not TA'ed. On Tuesday they came in 1.5 hours late for their meeting and gave me the paperwork. I put it on top and approved it yesterday.

The # 9 we received on 3-24-06. Please note that this is an intent to TA. It IS approved. Nearburg still has to do the testing and associated paperwork. Their representation that it is TA'ed is incorrect.

As far as the imaging, Linda was out for 5 days and got stuff together and scanned for another 6 days. After this scanning effort we learned that the information scanned did not get entered into the system. She is in the process of redoing the scanning.

Will,

The approved copy of the # 11 is in a stack of about 1500 – 2000 other papers. Can you just take my solemn oath that I approved it yesterday? I even put it into RBDMS!

---

**From:** Macquesten, Gail, EMNRD  
**Sent:** Wednesday, March 29, 2006 3:34 PM  
**To:** Barton, Van, EMNRD; Jones, William V., EMNRD  
**Subject:** Nearburg

Hi Van and Will --

I got a call from Nearburg today regarding their inactive well list and Rule 40 compliance. Right now, they show 6 inactive wells. They are only allowed 5. They are trying to get at least one well off the list so they will be in compliance. (They have some permits pending in front of Will, so they are anxious to get in compliance quickly.) According to Nearburg, they very recently filed some sundries indicating that the following 2 wells have been TA'd:

South Boyd 27 #9 -- 30-015-29297

South Boyd 27 #1 -- 30-015-30817

My understanding is that they filed the sundry on the #9 well just a day or two ago, and don't have approval on it yet. But they say they walked the sundry through on the #11 well, and that Van has approved it. It hasn't shown up in imaging yet, and the #11 well still appears on the list.

Van, I wasn't able to get in touch with you on Wednesday to verify this, because you were out of the office. Nearburg will be calling you in the morning to see if they really do have approval on the #11. If they do, would you please let Will Jones know, and fax him a copy of the approved sundry, so he won't hold up the permitting process? (I'll be in hearings most of the morning, and in Albuquerque in the afternoon.)

If it isn't approved, please let me know. If they won't be able to get a well off the list in the next day or so, they will want to enter into an agreed compliance order. We're hoping to avoid that, but if we need to do it, we'll do it.

Thanks- Gail

3/30/2006