

1/12/99 | 1/27/99 | BS | MW | SWD

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION  
- Engineering Bureau -

ADMINISTRATIVE APPLICATION COVERSHEET

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS

Application Acronyms:

- [NSP-Non-Standard Proration Unit] [NSL-Non-Standard Location]
- [DD-Directional Drilling] [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 - Directional Drilling
- NSL  NSP  DD  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

[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

AOR TR  
ACR  
PJA  
O  
O  
O

[3] INFORMATION / DATA SUBMITTED IS COMPLETE - Statement of Understanding

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I further verify that all applicable API Numbers are included. I understand that any omission of data, information or notification is cause to have the application package returned with no action taken.

JAMES BRUCE  
P.O. BOX 1056  
SANTA FE, NM 87504

Note: Statement must be completed by an individual with supervisory capacity.

Print or Type Name \_\_\_\_\_ Signature \_\_\_\_\_ Title *Attorney for Applicant* \_\_\_\_\_ Date *1/12/99* \_\_\_\_\_

**JAMES BRUCE**  
ATTORNEY AT LAW

POST OFFICE BOX 1056  
SANTA FE, NEW MEXICO 87504

SUITE B  
612 OLD SANTA FE TRAIL  
SANTA FE, NEW MEXICO 87501

(505) 982-2043  
(505) 982-2151 (FAX)

January 12, 1999

**Hand Delivered**

David Catanach  
Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505

Dear Mr. Catanach:

Enclosed is an administrative application by Santa Fe Energy Resources, Inc. for injection authorization. Please call me if you need anything further on this matter.

Very truly yours,

A handwritten signature in cursive script that reads "James Bruce". The signature is written in dark ink and is positioned above the typed name.

James Bruce

Attorney for Santa Fe  
Energy Resources, Inc.



**Santa Fe Energy Resources, Inc.**

**Don D. DeCarlo**  
**Division Manager, Production**

January 11, 1999

New Mexico Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505

Attn: David Catanach, Examiner

Dear David,

Enclosed is a copy of an Application for Authority to Inject (NMOCD Form C-108) for the Old Ranch Canyon "7" Fed #5, in Section 7, Township 22 South, Range 24 East, Eddy County, New Mexico. If you have any questions regarding this new application, please contact me at (915) 686-6709.

Sincerely,

A handwritten signature in black ink, appearing to read "Don Rogers", with a long horizontal flourish extending to the right.

Don Rogers

Project Manager - Indian Basin Area

c: D. D. Decarlo  
C. S. Leonard  
A. W. Marino  
W. R. Adams

**Application for Authorization to Inject  
New Mexico Oil Conservation Division  
Energy and Minerals Department  
Form C-108**

I. Purpose :  Secondary Recovery  Pressure Maintenance  Disposal  Storage

Application Qualifies for Administrative Approval?  Yes  No

II. Operator : Santa Fe Energy Resources, Inc.

Address : 550 W. Texas, Suite 1330, Midland, Texas 79701

Contact Party : Don Rogers - Project Manager Phone : 915-686-6709

III. The Old Ranch Canyon "7" Fed #5 is to be drilled 1,350' FNL & 2,350' FWL, Section 7, T22S-R24E, Eddy Co., N.M. This well is proposed as an 11,800' Devonian-Montoya salt water disposal well. Produced water for disposal will come from the Cisco-Canyon formation at approximately 7,800'-8,400'.

Attached are well data sheets detailing the proposed design and specifications for the casing, tubing, and injection packer on the subject well.

IV. Is this an expansion of an existing project?  Yes  No

If yes, give the Division Order number authorizing the project. N/A

V. Attached is a map identifying the proposed well's area of review. This map identifies all wells and leases within two miles of the proposed disposal well and a one-half mile radius circle has been drawn around the proposed disposal well.

VI. There is one well within the area of review, the Old Ranch Knoll "8" Fed Com #4 (Sec. 8-T22S-R24E), which penetrated the proposed Devonian-Montoya injection zone. It is currently being used for disposal.

VII. 1. The average and maximum injection rates are expected to be  $\pm 25,000$  BWPD and  $\pm 35,000$  BWPD, respectively, of formation water from the Cisco-Canyon formation.

2. The system will be closed. Water will be transported via pipeline from the EIB Central Tank Battery in the NE/SW of Section 8 and a point in the East Indian Basin Gathering System in the SW/4 of Section 5.

3. The average and maximum injection pressures are expected to be 1000 psi and 2000 psi, respectively.

4. No water samples are available from the Devonian-Montoya disposal zone for compatibility tests. The Devonian formation, however, is widely used in the area for the disposal of Cisco-Canyon produced water. Cisco-Canyon water analyses are attached.

5. No known samples of Devonian-Montoya produced water exist from the immediate area.

VIII. The proposed injection zone for the Cisco-Canyon produced water is the Devonian-Montoya from 11,000'-11,800'. Lithologically, these two zones are similar, consisting of dolomite and cherty dolomites characterized by intercrystalline to vuggy porosity. The proposed injection zone will be selected porous intervals across an 800 foot thick Devonian-Montoya section. In October, 1994, Santa Fe drilled a fresh water supply well in the NE/SW of Section 8. The well was drilled to a depth of 190 feet, but did not encounter any water bearing formations and was plugged and abandoned. There are no known sources of drinking water in the immediate area.

**Santa Fe Energy Resources, Inc.**  
**Old Ranch Canyon "7" Fed #5**  
**Form C-108 - Application for Authorization to Inject, cont.**

- IX. The Devonian-Montoya open hole section between 11,000' and 11,800' will be acidized with 20% HCl to optimize injectivity, if necessary.
- X. We plan to run porosity and resistivity logs across the entire open hole interval in the Devonian-Montoya formation.
- XI. There are no known fresh water wells within one mile of the proposed well.
- XII. Santa Fe Energy has examined available geologic and engineering data and has concluded that there is no known underground source of drinking water with open faults or other hydrologic connection which could communicate with the disposed water.

XIII. Proof of Notice

Surface owner of proposed well : **Department of the Interior**  
**Bureau of Land Management**  
**P. O. Box 27115**  
**Santa Fe, New Mexico 87502-7115**

Leasehold owners or operators on adjacent property within one-half mile of the proposed disposal well location :

**Yates Petroleum Corporation**  
**105 South Fourth Street**  
**Artesia, New Mexico 88210**

Attached is an Affidavit of Publication to verify that a legal advertisement was published on December 17<sup>th</sup> and 24<sup>th</sup>, 1998, per the requirements of this application. Verification of certified letter delivery to the parties listed above are also included.

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 : Don Rogers Title : Project Manager  
Signature :  Date : 1/11/99

- XC : NMOCD - Santa Fe
- NMOCD - Artesia
- BLM - Carlsbad
- Yates Petroleum - Artesia
- James Bruce - Santa Fe

**Santa Fe Energy Resources, Inc.**  
**Old Ranch Canyon "7" Fed #5**  
**Application for Authorization to Inject**  
**Well Data for NMOCD Form C-108**

III. A. (1) Name and Location

Federal Lse : NM-81219  
Well Name : Old Ranch Canyon "7" Fed #5  
Location : 07C-T22S-R24E (1,350' FNL & 2,350' FWL)

III. A. (2) Casing and Cement

Surface Csg : Drill 17½" hole to approximately 1,600'. Run 13-3/8" 54.5# K-55 ST&C csg. Cmt with 655 sx "C" 35:65:6 Poz + 2% CaCl + 0.25 pps celloflake, yld 1.9 ft³/sk @ 12.75 ppg and 335 sx "C" + 2% CaCl<sub>2</sub>, yld 1.34 ft³/sk @ 14.8 ppg

Injection Csg : Drill 12¼" hole to approximately 11,000'. Run 9-5/8" L-80 43.5# LT&C. DV Tool @ ± 7,000'. Cmt 1st stage with 1,060 sx "H" 50:50:2 Poz, 0.4% D60, 0.2% D65, yld 1.32 ft³/sk @ 14.2 ppg. Cmt 2nd stage w/1,165 sx "H" 35:65:6 Poz + 0.25 pps celloflake, yld 2.04 ft³/sk @ 11.44 ppg and 205 sx H-Neat, yld 1.18 ft³/sk @ 15.6 ppg.

Open Hole : Drill 8¾" hole to ± 11,800' as open hole section.

III. A. (3) Injection Tubing : 7" 23.0# L-80 MMS tubing, internally plastic coated.

III. A. (4) Injection Packer : 9-5/8" X 4½" Guiberson Uni-Packer VI (or equivalent) with on/off tool, set @ ± 10,600'

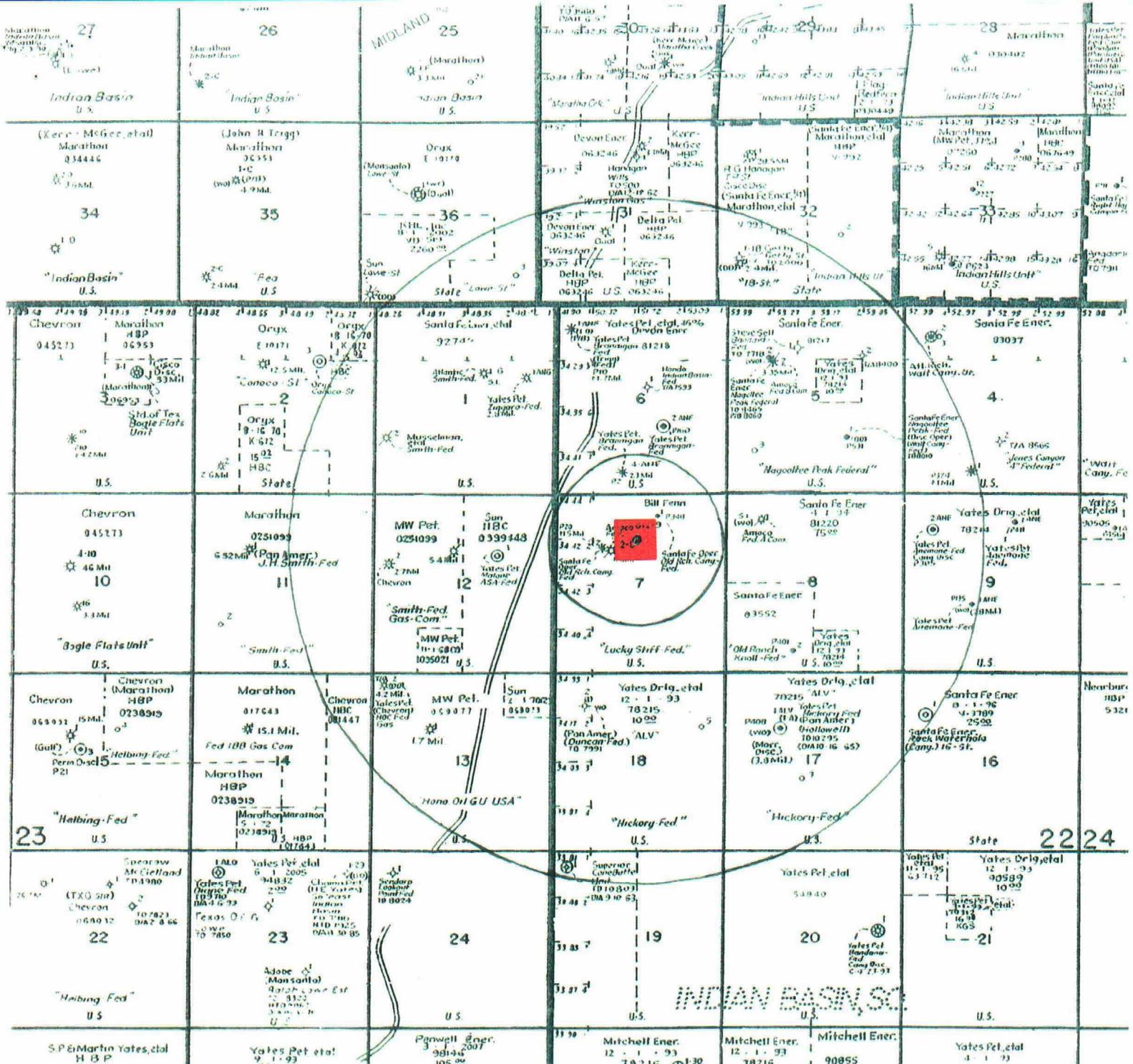
III. B. (1) Inject. Formation : Devonian-Montoya

III. B. (2) Injection Interval : Selected porous intervals within open-hole section of the Devonian-Montoya formation from 11,000'-11,800'.

III. B. (3) The referenced well is to be used strictly for the purpose of water disposal.

III. B. (4) We do not plan to test any other intervals in this wellbore.

III. B. (5) Morrow Sands have produced in the area between 9,700'-10,000'. No formations below the Devonian-Montoya are productive in the area.



**Santa Fe Energy Resources, Inc.**  
**Central Division**  
**Midland, Texas**

**EDDY COUNTY, NEW MEXICO**

**OLD RANCH CANYON "7" FED #5**  
**AREA OF REVIEW**  
**SEC. 7, T22S, R24E**

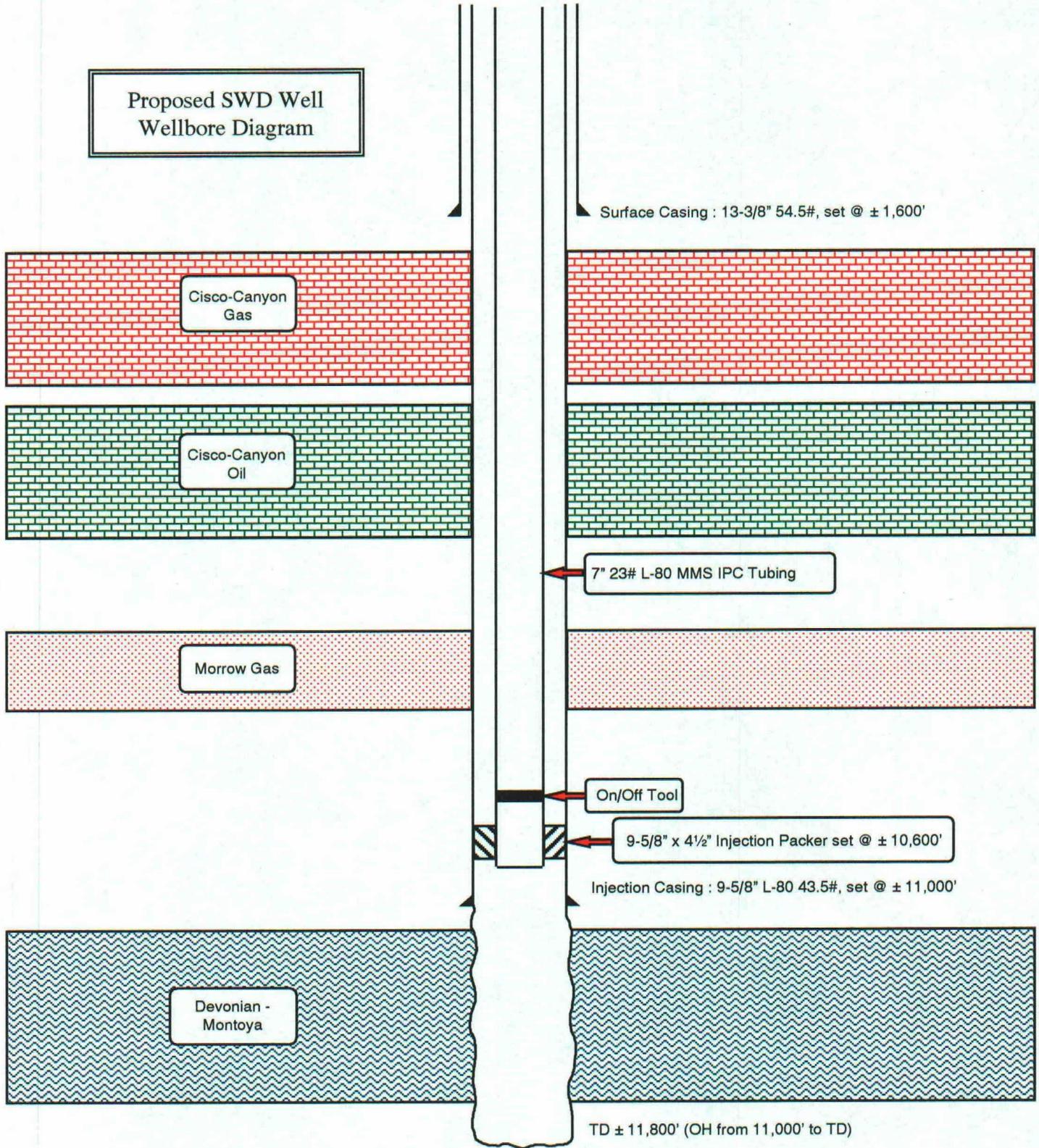
**DATE: 12/17/98**

**FILE:**

**SCALE: 1"=4000'**

**Old Ranch Canyon "7" Fed #5**  
07C-22S-24E  
Eddy County, NM

Proposed SWD Well  
Wellbore Diagram



# Affidavit of Publication

No 19526

State of New Mexico,  
County of Eddy, ss.

Amy McKay,  
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:

December 17, 19 98  
December 24, 19 98  
\_\_\_\_\_, 19 \_\_\_\_  
\_\_\_\_\_, 19 \_\_\_\_  
\_\_\_\_\_, 19 \_\_\_\_  
\_\_\_\_\_, 19 \_\_\_\_

That the cost of publication is \$ 44.40,  
and that payment thereof has been made and will be assessed as court costs.

Amy McKay

Subscribed and sworn to before me this  
28 day of December, 19 98

Donna M. Crump

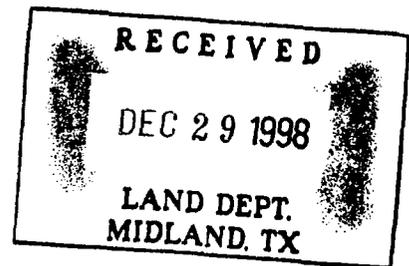
My commission expires 8-1-02  
Notary Public

December 17, 24, 1998

Santa Fe Energy Resources, Inc. has made application to drill the Old Ranch Canyon "7" fed #5 to a depth of 11,800' for the sole purpose of disposing of formation water into the Devonian and Montoya formations at selected intervals from 11,000' to 11,800'. The proposed well location is 1,350' FNL and 2,350' FWL of section 7, T22S, R24E, Eddy County, New Mexico. SFER plans to dispose of approximately 30,000 barrels of water per day at an estimated surface pressure of 1,000 psi.

Interested parties must file objections or requests for hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico, 87501 within 15 days of the publication of this notice.

Applicant: Santa Fe Energy Resources, Inc.  
550 W. Texas, Suite 1330  
Midland, Texas 79701  
Phone: (915) 687-3551  
Attn: Don Rogers





## Santa Fe Energy Resources, Inc.

Don D. DeCarlo  
Division Manager, Production

January 11, 1999

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

U. S. Department of the Interior  
Bureau of Land Management  
P. O. Box 1778  
Carlsbad, New Mexico 88221-1778

Dear Sirs,

Enclosed is a copy of an Application for Authority to Inject (NMOCD Form C-108) which has been filed by Santa Fe Energy with the New Mexico Oil Conservation Division regarding a new disposal well, the Old Ranch Canyon "7" Fed #5, in Section 7, Township 22 South, Range 24 East, Eddy County, New Mexico.

This notification is being sent as part of the permitting process to notify the surface owner surrounding the proposed SWD well. If you have any questions regarding this application, please contact me at (915) 686-6709.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Rogers', with a stylized flourish at the end.

Don Rogers  
Project Manager - Indian Basin Area

c: D. D. Decarlo  
C. S. Leonard  
A. W. Marino  
W. R. Adams



**Santa Fe Energy Resources, Inc.**

Don D. DeCarlo  
Division Manager, Production

January 11, 1999

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

Yates Petroleum Corporation  
105 South Fourth Street  
Artesia, N.M. 88210

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If you object to this application, you should notify the Oil Conservation Division in writing within 15 days of the date of this letter. The Division's address is 2040 South Pacheco Street, Santa Fe, New Mexico 87505. Failure to object will preclude you from contesting this matter at a later date.

Sincerely,

A handwritten signature in black ink, appearing to read "Don Rogers".

Don Rogers  
Project Manager - Indian Basin Area

c: D. D. Decarlo  
C. S. Leonard  
A. W. Marino  
W. R. Adams

Z 558 008 341

US Postal Service  
**Receipt for Certified Mail**  
No Insurance Coverage Provided.  
Do not use for International Mail (See reverse)

Sent to <b>U.S. Department of Int.</b>	
<b>Bureau of Land Management</b>	
Street & Number	
<b>P.O. Box 1778</b>	
Post Office, State, & ZIP Code	
<b>Carlsbad, NM 88221</b>	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	<b>yes</b>
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	

PS Form 3800, April 1995

**Fold at line over top of envelope to the right of the return address**

**CERTIFIED**

Z 558 008 341

**MAIL**

Z 558 008 340

US Postal Service  
**Receipt for Certified Mail**  
No Insurance Coverage Provided.  
Do not use for International Mail (See reverse)

Sent to <b>Yates Petroleum Corp.</b>	
Street & Number	
<b>105 S. 4th St.</b>	
Post Office, State, & ZIP Code	
<b>Artesia, NM 88210</b>	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	<b>Yes</b>
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	

PS Form 3800, April 1995

**Fold at line over top of envelope to the right of the return address**

**CERTIFIED**

Z 558 008 340

**MAIL**