



**JAMES BRUCE**  
ATTORNEY AT LAW

POST OFFICE BOX 1056  
SANTA FE, NEW MEXICO 87504

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September 22, 1999

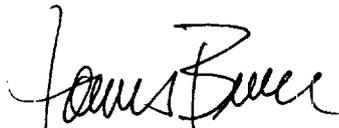
**Hand Delivered**

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

Dear Mr. Catanach:

Enclosed is an application for administrative approval of a salt water disposal well, filed on behalf of Santa Fe Snyder Corporation. Also enclosed are a copy of the notice letter to the offset operators and surface owner, and a copy of the notice sent to the Carlsbad newspaper for publication.

Very truly yours,

  
James Bruce

Attorney for Santa Fe Snyder Corporation

cc: Artesia District Office (w/encl.)

**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 Snyder Corporation

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

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

✓ III. The Jones Canyon "4" Fed #6-WD is to be drilled 2,600' FNL & 2,300' FEL, Section 4, T22S-R24E, Eddy Co., N.M. This well is proposed as an 12,000' 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 production facilities in Section 4-T22S-R24E and Section 34-T21S-R24E.

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'-12,000'. 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 a 1,000 foot thick Devonian-Montoya section. In October, 1994, Santa Fe Snyder 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.

ILLEGIBLE

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MS  
2200/3

**Santa Fe Snyder Corporation  
Jones Canyon "4" Fed #6-WD  
Form C-108 - Application for Authorization to Inject, cont.**

- IX. The Devonian-Montoya open hole section between 11,000' and 12,000' 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 Snyder Corp. 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**

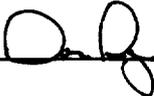
**Marathon Oil Corporation  
P. O. Box 552  
Midland, Texas 79702-0552**

Attached is an Affidavit of Publication to verify that a legal advertisement was published on September xx<sup>th</sup> and xx<sup>th</sup>, 1999, 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 Engineer

Signature :  Date : 8/27/99

- XC : NMOCD - Santa Fe  
NMOCD - Artesia  
BLM - Carlsbad  
Yates Petroleum - Artesia  
Marathon Oil Co. - Midland  
James Bruce - Santa Fe

**Santa Fe Snyder Corporation**  
**Jones Canyon "4" Fed #6-WD**  
**Form C-108 - Application for Authorization to Inject, cont.**  
**Well Data for NMOCD Form C-108**

III. A. (1) ✓ Name and Location

Federal Lse : NM-83037  
Well Name : Jones Canyon "4" Fed #6-WD  
Location : Section 4-T22S-R24E (2,600' FNL & 2,300' FEL) (under G)

III. A. (2) ✓ Casing and Cement

Surface Csg : Drill 26" hole to approximately 600'. Run 20" 94# X-56 Buttress csg. Cmt w/100 sx Thix, 600 sx 65:35:6 & 300 sx "C" + 2% CaCl

Intermediate 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 ft<sup>3</sup>/sk @ 12.75 ppg and 335 sx "C" + 2% CaCl<sub>2</sub>, yld 1.34 ft<sup>3</sup>/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 ft<sup>3</sup>/sk @ 14.2 ppg. Cmt 2nd stage w/1,165 sx "H" 35:65:6 Poz + 0.25 pps celloflake, yld 2.04 ft<sup>3</sup>/sk @ 11.44 ppg and 205 sx H-Neat, yld 1.18 ft<sup>3</sup>/sk @ 15.6 ppg.

Open Hole : Drill 8¾" hole to ± 12,000' 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) ✓ Injct. Formation : Devonian-Montoya

III. B. (2) ✓ Injection Interval : Selected porous intervals within open-hole section of the Devonian-Montoya formation from 11,000'-12,000'.

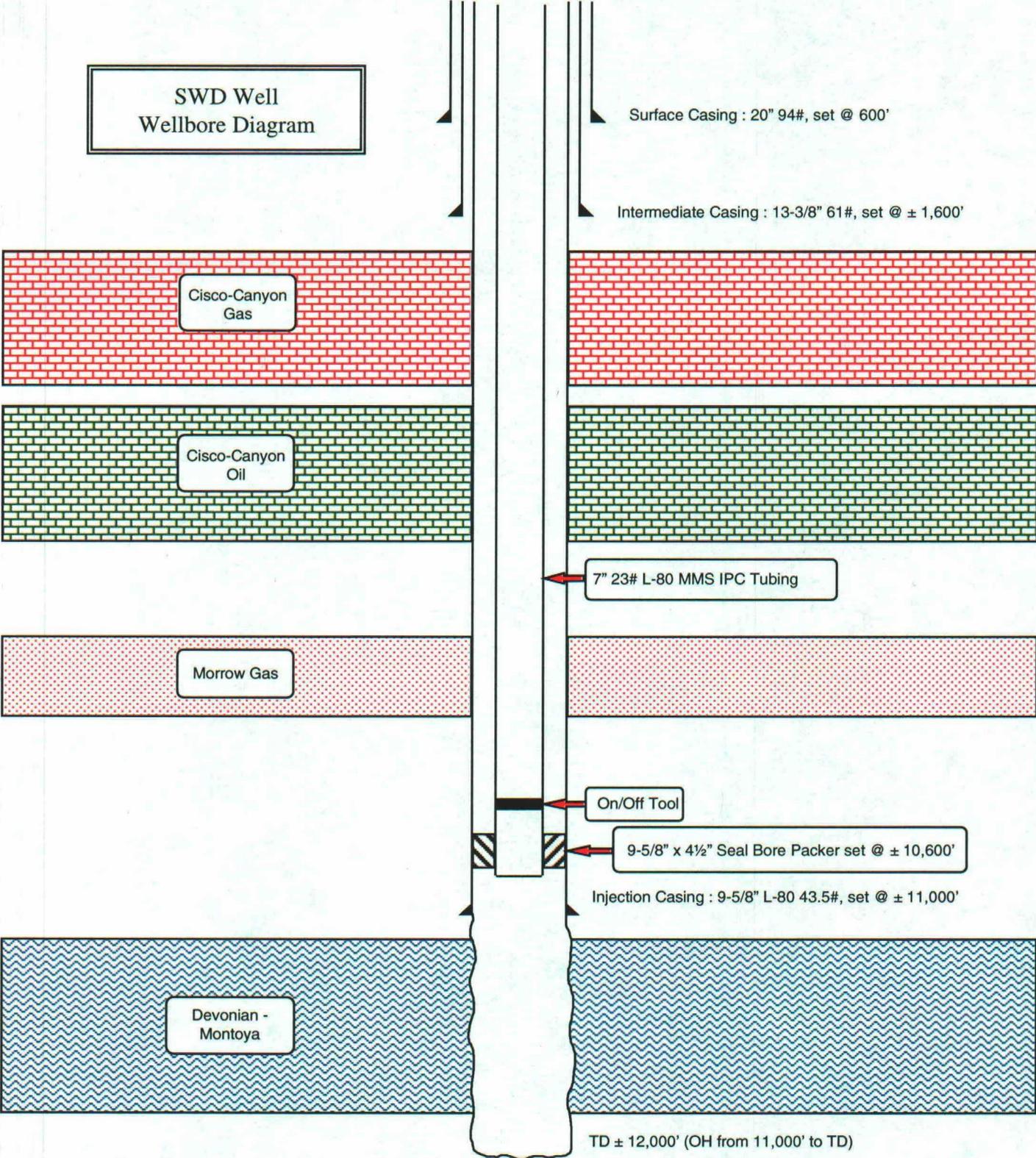
III. B. (3) ✓ The referenced well is to be used strictly for the purpose of water disposal.

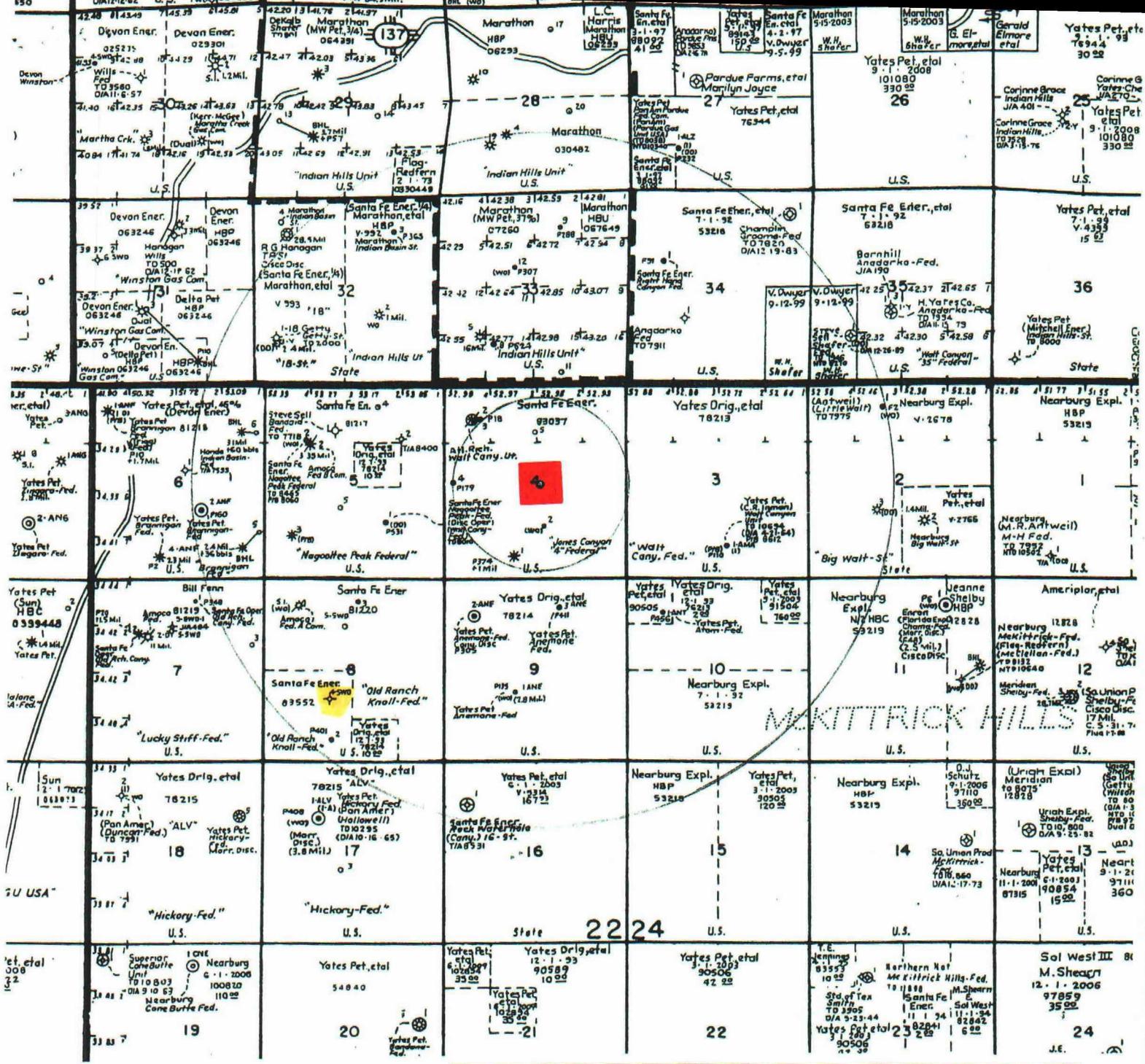
III. B. (4) We do not plan to test any other intervals in this wellbore.

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.

**Jones Canyon "4" Fed #6-WD**  
04G-22S-24E  
Eddy County, NM

SWD Well  
Wellbore Diagram







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

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**EDDY COUNTY, NEW MEXICO**

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**JONES CANYON "4" FED #6**  
**AREA OF REVIEW**  
**2600' FNL & 2300' FEL**  
**SEC. 8, T22S, R24E**

DATE: 8/20/99  
 FILE:

SCALE: 1"=4000'

**JAMES BRUCE**

**ATTORNEY AT LAW**

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SANTA FE, NEW MEXICO 87504

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SANTA FE, NEW MEXICO 87501

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

September 22, 1999

**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

Bureau of Land Management  
P.O. Box 1778  
Carlsbad, New Mexico 88221

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

Marathon Oil Company  
P.O. Box 552  
Midland, Texas 79702

Ladies and Gentlemen:

Enclosed is a copy of an administrative application for a salt water disposal well, filed with the New Mexico Oil Conservation Division by Santa Fe Snyder Corporation, regarding a well in the SW~~NE~~NE~~W~~ of Section 4, Township 22 South, Range 24 East, NMPM, Eddy County, New Mexico. If you object to the application, you must notify the Division in writing no later than Thursday, October 7, 1999. The Division's address is 2040 South Pacheco Street, Santa Fe, New Mexico 87505 (attention: David Catanach). Failure to object will preclude you from contesting this matter at a later date.

Very truly yours,

  
James Bruce

Attorney for Santa Fe Snyder Corporation

**JAMES BRUCE**  
ATTORNEY AT LAW

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SANTA FE, NEW MEXICO 87504

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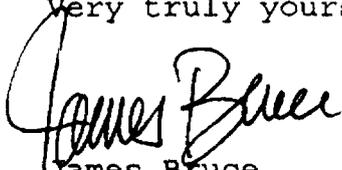
(505) 982-2043  
(505) 982-2151 (FAX)

Carlsbad Current-Argus  
620 South Main Street  
Carlsbad, New Mexico 88220

Ladies and Gentlemen:

Enclosed is a notice to be published once a week for two weeks.  
Please call me with the publication cost, and I will forward a  
check to you. Mail the proof of publication to me at the above  
post office box. Thank you.

Very truly yours,



James Bruce

Attorney for Santa Fe Snyder Corporation

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Santa Fe Snyder Corporation has made application to drill the Jones Canyon "4" Fed #6-WD to a depth of 12,000' for the sole purpose of disposing of formation water into the Devonian & Montoya formations at selected intervals from 11,000' to 12,000'. The proposed well location is 2,600' FNL & 2,300' FEL of Section 4, 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 Snyder Corporation  
550 W. Texas, Suite 1330  
Midland, Texas 79701  
Phone: (915) 687-3551  
Attn: Don Rogers

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