	INISTRATIVE INJECTION APPLICATIONS			
Contact: Dou Process Title:	ARLA M.R Phone:			
	EASE DATE <u>\$ 19.98</u> DATE OUT <u>6.26.98</u>			
Proposed Injection Application is for:	WATERFLOOD Expansion Initial			
Original Order: R-	Secondary Recovery Pressure Maintenance			
SENSITIVE AREAS	SALT WATER DISPOSAL Commercial Well			
WIPPCapitan Reef				
Data is complete for proposed well(s)? 445	Additional Data Req'd			
AREA of REVIEW WELLS				
<u>/</u> Total # of AOR	$\underline{\mathcal{G}}$ # of Plugged Wells			
4 <u>67</u> Tabulation Com	ete Schematics of P & A's			
<u>4</u> <u>4</u> Cement Tops Ac	equate AOR Repair Required			
INJECTION FORMATION	·			
Injection Formation(s)	Montorn Compatible Analysis <u>41</u>			
Source of Water or Injectate	Canyon			
PROOF of NOTICE				
Copy of Legal Notice	Information Printed Correctly			
Correct Operators	Copies of Certified Mail Receipts			
^{∧∠} Objection Received	Set to Hearing Date			
NOTES:				

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APPLICATION QUALIFIES FOR ADMINISTRATIVE APPROVAL?

COMMUNICATION WITH CONTACT PERSON:							
1st Contact:	Telephoned	Letter	Date	Nature of Discussion			
2nd Contact:	Telephoned	Letter	Date	Nature of Discussion			
3rd Contact:	Telephoned	Letter	Date	Nature of Discussion			

SWD 5/19/98

-714

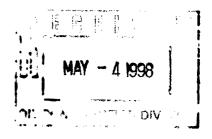
Santa Fe Energy Resources, Inc.

Don D. DeCarlo Division Manager, Production

April 29, 1998

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 Knoll "8" Fed #4, in Section 8, Township 22 South, Range 24 East, Eddy County, New Mexico. A similar application was made in early 1995 and was approved under OCD Administrative Order SWD-585. Because of economic considerations, however, the well was never drilled and the Authority to Inject subsequently expired.

If you have any questions regarding this new application, please contact me at (915) 686-6709.

Sincerely,

Don Rogers Project Manager - Indian Basin Area

c: D. D. Decarlo M. R. Burton W. D. Fulton 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	x Dispos No	al 🗌 Storage
II.	Operator :	Santa Fe Energy Resources, Inc. 550 W. Texas, Suite 1330, Midland, Texas 79701		
	Contact Party :	Don Rogers - Project Manager	Phone :	915-686-6709

III. The Old Ranch Knoll "8" Fed #4 is to be drilled 1,854' FSL & 1,921' FWL, Section 8, T22S-R24E, Eddy Co., N.M. This well is proposed as an 11,400' 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 X 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 Jones Canyon "4" Fed #2 (Sec. 4-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 ±15,000 BWPD and ±20,000 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, located approximately 400' South of the proposed well.

3. The average and maximum injection pressures are expected to be 500 psi and 1200 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 at 11,400'. 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 400 foot thick Devonian-Montoya section. In October, 1994, Santa Fe drilled a fresh water supply well approximately 400' to the South (NE/4 SW/4 of Section 8). The well was drilled to a depth of ~90 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.

- IX. The Devonian-Montoya open hole section between 11,000' and 11,400' 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 from March 31st to April 10th, 1998, per the requirements of this application. Verification of certified letter de ivery to the parties listed above are also included.

XIV. Certification

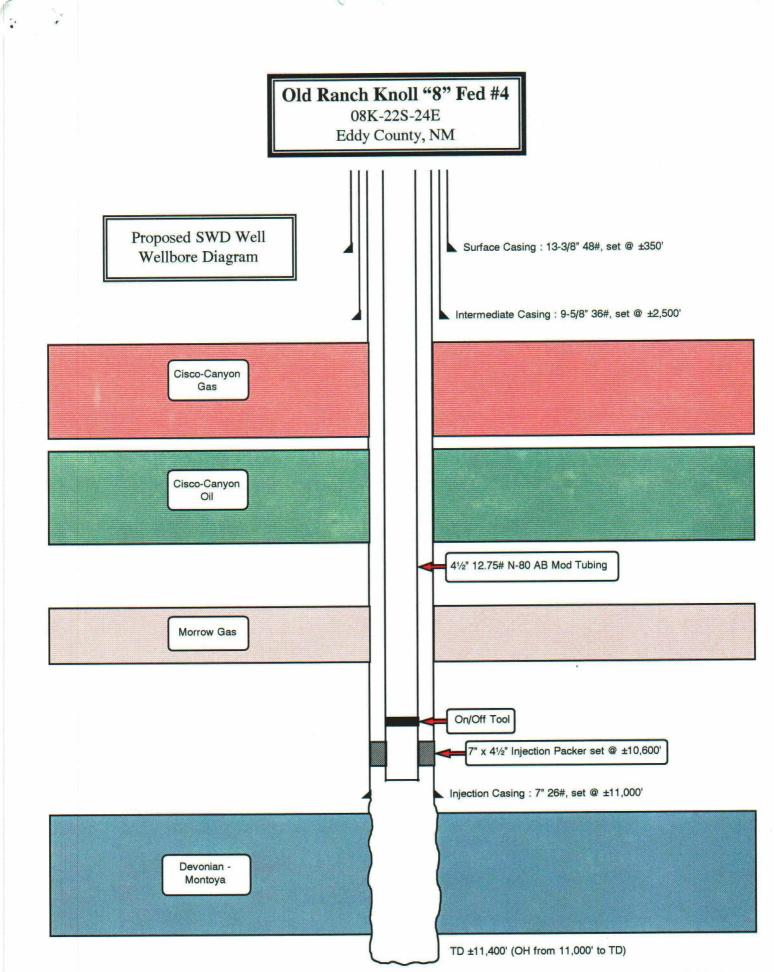
I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name : Don Rogers		Title :	Project Manager		
Signature :	-0.0	Date :	4 29 98		
	- 0		·		

XC : NMOCD - Santa Fe NMOCD - Artesia BLM - Carlsbad Yates Petroleum - Artesia James Bruce - Santa Fe III. A. (1) Name and Location

Federal Lse :	NM-83552
Well Name :	Old Ranch Knoll "8" Fed #4
Location :	08K-T22S-R24E (1,854' FSL & 1,921' FWL)

- III. A. (2) Casing and Cement
 - Surface Csg : Drill 17¹/₂" hole to approximately 350'. Run 13-3/8" 48# H-40 ST&C csg. Cmt w/400 sx Class "C" + 2% CaCl₂ + 1/4 pps celloflake mixed at 14.8 ppg and 1.32 ft³/sk yield to circulate to surface.
 - Intermediate Csg : Drill 12¼" hole to approximately 2,500'. Run 9-5/8" 36# K-55 ST&C csg. Cmt w/900 sx Class "C" Lite (35:65:6) + 2% CaCl₂ mixed at 12.7 ppg and 1.84 ft³/sk and tail-in with 300 sx Class "C" + 2% CaCl₂ mixed at 14.8 ppg and 1.32 ft³/sk yield to circulate to surface.
 - Injection Csg : Drill 8³/4" hole to approximately 11,000'. Run 7" 26# K-55 & C-9() LT&C and BT&C csg. Cmt w/900 sx Class "H" + 0.8% Halad-322 + 5% Salt mixed at 15.7 ppg and 1.18 ft³/sk yield to circulate to ± 6,000'.
 - Open Hole : Drill 6-1/8" hole to ± 11,400' as open hole section.
- III. A. (3) Injection Tubing : 4¹/₂" 12.75# N-80 AB-Mod tubing, internally plastic coated.
- III. A. (4) Injection Packer : 7" X 41/2" 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 Devon an-Montoya formation from 11,000'-11,400'.
- III. B. (3) The referenced well is to be used strictly for the purpose of water discosal.
- 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.



DLR 3/16/98

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			Centr	Fe Energy Resour al Division nd, Texas	ces, Inc.	
			EDDY	COUNTY, NEW	MEXICO	
			OLD R	ANCH KNOLL "8 AREA OF REVIE SEC. 8, T22S, R24	W	
		111	SCALE: 1":4000'		DATE: 3/30/98 FILE:	

Affidavit of Publication

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:

March	31							, 19_	98
<u>April</u>	1.	2,	3,	4,	5, 7	7, 8	<u>, 9</u>		
<u>April</u>	10	·	·					, 19_	98
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That the cost of publication is \$_214.13, and that payment thereof has been made and will be assessed as court costs.

Subscribed and sworn to before me this

day of 8/1/98

My commission expires_____

279

Notary Public

Nº 18374

March 31, 1998 April 1, 2, 3, 4, 5, 1998 April 7, 8, 9, 10, 1998

Santa Fe Energy Resources, Inc. has made application to drill the Old Ranch Knoil *8 Fed #4 to a depth of 11,400' for the sole purpose of discosing of formation water into the Devonian/Montoya formations at selected intervals from 10,600' to 11,400'. The proposed well location is a 1,304' FSL & 1,921' FWL of section 8, T22S, R24E, Eddy County, New Mexico. SFER plans to dispose of approxima:ely 20,000 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

April 29, 1998

<u>CERTIFIED MAIL</u> RETURN RECEIPT REQUESTED

U. S. Department of the InteriorBureau of Land ManagementP. O. Box 1778Carlsbad, 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 Knoll "8" Fed #4, in Section 8, 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,

Don Rogers Project Manager - Indian Basin Area

D. D. Decarlo M. R. Burton W. D. Fulton W. R. Adams

c:

Santa Fe Energy Resources, Inc. Don D. DeCarlo Division Manager, Production

April 29, 1998

CERTIFIED MAIL RETURN RECEIPT REQUESTED

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

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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 Knoll "8" Fed #4, in Section 8, Township 22 South, Range 24 East, Eddy County, New Mexico.

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,

Don Rogers Project Manager - Indian Basin Area

c: D. D. Decarlo M. R. Burton W. D. Fulton W. R. Adams