



Santa Fe Energy Resources, Inc.

RECEIVED

MAR 24 1995

Oil Conservation Division

March 17, 1995

New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Dear Sirs:

Attached is an application to dispose of produced water into Santa Fe Energy Resources, Inc. proposed Old Ranch Knoll "8" Fed. No.4. We have completed the requirements set out in Form C-108 and are seeking administrative approval of the application.

Should you have questions regarding this application, please do not hesitate to call me at 915-686-6614.

Sincerely,

Darrell Roberts

Darrell Roberts
Division Drilling Engineer

ork84-3.doc

XC: NMOCD - Artesia, NM
Jim Bruce - Hinkle Law Firm - Santa Fe, NM

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: Darrell Roberts - Drilling Engineer Phone: 915-687-3551
- III. Well Data: Attached are well data sheets for the proposed casing designs for the subject disposal well as specified on the reverse side of Form C-108.
- IV. Is this an expansion of an existing project? ☐ yes ☒ no.
If yes, give the Division Order number authorizing the project None.
- V. Attached is a map identifying the proposed well's area of review. The 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 are no wells within the area of review which penetrated the proposed injection zone.
- VII.
 1. We propose to dispose of an estimated 15,000 BWPD which is formation water from the Cisco-Canyon zones, from offset wells.
 2. The system will be closed, the water will come via pipeline from the Central Tank Battery located approximately 400' south of the proposed well.
 3. The estimated average injection pressure is on a vacuum to 100 psi. and estimated maximum injection pressure is 1000 psi.
 4. We have not drilled the well yet, so we do not have formation water from the injection zone to test the compatibility with the proposed injection water.
 5. No known samples of formation water from the Devonian or Montoya.
- VIII. The proposed injection zones in this well for the disposal of produced formation waters from the Cisco-Canyon formations are the Devonian and Montoya formations. These formations are expected to be encountered between the depth of 10,630' and 11,400' in the proposed wellbore. Lithologically these formations are similar, consisting of dolomite and cherty dolomites that exhibit intercrystalline to vuggy porosity. The proposed injection interval will be in selected porous intervals over a gross Devonian/Montoya section of approximately 750 feet in thickness. On October 3, 1994 we drilled a potential water well located in the NE/4 SW/4 of this same section. We drilled the well to total depth of 190 feet and did not encounter any water bearing formations. The well was plugged and abandoned. There are no known underground sources of drinking water in the immediate area.
- IX. After running open hole logs over the Devonian and Montoya formations, porous intervals will be perforated through the 7" casing and the injection intervals will be acidized with 15 % HCl to improve the injectivity of the proposed zones.
- X. We plan to run a porosity log and resistivity log over the entire Devonian and Montoya formations.

FORM C-108

Page 2

Old Ranch Knoll "8" Fed. No.4

- XI. No known fresh water wells within one mile of the proposed well.
- XII. There is no known underground source of drinking water for possible open faults or hydrologic connection to have communication to the disposal water. The proposed disposal zone at almost two miles below the surface is so far removed from the surface that contamination of possible drinking water sources by communication should not a concern.
- XIII. We have mailed a copy of this application to the Bureau of Land Management, Carlsbad Resource Area, as they are the owners of the land on which the well is located. We have also mailed a copy of this application to Yates Petroleum Corp., Artesia, New Mexico, as they are the only leasehold operator within one-half mile of the proposed well location. We have also attached a copy of an Affidavit of Publication to verify that we had a legal advertisement published in the Carlsbad Current- Argus on February 21 & 28, 1995, per the requirements of this application. We will supply you with the verification that certified letters were sent to the BLM & Yates Petroleum once we have received the signature cards from the various parties.
- 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: Darrell Roberts Title: Division Drilling Engineer

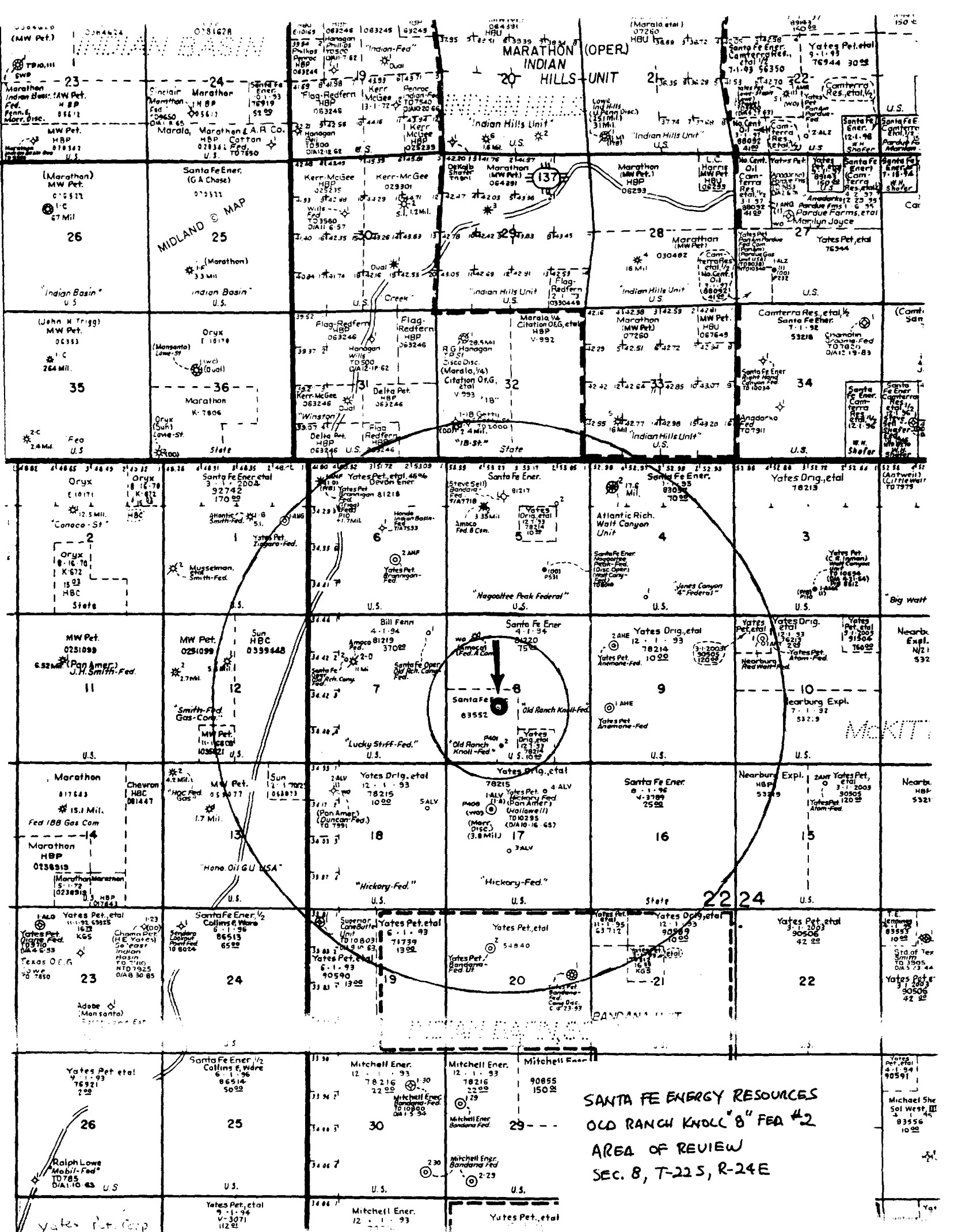
Signature: *Darrell Roberts* Date: 3/7/95

XC: NMOCD - Santa Fe
NMOCD- Artesia
BLM - Carlsbad
Yates Petroleum - Artesia
Hinkle Law Firm - Santa Fe

ORKC108.PMT

Santa Fe Energy Resources, Inc.
Old Ranch Knoll "8" Federal No.4
Application for Authorization to Inject
Well Data for NMOCD Form C-108

- III. A. (1) Name & Location: Old Ranch Knoll "8" Federal No.4 SWD
1804' FSL & 1921' FWL
Section 8, T-22S, R-24E
Lea County, New Mexico
- III. A. (2) Casing & Cement:
- Surface Casing: Drill a 17-1/2" hole to approximately 350'. Run 13-3/8" 48.0 ppf H-40 ST&C casing. Cement with 400 sx Class "C" + 2% CaCl₂ + 1/4 pps celloflake mixed at 14.8 ppg and 1.32 ft³/sk yield to circulate to the surface.
- Intermediate Casing: Drill a 12-1/4" hole to approximately 2500'. Run 9-5/8" 36.0 ppf K-55 ST&C casing. Cement with 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 the surface.
- Production Casing: Drill a 8-3/4" hole to approximately 11,400'. Run 7" 26.0 ppf K-55 & C-90 LT&C and BT&C casing. Cement with 900 sx Class "H" + 0.8% Halad-322 + 5% Salt mixed at 15.7 ppg and 1.18 ft³/sk yield to circulate cement to approximately 6,000'.
- III. A. (3) Injection Tubing: 4-1/2" 11.60 ppf N-80 AB-Mod LT&C tubing, internally plastic coated with ICO SC650, hung off in the wellhead and attached to packer at approximately 10,600'.
- III. A. (4) Injection Packer: 4-1/2" X 7" Guiberson Uni VI Packer with an On-Off Tool, all internally plastic coated and set at approximately 10,600'.
- III. B (1) Injection Formation: Devonian and Montoya.
- III. B (2) Injection Interval: Selected porous intervals within the Devonian and Montoya formations from 10,630'-11,400' and the intervals will be perforated through the 7" casing.
- III. B (3) This proposed well is being drilled strictly for disposal purposes.
- III. B (4) We do not plan to test any other intervals in this wellbore.
- III. B (5) The Morrow Sands have produced in the area in an interval from 9,700'- 10,000'. The Cisco Canyon formation is the primary productive horizon in the area and it produces from an interval from 8,000'- 8,400' and this well will be utilized to dispose of produced from this interval (see attached water analyses).





Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and 2 for additional services.
- Complete items 3, 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- ☐ Addressee's Address
- ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
YATES PETROLEUM CORP.
105 SOUTH 4TH
ARTESIA NEW MEXICO 88220

4a. Article Number
P 198 931 139

4b. Service Type

☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☒ Return Receipt for Merchandise

7. Date of Delivery
MAR 9 1991

5. Signature (Addressee)
[Signature]

6. Signature (Agent)
[Signature]

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1991 U.S. GPO: 1993-362-714 DOMESTIC RETURN RECEIPT

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete item 1 and/or 2 for additional services.
- Complete item 3 and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- ☐ Addressee's Address
- ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
US DEPT. OF INTERIOR
BUREAU OF LAND MANAGEMENT
P.O. BOX 1778
CARLSBAD NEW MEXICO 88221-1778

4a. Article Number
P 198 931 140

4b. Service Type

☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☒ Return Receipt for Merchandise

7. Date of Delivery
MAR 9 1991

5. Signature (Addressee)
[Signature]

6. Signature (Agent)
[Signature]

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1991 U.S. GPO: 1993-362-714 DOMESTIC RETURN RECEIPT

Thank you for using Return Receipt Service.

13,782 500 SHEETS FILLER 5 SQUARE
42,381 50 SHEETS EYE-EASE 5 SQUARE
42,382 100 SHEETS EYE-EASE 5 SQUARE
42,383 200 SHEETS EYE-EASE 5 SQUARE
42,384 100 SHEETS EYE-EASE 5 SQUARE
42,385 100 RECYCLED WHITE 5 SQUARE
42,386 200 RECYCLED WHITE 5 SQUARE
Made in U.S.A.



P 198 931 140 *DR*



**Receipt for
Certified Mail**

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Service	
Bureau of Land Management	
Street and No.	
P.O. Box 1778	
P.O. State and ZIP Code	
Carlsbad, NM 8221-1778	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	
<i>Old Ranch Knoll</i> <i>"g" Feb #4</i>	

PS Form 3800, June 1991

P 198 931 139 *DR*



**Receipt for
Certified Mail**

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to	
Yates Petroleum Corp.	
Street and No.	
105 SOUTH 4th	
P.O. State and ZIP Code	
Artesia, NM 88220	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	
<i>Old Ranch Knoll</i> <i>"s" Feb #4</i>	

PS Form 3800, June 1991

Santa Fe Energy Resources, Inc.

Sent Via Certified Mail

March 8, 1995

Yates Petroleum Corp.
105 S. 4th
Artesia, New Mexico 88220

Dear Sirs:

Enclosed is a copy of an Application for Authority to Inject (NMOCD Form C-108) that Santa Fe Energy Resources, Inc. is filing with the NMOCD in Santa Fe, New Mexico.

We plan to drill this well to a depth of 11,400' for the purpose of disposing of produced water from our Central Tank Battery located in Section 8, T-22S, R-34E, Eddy County, New Mexico. We are sending you a copy of this application as part of the requirements specified by the NMOCD. Yates Petroleum Corp. is a leasehold operator within one-half mile of the proposed well, your Hickory Fed. No.1 is located in Section 17.

Should you have any questions, please do not hesitate to call me at 915-687-3551.

Sincerely,



Darrell Roberts
Division Drilling Engineer

ork84-2.doc



Sent Via Certified Mail

March 8, 1995

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) that Santa Fe Energy Resources, Inc. is filing with the NMOCD in Santa Fe, New Mexico.

This well is called the Old Ranch Knoll "8" Federal No.4 SWD and a BLM APD was filed on February 3, 1995. This notification is being sent as part of the permitting process to notify the owner of the surface around the proposed disposal well; the surface around the subject well is under the jurisdiction of the BLM.

Should you have any questions, please do not hesitate to call me at 915-687-3551.

Sincerely,

A handwritten signature in cursive script that reads "Darrell Roberts".

Darrell Roberts
Division Drilling Engineer

ork84-1.doc

Central Division
550 W. Texas, Suite 1330
Midland, Texas 79701
915/687-3551

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:

February 21, 19 95
February 28, 19 95
_____, 19 ____
_____, 19 ____
_____, 19 ____
_____, 19 ____

That the cost of publication is \$ 39.02,
and that payment thereof has been made and will
be assessed as court costs.

Amy McKay

Subscribed and sworn to before me this

1st day of March, 1995

Donna Crump

My commission expires 8/01/98
Notary Public

No 16964

February 21, 28, 1995

Santa Fe Energy Resources, Inc. has made application to drill the Old Ranch Knoll "8" Fed. No. 4 to a depth of 11,400' for the sole purpose of disposing of formation water into the Devonian/Montoya formations at selected intervals from 10,600'-11,300'. The proposed well location is at 1804' FSL & 1921' FWE of Section 8, T-22S, R-24E, Eddy County, New Mexico. We plan to dispose of approximately 15,000 barrels of water per day at an estimated 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
Attention: Darrell Roberts

**Laboratory Services, Inc.**1331 Tasker Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

*CC: Mike Burton***WATER ANALYSIS**COMPANY Sante Fe EnergySAMPLE Old Ranch Canyon 7 Federal #1SAMPLED BY Bobby Fowler - OmegaDATE TAKEN 10/6/94 12:00PMREMARKS Sample Temp. 106 Atmos. Temp. 75

Barium as Ba	0.00	
Carbonate alkalinity PPM	36	
Bicarbonate alkalinity PPM	760	
pH at Lab	7.38	
Specific Gravity @ 60° F	1.003	
Magnesium as Mg	1,102	
Total Hardness as CaCO ₃	1,900	
Chlorides as Cl	2,471	
Sulfate as SO ₄	1,850	
Iron as Fe	0.02	
Potassium	1.15	
Hydrogen Sulfide	366.21	
Resistivity Ohms	2.1500	24.4° C
Total Dissolved Solids	5,750	
Calcium as CA	798	
Nitrate	92.40	

Results reported as Parts per Million unless statedLangelier Saturation Index +1.18Analysis by Rolland PerryDate: 10-07-94

UNICHEM INTERNATIONAL
P.O. BOX 61427 4312 County Road 1298 S.
Midland, Texas 79711

Santa Fe Energy

Report Date: May 3, 1994
Lab In Date: May 2, 1994
Sample Date: April 28, 1994

Listed below please find our water analysis report from Old Ranch Knoll 8 , Fed. Com. #2 :

Specific Gravity: 1.006
Total Dissolved Solids: 8691
PH: 6.75
Ionic Strength: .176

=====

CATIONS:		mg/liter
Calcium:	(Ca++)	480
Magnesium:	(Mg++)	121
Sodium:	(Na+)	2308
Iron (Total)	(Fe++)	.70
Barium	(Ba++)	2.70
Manganese:	(Mn++)	0.00
Resistivity:		

=====

ANIONS:		
Bicarbonate:	(HCO3-)	1000
Carbonate:	(CO3--)	0
Hydroxide:	(OH-)	0
Sulfate:	(SO4--)	2281
Chloride:	(Cl-)	2500

=====

GASES:

Carbon Dioxide:	(CO2)	220.0
Oxygen:	(O2)	*****
Hydrogen Sulfide:	(H2S)	340.0

=====

SCALE INDEX (Positive Value Indicates Scale Tendency) * indicates tests were not run.

Temperature		CaCO3 SI	CaSO4 SI
86F	30.0C	.42	-9.64
104F	40.0C	.69	-9.73
122F	50.0C	.93	-9.73
140F	60.0C	1.14	-9.64
168F	70.0C	1.40	-8.75
176F	80.0C	1.70	-10.60

If you have any questions or require further information, please contact us.

Sincerely,

Jeanne M. McMurray

Laboratory Technician

cc:

bc: Jerry Fuller
Kenny Tuttle

UNICHEM INTERNATIONAL
P.O. BOX 61427 4312 County Road 1298 S.
Midland, Texas 79711

Santa Fe Energy

Report Date: May 3, 1994
Lab In Date: May 2, 1994
Sample Date: April 28, 1994

Listed below please find our water analysis report from Roaring Springs, Fed. #1:

Specific Gravity: 1.022
Total Dissolved Solids: 30443
PH: 6.85
Ionic Strength: .578

CATIONS:

		mg/liter
Calcium:	(Ca++)	1120
Magnesium:	(Mg++)	292
Sodium:	(Na+)	9939
Iron (Total)	(Fe++)	1.10
Barium	(Ba++)	3.20
Manganese:	(Mn++)	2.05
Resistivity:		

ANIONS:

Bicarbonate:	(HCO3-)	756
Carbonate:	(CO3--)	0
Hydroxide:	(OH-)	0
Sulfate:	(SO4--)	2336
Chloride:	(Cl-)	16000

GASES:

Carbon Dioxide:	(CO2)	290.0
Oxygen:	(O2)	*****
Hydrogen Sulfide:	(H2S)	340.0

SCALE INDEX (Positive Value Indicates Scale Tendency) * indicates tests were not run.

Temperature		CaCO3 SI	CaSO4 SI
86F	30.0C	.26	-16.92
104F	40.0C	.49	-17.21
122F	50.0C	.73	-17.04
140F	60.0C	1.06	-16.46
168F	70.0C	1.37	-15.52
176F	80.0C	1.71	-13.49

If you have any questions or require further information, please contact us.

Sincerely,

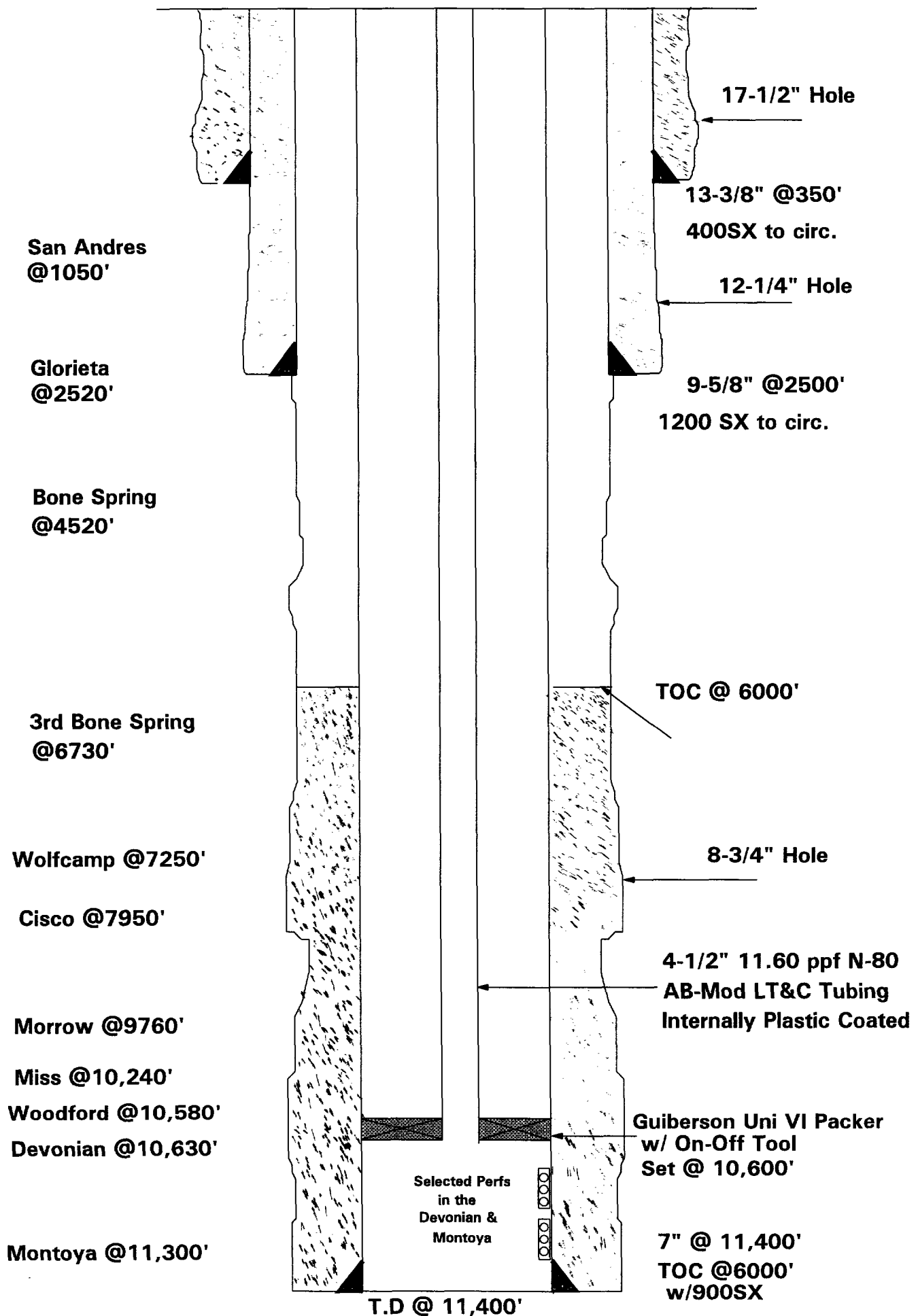
Jeanne M. McMurray

Laboratory Technician

cc:

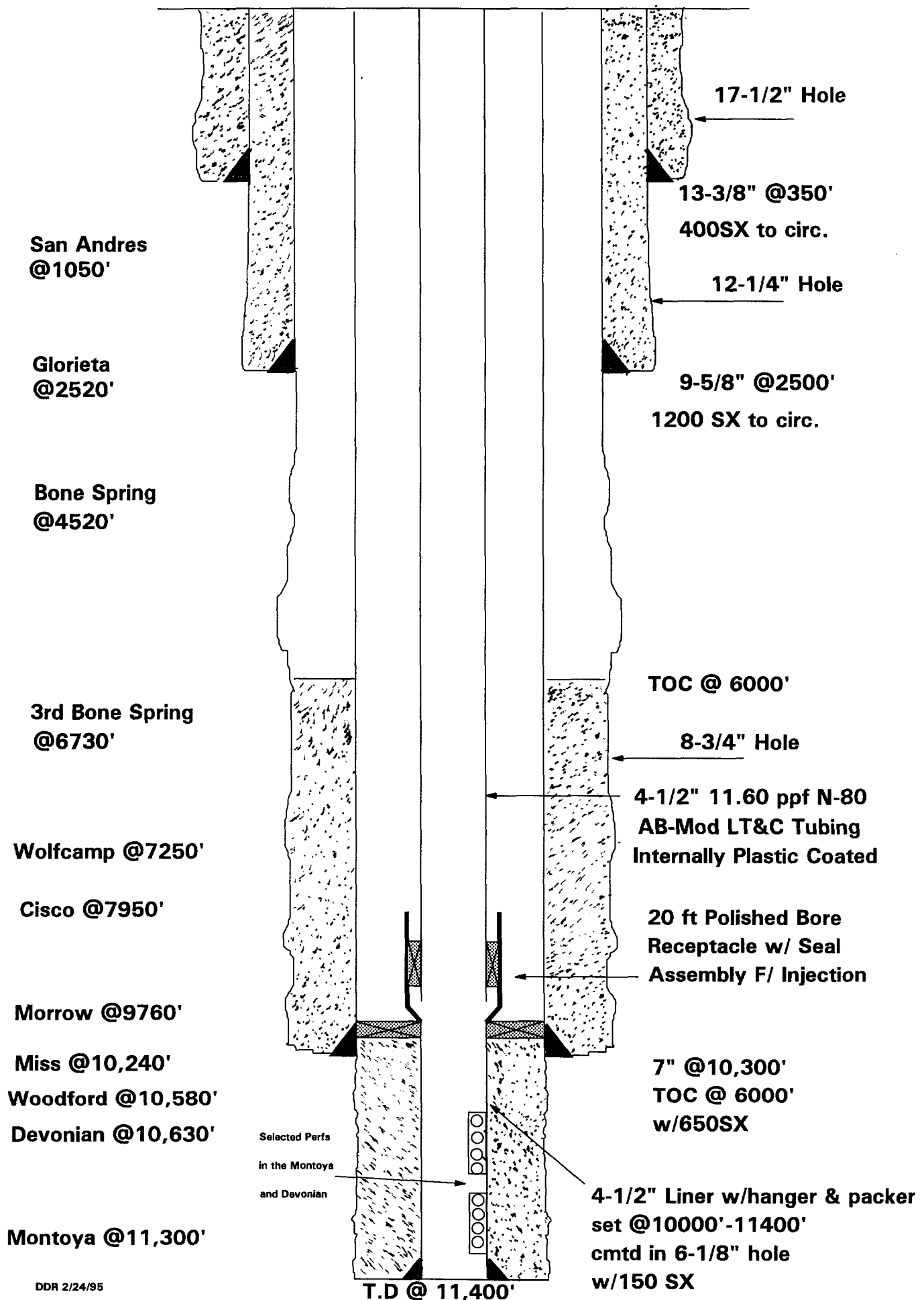
bc: Jerry Fuller
Kenny Tuttle

Santa Fe Energy Resources
Old Ranch Knoll "8" Fed. No.4 SWD
1804' FSL & 1921' FWL
Sec. 8-22S-24E, Lea Co., NM
Proposed Wellbore Schematic



**Santa Fe Energy Resources
Old Ranch Knoll "8" Fed. No.4 SWD
1804' FSL & 1921' FWL
Sec. 8-22S-24E, Lea Co., NM
Proposed Wellbore Schematic**

**Contingency Plan for
Severe Lost Circulation
in Cisco/Canyon**



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT - " for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well

☐ Oil Well ☐ Gas Well ☒ Other

2. Name of Operator

Santa Fe Energy Resources, Inc.

3. Address and Telephone No.

550 W. Texas, Suite 1330, Midland, TX 79701 915-687-3551

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

(K), 1921' FWL & 1804' FSL, Sec. 8-22S-24E, Eddy County, N.M.

5. Lease Designation and Serial No.

NM-89552

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.

Old Ranch Knoll
"8" Fed. No. 4

9. API Well No.

10. Field and Pool, or exploratory Area

Wildcat (SWD)

11. County or Parish, State

Eddy NM

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☐ Notice of Intent
☒ Subsequent Report
☐ Final Abandonment Notice

TYPE OF ACTION

☐ Abandonment
☐ Recompletion
☐ Plugging Back
☐ Casing Repair
☐ Altering Casing
☐ Other _____
☒ Change of Plans
☐ New Construction
☐ Non-Routine Fracturing
☐ Water Shut-Off
☐ Conversion to Injection
☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Per Barry Hunt's request, Santa Fe Energy Resources Inc. has moved the proposed location for the captioned well from 1854' FSL & 1921' FWL to 1804' FSL & 1921' FWL of Section 8, T-22S, R-24E, Eddy County, New Mexico.

14. I hereby certify that the foregoing is true and correct

Signed

Daniel Polito

Title

Division Drilling Engineer

Date

March 15, 1995

(This space for Federal or State office use)

Approved by

Title

Date

Conditions of approval, if any:

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

State of New Mexico
Energy, Minerals, and Natural Resources Department

Form C-102
Revised 02-10-94
Instructions on back

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

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

Submit to the Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

☒ AMENDED REPORT

DISTRICT III
1000 Rio Brazos Rd.
Aztec, NM 87410

DISTRICT IV
P. O. Box 2088
Santa Fe, NM 87507-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number		2 Pool Code		3 Pool Name WILDCAT (SWD)					
4 Property Code		5 Property Name KNOLL OLD RANCH NELE FEDERAL						6 Well Number 4	
7 OGRID No.		8 Operator Name SANTA FE ENERGY RESOURCES, INC.						9 Elevation 4124'	
10 SURFACE LOCATION									
UL or lot no. K	Section 8	Township 22 SOUTH	Range 24 EAST, N.M.P.M.	Lot Ida	Feet from the 1921'	North/South line SOUTH	Feet from the 1804'	East/West line WEST	County EDDY
11 BOTTOM HOLE LOCATION IF DIFFERENT FROM SURFACE									
UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
12 Dedicated Acres		13 Joint or Infill		14 Consolidation Code		15 Order No.			

NO ALLOWABLE WELL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN
CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

OPERATOR CERTIFICATION

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

Signature

Darrell Roberts

Printed Name

DARRELL ROBERTS

Title

DIVISION DRILLING ENGINEER

Date

MARCH 15, 1995

SURVEYOR CERTIFICATION

I hereby certify that the well
location shown on this plat was
plotted from field notes of actual
surveys made by me or under
my supervision, and that the
same is true and correct to the
best of my belief.

Date of Survey

MARCH 10, 1995

Signature and Seal of
Professional Surveyor

V. Lynn Bezner

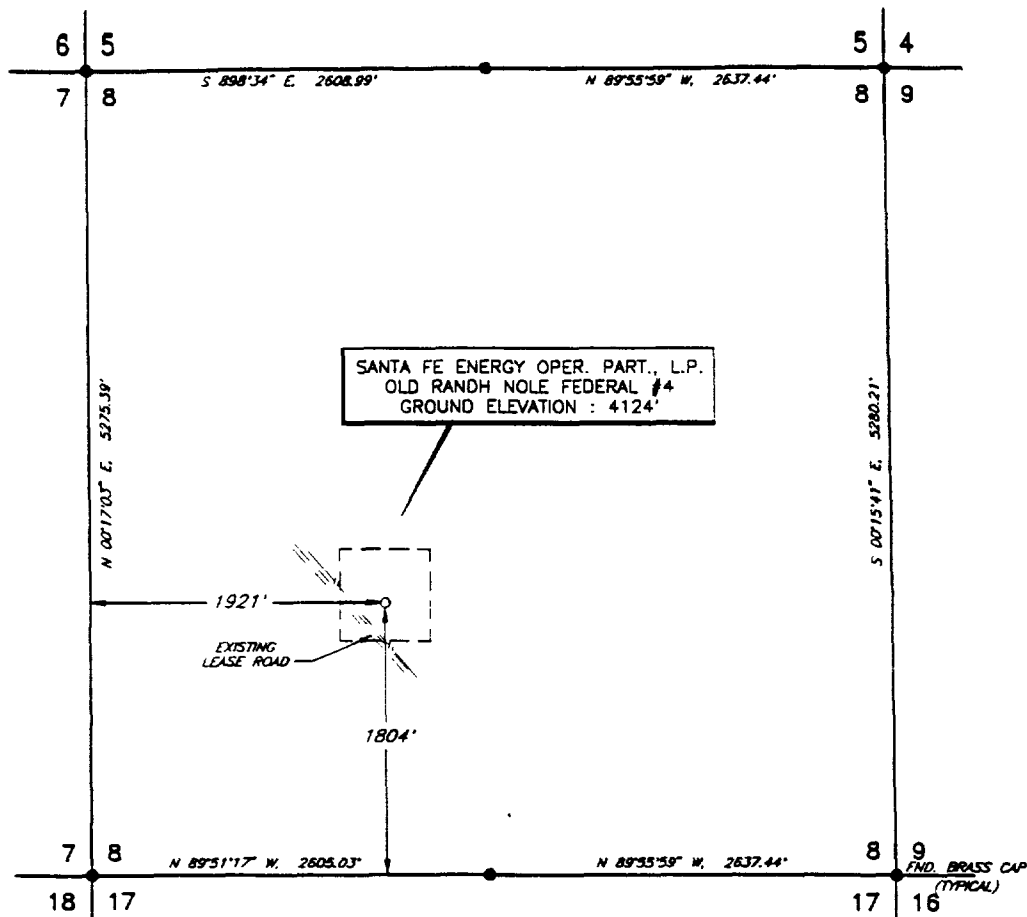
Certificate No.

V. L. BEZNER

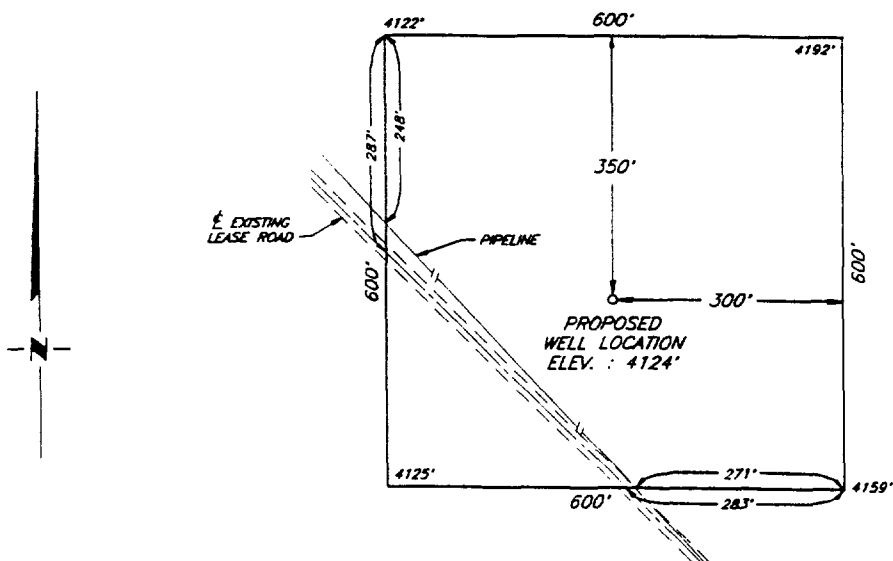
R.P.S. #7920

JOB #37856 / NE / V-LB

PLAT SHOWING PROPOSED
WELL LOCATION AND LEASE ROAD IN
SECTION 8, T-22-S, R-24-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



PLAN VIEW
1" = 1000'



DETAIL VIEW
1" = 200'

SANTA FE ENERGY RESOURCES, INC.				SCALE: AS SHOWN	
MIDLAND, TEXAS				DATE: FEBRUARY 2, 1995	
SURVEYING AND MAPPING BY				JOB NO.: 37856-F	
TOPOGRAPHIC LAND SURVEYORS				51 NE	
MIDLAND, TEXAS				SHEET : 1 OF 1	
1	MOVED LOC.	5-10-95	V.B.		
NO.	REVISION	DATE	BY		
SURVEYED BY:		R.B.			
DRAWN BY:		V.H.B.			
APPROVED BY:		V.L.B.			

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

b. TYPE OF WELL

OIL
WELL ☐

GAS
WELL ☐

OTHER SWD

SINGLE
ZONE ☐

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Santa Fe Energy Resources, Inc.

3. ADDRESS AND TELEPHONE NO.

550 W. Texas, Suite 1330, Midland, Texas (915) 682-6373

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*
At surface

(K) 1854' FSL & 1921' FWL
At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

15 miles West of Carlsbad, New Mexico

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drig. unit line, if any) 740'

16. NO. OF ACRES IN LEASE

160

17. NO. OF ACRES ASSIGNED
TO THIS WELL

0

18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

1243'

19. PROPOSED DEPTH

11400'

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

4122.28 GR

22. APPROX. DATE WORK WILL START*

April 1, 1995

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2"	H-40 13-3/8"	48	350'	400 sx to circulate
12-1/4"	K-55 9-5/8"	36	2500'	1200 sx to circulate
8-3/4"	K-55, C-90 7"	26	11400'	TOC @ 6000'

We propose to drill to a depth sufficient to penetrate the Devonian/Montoya formations. If sufficient porosity and permeability are encountered 7" casing will be run to TD and the well will be completed as a salt water disposal well. Specific programs as per Onshore Oil and Gas Order No. 1 are outlined in the following attachments:

Drilling Program

Exhibit A - Operations Plan
Exhibit B - BOP & Choke Manifold
Exhibit C - Drilling Fluid Program
Exhibit D - Auxiliary Equipment
Exhibit E - Topo Map of Location

Exhibit F - Plat Showing Existing Wells
Exhibit F (A) - Plat of Location
Exhibit G - Well Site Layout
Surface Use and Operations Plan
H₂S Drilling Operations Plan

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

James I. Phil *Atkinson*

TITLE Agent for Santa Fe Energy

DATE February 3, 1995

(This space for Federal or State office use)

PERMIT NO. _____

APPROVAL DATE _____

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon
CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY _____

TITLE _____

DATE _____

*See Instructions On Reverse Side

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

State of New Mexico
En , Minerals, and Natural Resources 1 rtment

Form C-102
Revised 02-10-94
Instructions on back

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

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

Submit to the Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

☐ AMENDED REPORT

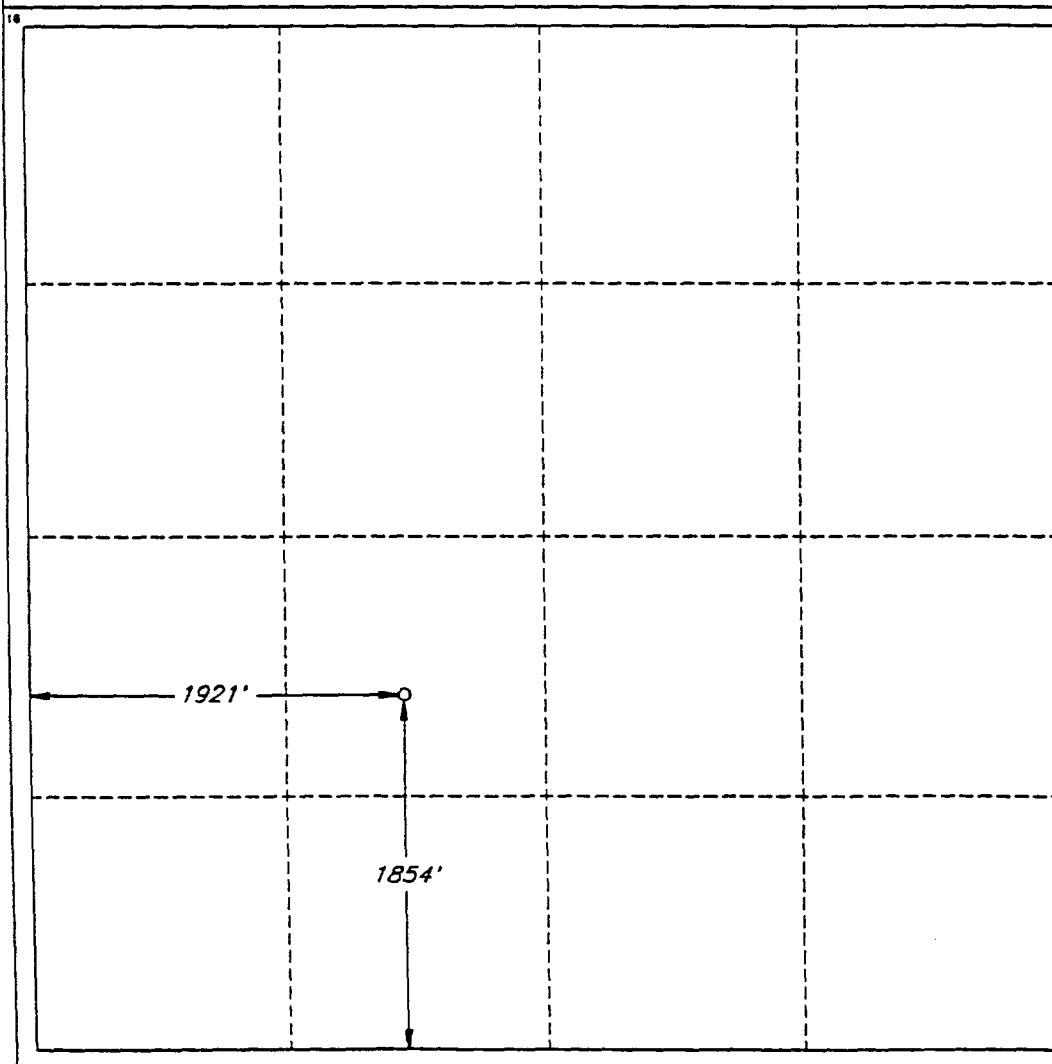
DISTRICT III
1000 Rio Brazos Rd.
Aztec, NM 87410

DISTRICT IV
P. O. Box 2088
Santa Fe, NM 87507-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number		2 Pool Code		3 Pool Name Wildcat (SWD)					
4 Property Code		5 Property Name Knoll "8" OLD RANCH WEE FEDERAL						6 Well Number 4	
7 OGRID No.		8 Operator Name SANTA FE ENERGY OPER. PART, L.P.						9 Elevation 4122'	
10 SURFACE LOCATION									
UL or lot no. K	Section 8	Township 22 SOUTH	Range 24 EAST, N.M.P.M.	Lot Ida	Feet from the 1921'	North/South line SOUTH	Feet from the 1854'	East/West line WEST	County EDDY
11 BOTTOM HOLE LOCATION IF DIFFERENT FROM SURFACE									
UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
12 Dedicated Acres 0		13 Joint or Infill		14 Consolidation Code		15 Order No.			

NO ALLOWABLE WELL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN
CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

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

Signature
James P. "Phil" Stinson
Printed Name
James P. "Phil" Stinson
Title
Agent for Santa Fe Resources
Date
February 6, 1995

SURVEYOR CERTIFICATION

I hereby certify that the well
location shown on this plat was
plotted from field notes of actual
surveys made by me or under
my supervision, and that the
same is true and correct to the
best of my belief.

Date of Survey
FEBRUARY 2, 1995

Signature and Seal of
Professional Surveyor
V. Lynn Beznar
STATE OF NEW MEXICO
V. LYNN BEZNAR
Certification No.
V. L. BEZNAR R.P.S. #7920
JOB #37856 / V.H.B.