

**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)

September 26, 1997

**Hand Delivered**

Michael E. Stogner  
Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505

Dear Mr. Stogner:

Pursuant to Division Rule 104.F(2), Santa Fe Energy Resources, Inc. ("Santa Fe") hereby applies for administrative approval of two unorthodox gas well locations, in the Morrow formation (Undesignated Quail Ridge-Morrow Gas Pool<sup>1</sup>), for the following well:

Topaz "19" Fed. Com. Well No. 1  
Lots 1-4, E $\frac{1}{2}$ W $\frac{1}{2}$  (W $\frac{1}{2}$ ) S19, Township 20 South, Range 34 East,  
NMPM (320.28 acres), Lea County, New Mexico

1<sup>st</sup> location: 660 feet FSL & 2084 feet FWL  
2<sup>nd</sup> location: 1100 feet FSL & 660 feet FWL (directionally drilled)

The primary objective in this well is the lower Morrow sands, at a depth of approximately 13,700 feet subsurface. (Secondary objectives include the middle Morrow sands (13,200 feet), Atoka sand (12,800 feet), Bone Spring (9,600 feet), and Delaware sands (5,700 feet).<sup>2</sup>) A production map of the area is attached hereto as Exhibit A.

Fluvial sands in the lower Morrow were deposited in a north-south direction across the prospect area, as shown on the isopach

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<sup>1</sup>Pool rules require wells to be no closer than 1980 feet from the end line of the spacing unit.

<sup>2</sup>The well is at an orthodox location in the Bone Spring and Delaware formations.

attached hereto as Exhibit B. Producers along this trend are prolific: Santa Fe's Sinagua "18" Fed. Well No. 1, in the NE¼ §18-20S-34E, has produced 3.47 BCF to date from the lower Morrow sands. Also attached is a structure map on top of the lower Morrow (Exhibit C).

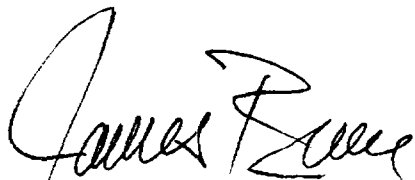
Santa Fe plans to re-enter the Cities Service Government "N" Well No. 1Y,<sup>3</sup> which was drilled as a Devonian test in 1968 at the 1<sup>st</sup> location described above. The well encountered good thicknesses in both the middle and lower Morrow sands, but was not thoroughly tested. Santa Fe will first test the Morrow at the 1<sup>st</sup> location. If that test is unsatisfactory, Santa Fe will come uphole to approximately 10,100 feet, and drill directionally to the 2<sup>nd</sup> location. Electric logs and hydrocarbon shows from wells in the area indicate that pay improves to the west of the 1<sup>st</sup> location. The proposed vertical location, if successful, will lessen the cost of the well and thus prevent waste. The directionally drilled location, if necessary, will allow Santa Fe to penetrate approximately 35 feet of Morrow sand, which will increase the chances of completing a commercial well.

Attached as Exhibit D are the APD (Form 3160-3), Form C-102, and vertical and horizontal plan view of the well, submitted to the Bureau of Land Management.

Attached as Exhibit E is a land plat of the subject area, highlighting Santa Fe-operated acreage in yellow. Although all of the offsetting acreage is operated by Santa Fe, offsetting lessees have been notified of this application, as evidenced by the notice letter attached hereto as Exhibit F. Please note that, if the well is directionally drilled, the only offset lessees in Sections 24 & 25-20S-33E and the W¼ §30-20S-34E are Santa Fe, Louis Dreyfus Natural Gas Corp., and Southwestern Energy Production Company, who are also interest owners in the proposed well.

This application is submitted in duplicate. Please call me if you need anything further on this matter.

Very truly yours,



James Bruce

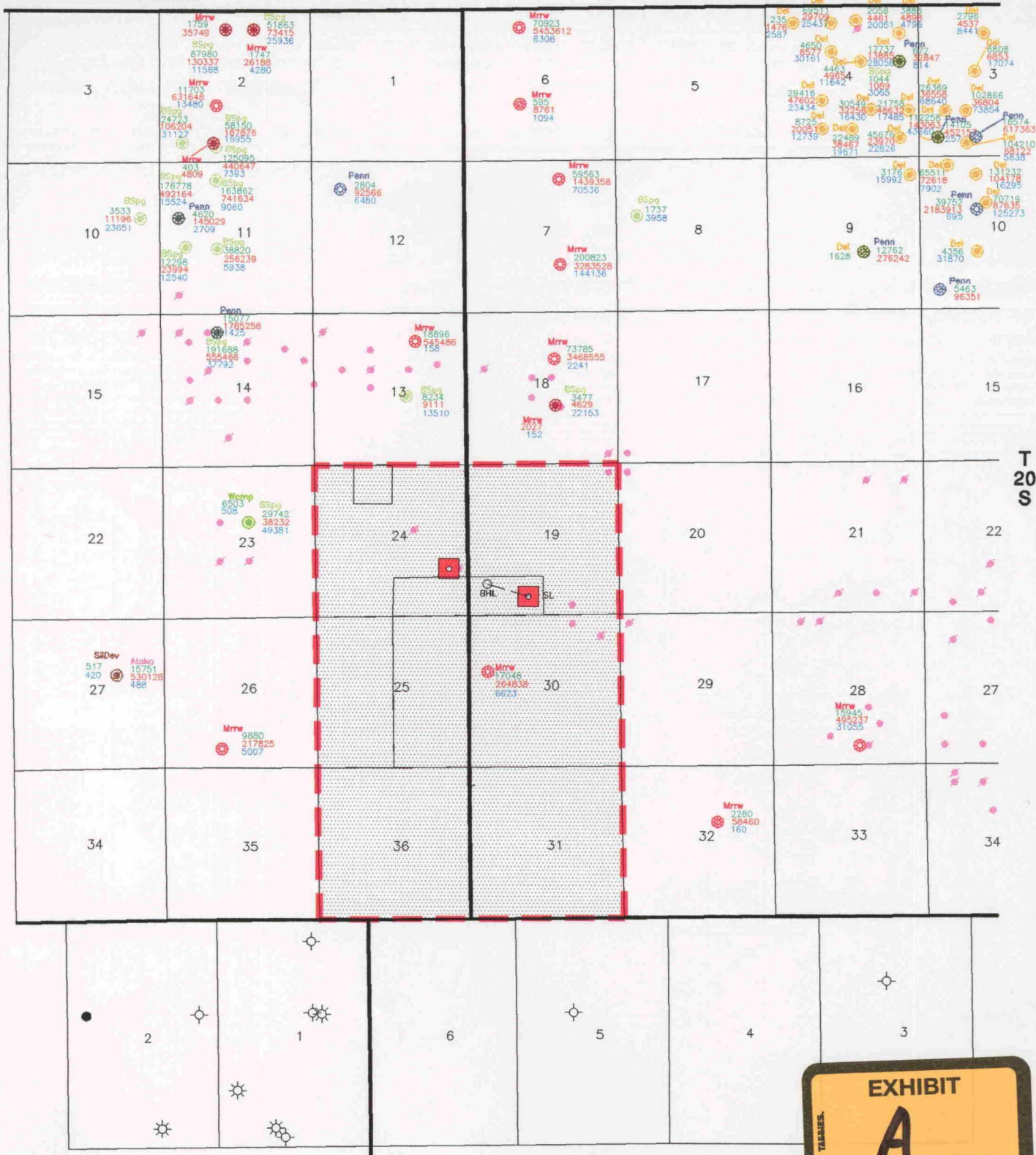
Attorney for Santa Fe  
Energy Resources, Inc.

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<sup>3</sup>To be re-named the Topaz "19" Fed. Com. Well No. 1.

R-33-E

R-34-E



## LEGEND

- SILURO-DEVONIAN PRODUCTION
- MORROW PRODUCTION
- ATOKA PRODUCTION
- STRAWN PRODUCTION
- PENN PRODUCTION
- WOLFCAMP PRODUCTION
- BONE SPRING PRODUCTION
- DELAWARE PRODUCTION
- UPPER GUADALUPIAN PRODUCTION



SFER INTEREST ACREAGE



PROSPECT OUTLINE



PROPOSED LOCATION



Santa Fe Energy Resources, Inc.

CENTRAL DIVISION  
MIDLAND, TEXAS

Lea South Area

## TOPAZ PROSPECT

Lea County, New Mexico

PRODUCTION MAP  
CUMULATIVE TO 2-28-97

Geol. By: Tom Tinney

Scale: 1"=

C.I.:

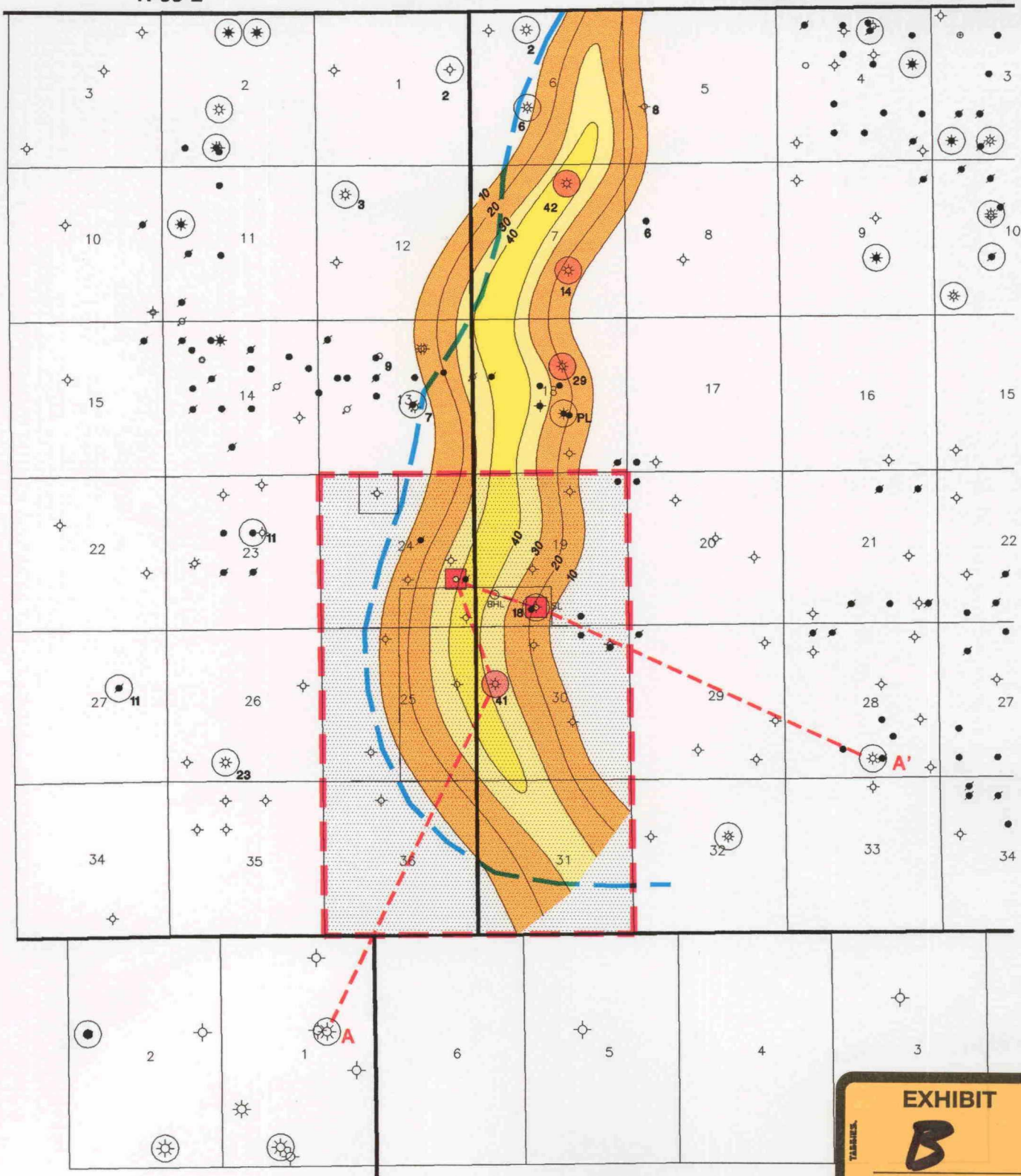
Date: 9-11-97

TOPZ-RRC.DWG



R-33-E

R-34-E

T  
20  
S

EXHIBIT

B

1 Mile



SFER INTEREST ACREAGE



PROSPECT OUTLINE



PROPOSED LOCATION



LOWER MORROW PRODUCER



Santa Fe Energy Resources, Inc.

CENTRAL DIVISION  
MIDLAND, TEXAS

Lea South Area

**TOPAZ PROSPECT**

Lea County, New Mexico

**ISOPACH MAP  
LOWER MORROW CLASTICS  
NET CLEAN SAND**

Geol. By: Tom Tinney

Scale: 1"=

C.I.: 10'

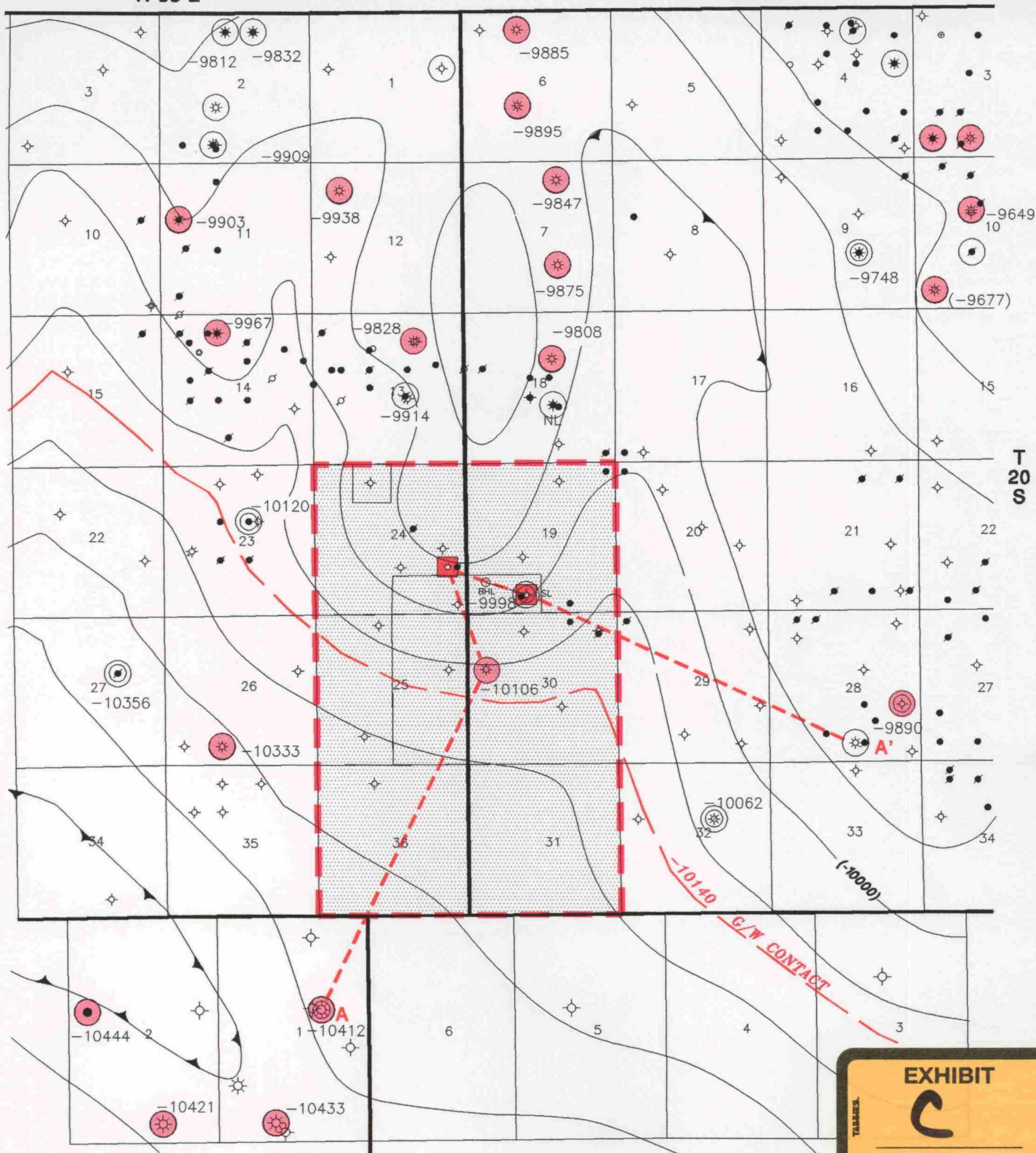
Date: 9-11-97

TOPZ-RRC.DWG



R-33-E





R-34-E

T  
20  
S

EXHIBIT

C

1 Mile

-  SFER INTEREST ACREAGE
-  PROSPECT OUTLINE
-  PROPOSED LOCATION
-  MORROW PRODUCER



Santa Fe Energy Resources, Inc.

CENTRAL DIVISION  
MIDLAND, TEXAS

Lea South Area

**TOPAZ PROSPECT**

Lea County, New Mexico

**TOP OF LOWER MORROW**

Geol. By: Tom Tinney

Scale: 1"=

C.I.: 100'

Date: 9-11-97

TOPZ-RRC.DWG

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

**SUBMIT IN TRIPLICATE\***  
(Other instructions on reverse side)

**FORM APPROVED**  
OMB NO. 1004-0136  
Expires: February 28, 1995

**APPLICATION FOR PERMIT TO DRILL OR DEEPEN**

<b>1a. TYPE OF WORK</b> <b>DRILL</b> <input checked="" type="checkbox"/> <b>DEEPEN</b> <input type="checkbox"/>			<b>5. LEASE DESIGNATION AND SERIAL NO.</b> NM 0550543	
<b>b. TYPE OF WELL</b> OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>			<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME</b> _____	
<b>2. NAME OF OPERATOR</b> Santa Fe Energy Resources, Inc.			<b>7. UNIT AGREEMENT NAME</b> _____	
<b>3. ADDRESS AND TELEPHONE NO.</b> 550 W. Texas, Suite 1330, Midland, TX 79701 (915) 682-6373			<b>8. FARM OR LEASE NAME, WELL NO.</b> Topaz "19" Fed Com	
<b>4. LOCATION OF WELL</b> (Report location clearly and in accordance with any State requirements.) At surface (N) 660' FSL & 2083' FWL At proposed prod. zone (M) 1100' FSL & 660' FWL			<b>9. API WELL NO.</b> 1	
<b>14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*</b> 8 mi NE from Halfway Bar, New Mexico			<b>10. FIELD AND POOL, OR WILDCAT</b> Quail Ridge (Morrow)	
<b>15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT</b> (Also to nearest drg. unit line, if any) 660			<b>11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA</b> Sec. 19, T-20-S, R-34-E	
<b>16. NO. OF ACRES IN LEASE</b> 80			<b>12. COUNTY OR PARISH</b> Lea	
<b>17. NO. OF ACRES ASSIGNED TO THIS WELL</b> 320			<b>13. STATE</b> New Mexico	
<b>18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.</b> 14,000			<b>20. ROTARY OR CABLE TOOLS</b> Rotary	
<b>21. ELEVATIONS</b> (Show whether OF, RT, GR, etc.) 3662 GR			<b>22. APPROX. DATE WORK WILL START*</b> 10/30/97	

**23. PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
26"	H-40 20"	94	177'	450 sx (Circ) (Csg in place)
17 1/2"	J 13 5/8"	48, 54.5, 81, 68	3198'	2450 sx (Circ) (Csg in place)
12 1/4"	J-55, N-80 9 5/8"	36, 40	5700'	1675 sx (Circ) (Csg in place)
8 3/4"	N-80, S-95, 5 1/2"	17	14000'	Stage collar @ 10,000' TOC @ 4800'

We propose to re-enter the former Cities Service Oil Co. Government N #1-Y, sidetrack and drill to a depth sufficient to test the Morrow formation for gas. If productive, 5 1/2" casing will be cemented at TD. If non-productive, the well will be plugged and abandoned in a manner consistent with Federal Regulations. 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 Schematic  
 Exhibit C - Drilling Fluids Program  
 Exhibit D - Auxiliary Program  
 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

This APD was previously approved as the Sinagua "19" Fed Com #2 on 7-21-95

**IN ABOVE SPACE DESCRIBE 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 D. Stinson TITLE Agent for Santa Fe Energy DATE 9.22.97  
 (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

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.



DISTRICT II  
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

## OIL CONSERVATION DIVISION

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

☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number		Pool Code	Pool Name Quail Ridge (Morrow)
Property Code	Property Name TOPAZ "19" FED COM		Well Number 1
OGRID No.	Operator Name SANTA FE ENERGY RESOURCES, INC.		Elevation 3662

### Surface Location

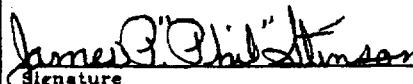
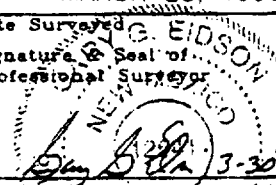

UL or lot No.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
N	19	20 S	34 E		660	SOUTH	2083	WEST	LEA

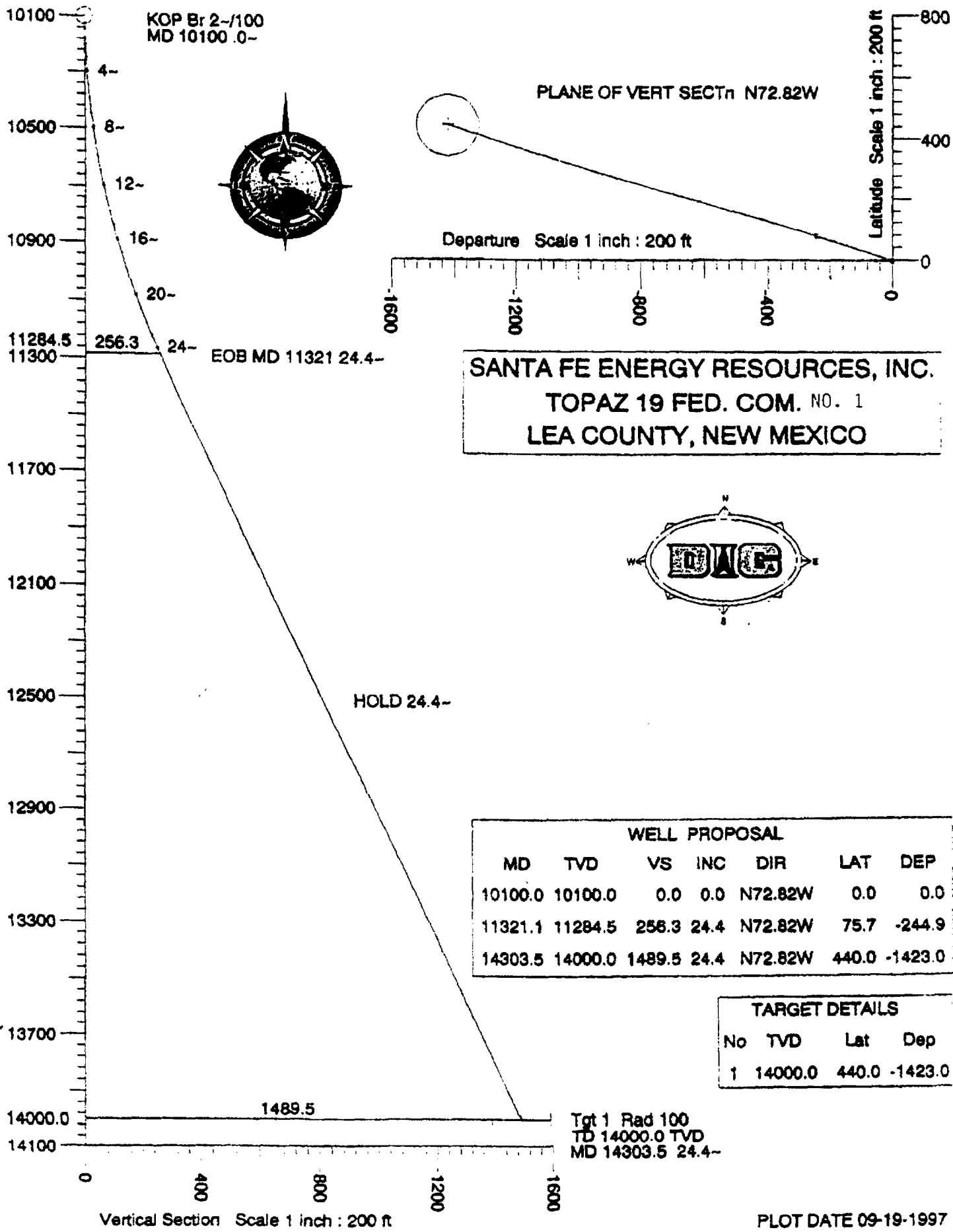
## Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	19	20-S	34-E		1100'	South	660'	West	

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320			

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

<p>LOT 1</p>     <p>40.03 AC.</p> <p>LOT 2</p>     <p>40.06 AC.</p> <p>LOT 3</p>     <p>40.08 AC.</p> <p>LOT 4</p> <p>2083'</p> <p>3660.1</p> <p>3661.1</p> <p>3663.0</p> <p>3663.9</p> <p>40.12 AC.</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <h3 style="text-align: center;">OPERATOR CERTIFICATION</h3> <p style="text-align: center; font-size: small;">I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <div style="text-align: center;">               Signature           </div> <div style="text-align: center;">             James P. "Phil" Stinson              Printed Name           </div> <div style="text-align: center;">             Agent for Santa Fe Energy              Title           </div> <div style="text-align: center;">             9.22.97              Date           </div> </div> <div style="border: 1px solid black; padding: 5px;"> <h3 style="text-align: center;">SURVEYOR CERTIFICATION</h3> <p style="text-align: center; font-size: small;">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.</p> <p style="text-align: center; font-weight: bold; font-size: large;">MARCH 28, 1995</p> <div style="display: flex; justify-content: space-between;"> <div> <p>Date Surveyed</p> <p>Signature &amp; Seal of</p> <p>Professional Surveyor</p> </div> <div style="text-align: right;"> <p>SJA</p>  </div> </div> <div style="text-align: center; margin-top: 10px;"> <p>W.O. Num. 95-11-05-1</p> </div> <div style="display: flex; justify-content: space-between; font-size: x-small; margin-top: 10px;"> <div>Certificate</div> <div>JOHN W. WISE RONALD V. EDSON GARY EDSON</div> <div>  </div> </div> </div>
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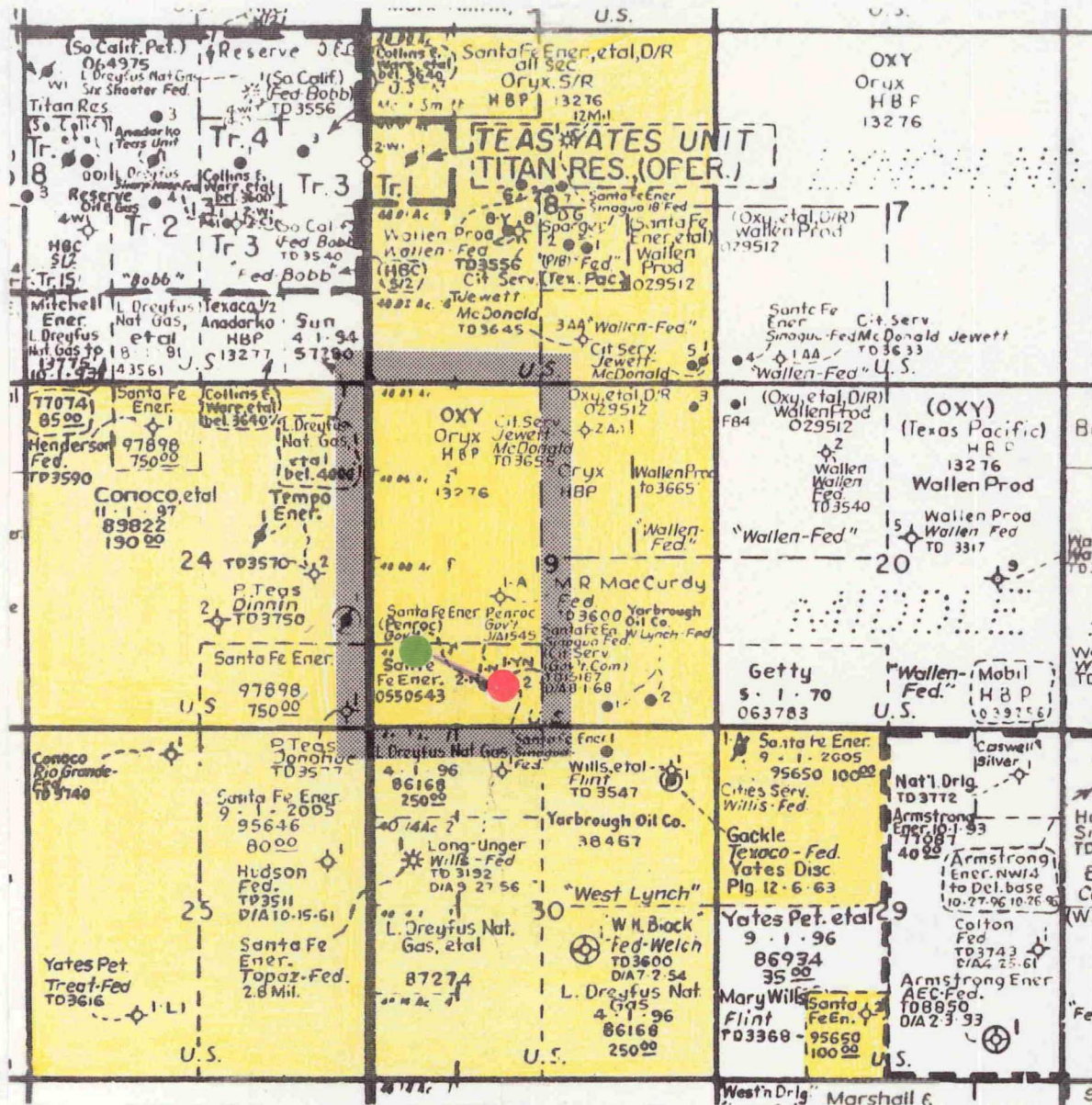


**SANTA FE ENERGY RESOURCES, INC.**  
**TOPAZ 19 FED. COM. NO. 1**  
**LEA COUNTY, NEW MEXICO**

WELL PROPOSAL						
MD	TVD	VS	INC	DIR	LAT	DEP
10100.0	10100.0	0.0	0.0	N72.82W	0.0	0.0
11321.1	11284.5	256.3	24.4	N72.82W	75.7	-244.9
14303.5	14000.0	1489.5	24.4	N72.82W	440.0	-1423.0

TARGET DETAILS			
No	TVD	Lat	Dep
1	14000.0	440.0	-1423.0





# **TOPAZ "19" FED. COM. NO. 1**

**Vertical Completion**  
660' FSL & 2084' FWL

**Sidetrack Completion**  
1100' FSL & 660' FWL

**320 Acre Drilling Tract**  
W/2 Section 19-T20S-R34E

Operator: SFER, Inc.

SFER, INC. Acreage



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

LEA COUNTY, NEW MEXICO

LAND PLAT

TOPAZ PROSPECT

Date: 2-1-97

EXHIBIT

**E**

**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)

September 26, 1997

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

To: Persons on Exhibit A

Ladies and Gentlemen:

On September 26, 1997, Santa Fe Energy Resources, Inc. filed an application at the New Mexico Oil Conservation Division seeking administrative approval of an unorthodox gas well location for the Topaz "19" Fed. Com. Well No. 1, located in the W $\frac{1}{2}$  of Section 19, Township 20 South, Range 34 East, NMPM, Lea County, New Mexico. A copy of the application is enclosed. Santa Fe's records show that you own an interest offsetting the above well. If you object to the unorthodox location, you must notify the Division in writing no later than 20 days from the date of this letter. The Division's address is 2040 South Pacheco Street, Santa Fe, New Mexico 87505 (Attention: Michael E. Stogner).

Very truly yours,



James Bruce

Attorney for Santa Fe  
Energy Resources, Inc.



EXHIBIT A

**TOPAZ PROSPECT**

**Land Description**

All Section 24, T-20-S, R-33-E  
All Section 25, T-20-S, R-33-E  
W/2 & SE/4 Section 30, T-20-S, R-34-E

**Lessees**

Santa Fe Energy Resources, Inc.  
550 West Texas, Suite 1330  
Midland, Texas 79701

(Operator)

Louis Dreyfus Natural Gas Corp.  
14000 Quail Springs Parkway  
Suite 600  
Oklahoma City, Oklahoma 73134-2600

Southwestern Energy Production Company  
5600 North May Ave.  
Suite 200  
Oklahoma City, Oklahoma 73112-3979

**Land Description**

NE/4 Section 30, T-20-S, R-34-E

**Lessees**

Santa Fe Energy Resources, Inc.  
550 West Texas, Suite 1330  
Midland, Texas 79701

(Operator)

Louis Dreyfus Natural Gas Corp.  
14000 Quail Springs Parkway  
Suite 600  
Oklahoma City, Oklahoma 73134-2600

Southwestern Energy Production Company  
5600 North May Ave.  
Suite 200  
Oklahoma City, Oklahoma 73112-3979

Harvey E. Yates Company  
P.O. BOX 1933  
One SunWest Centre  
Roswell, New Mexico 88201

Jalapeno Corporation  
P.O. Box 1608  
Albuquerque, New Mexico 87103

Armstrong Energy Corporation  
P.O. Box 1973  
Roswell, New Mexico 88202

Jack Beaty  
9428 Pebble Beach Drive  
Albuquerque, New Mexico 87111

Catherine M. Harvey  
P.O. Box 2148  
Santa Fe, New Mexico 87504

**Land Description**

NE/4 Section 30, T-20-S, R-34-E Cont'd

**Lessees**

Thomas E. Hickey  
c/o T.H. McElvain Oil & Gas  
P.O. Box 2148  
Santa Fe, New Mexico 87504

LeMay Energy Corporation  
555 Camino Ranchero  
Santa Fe, New Mexico 87501

Constance B. Lewis  
310 Monssen Drive  
Dallas, Texas 75224-1428

Anne B. Little  
P.O. Box 82277  
Albuquerque, New Mexico 87198-2277

Verde Vista Energy Company  
P.O. Box 310  
Roswell, New Mexico 88202



**Land Description**

E/2 Section 19, T-20-S, R-34-E

**Lessees**

Santa Fe Energy Resources, Inc.  
550 West Texas, Suite 1330  
Midland, Texas 79701

Doyle Hartman  
P.O. Box 10426  
Midland, Texas 79702

Larry Nermyr  
Box 4106S  
Sidney, Montana 59270

Southwestern Energy Production Company  
5600 North May Avenue, Suite 200  
Oklahoma City, Oklahoma 73112-3979

Louis Dreyfus Natural Gas Corp.  
14000 Quail Springs Parkway  
Suite 600  
Oklahoma City, Oklahoma 73134-2600

J. Cleo Thompson, Jr.  
4500 Republic Nat'l. Bank Tower  
Dallas, Texas 75201

James A. Davidson  
Box 494  
Midland, Texas 79702

**Land Description**

E/2 Section 19, T-20-S, R-34-E Cont'd

**Lessees**

Petro-Quest Exploration  
P.O. Box 10016  
Midland, Texas 79702

Mizel Resources, A Trust  
5801 East 41st Street, Suite 104  
Tulsa, Oklahoma 74135

James E. Burr & Laveta Burr  
P.O. Box 8050  
Midland, Texas 79702

Ruth Sutton  
2826 Moss  
Midland, Texas 79705

John H. Hendrix Corp.  
P.O. Box 3040  
Midland, Texas 79702-3040

Michael L. Klein & Jeanne Klein  
500 West Texas  
Midland, Texas 79701

Ronnie H. Westbrook & Karen Westbrook  
2809 Haynes  
Midland, Texas 79705

Devises of Dewey E. Sparger  
P.O. Box 1112  
Hobbs, New Mexico 88240

Larry A. Mizel  
3600 South Yosemite Street #810  
Denver, Colorado 80237

Fasken Oil & Ranch Ltd.  
For A/C Fasken Land & Minerals Ltd  
303 West Wall Ave., Suite 1900  
Midland, Texas 79701-5116