

UNIT
DEPARTMENT
BUREAU OF
APPLICATION FOR PERMIT

OPER. UNIT NO. 30305 LOCATE
PROPERTY NO. 18920 JRS ON 1240
POOL CODE 96665
EXP. DATE 4/21/97 CM
APPROX. 30-025-33929

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

1a. TYPE OF WORK

DRILL ☒

b. TYPE OF WELL

OIL WELL ☐

GAS WELL ☒

OTHER

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 79701 (915) 682-6373

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

At surface

(K) 1650' FSL & 1650' FWL

At proposed prod. zone

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

20 miles west of Jal, New Mexico

15. DISTANCE FROM PROPOSED*

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

990'

16. NO. OF ACRES IN LEASE

320

17. NO. OF ACRES ASSIGNED TO THIS WELL

320

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

2380'

19. PROPOSED DEPTH

13600'

20. ROTARY OR CABLE TOOLS

Rotary

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

3450' GR

22. APPROX. DATE WORK WILL START*

April 25, 1997

PROPOSED CASING AND CEMENT

CAPITAL PROGRAM CONTROLLED WATER BASIN

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	H-40 13 3/8"	48.0	800'	850 sx to circulate
12 1/4"	K-55 9 5/8"	40.0	5000'	1550 sx to circulate
8 3/4"	S-95 & P-110 7"	26.0	11800'	800 sx to TOC @ 6000'
6 1/8"	S-95 4 1/2"	13.5	13600'	225 sx (circ to liner top)

WITNESS

We propose to drill to a depth sufficient to test the Morrow formation for gas. If productive, a 4 1/2" liner will be run to 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 and Choke Schematic 5-M
- Exhibit B(A) - BOP and Choke Schematic 10-M
- Exhibit C - Drilling Fluid Program
- Exhibit D - Auxiliary Equipment

- Exhibit E - Topo Map at Location
- Exhibit F - Map Showing Existing Wells
- Exhibit F (A) - Plat of Location
- Exhibit G - Well Site Layout
- Surface Use and Operations Plan

Santa Fe Energy Resources, Inc. accepts all applicable terms, conditions, stipulations and restrictions concerning operations conducted on the leased land and well thereof, as described above.

Bond Coverage: Blanket Bond

BLM Bond File No. MT 679

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

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 interval if any.

24.

SIGNED

James P. "Phil" Stinson

TITLE

Agent for Santa Fe Energy

DATE

3-12-97

(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

FERGUSON

TITLE

MINERALS

DATE

4-16-97

*See Instructions On Reverse Side

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 30-025-33929		2 Pool Code 96665		3 Pool Name West Rio Chiso North Bell Lake (Morrow)		
4 Property Code 18928		5 Property Name GAUCHO UNIT FEDERAL			6 Well Number 3	
7 OGRID No. 20305		8 Operator Name SANTA FE ENERGY RESOURCES, INC.			9 Elevation 3450'	

10 SURFACE LOCATION

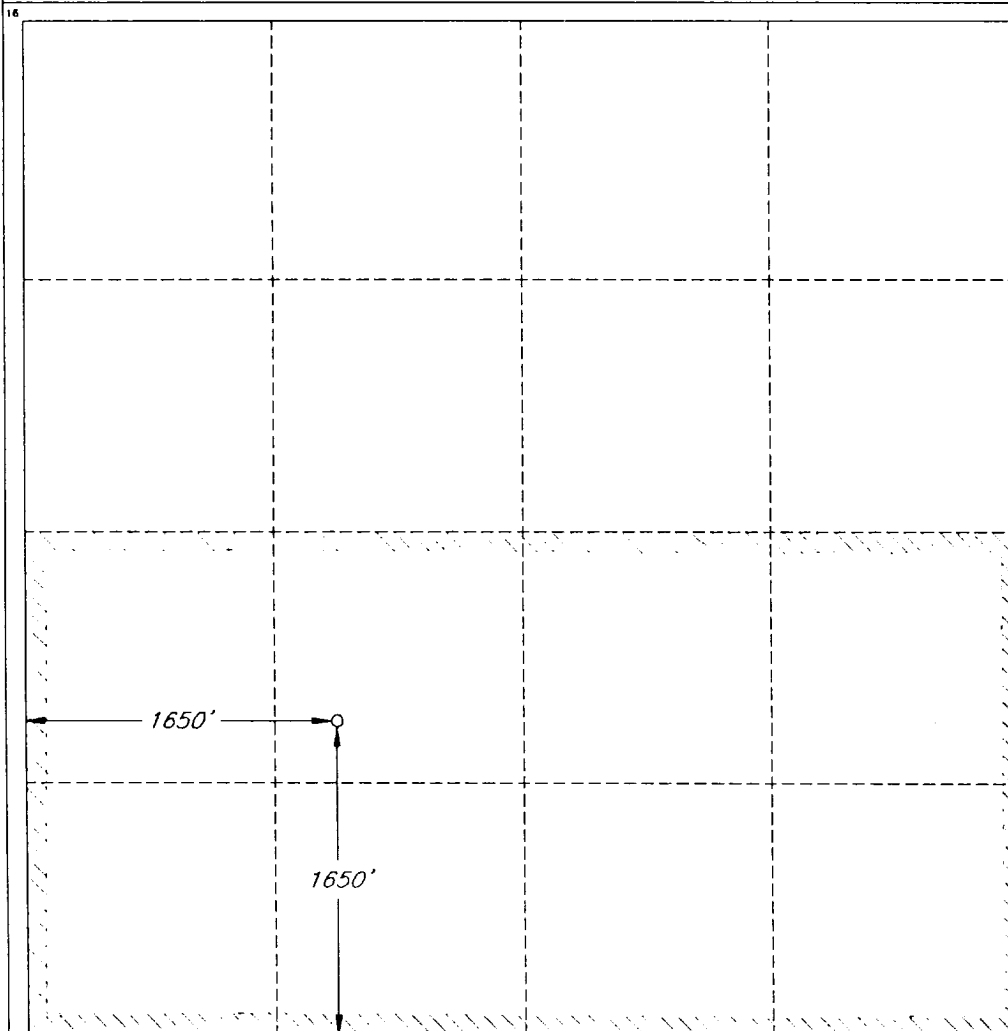
UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
K	20	22 SOUTH	34 EAST, N.M.P.M.		1650'	SOUTH	1650'	WEST	LEA

"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 320	13 Joint or Infill	14 Consolidation Code	15 Order No.
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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 Energy

Date

3-12-97

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 22, 1997

Signature and Seal of
Professional Surveyor



Certificate No.
ROGER M. ROBBINS P.S. #12128

JOB #50096-1 / 46SW / VHB

DRILLING PROGRAM

SANTA FE ENERGY RESOURCES, INC.

Gaucho Unit No. 3

In conjunction with Form 3160-3, Application to Drill the subject well, Santa Fe Energy Resources, Inc. submits the following ten items of pertinent information in accordance with Onshore Oil & Gas Order No. 1.

1. **Geologic Name of Surface Formation:** Alluvium
2. **Estimated Tops of Significant Geologic Markers:**

Rustler	1050'
Salado	1400'
Delaware	5000'
Bone Spring	8450'
Wolfcamp	10900'
Strawn	11900'
Atoka	12100'
Morrow	12700'
Total Depth	13600'

3. **The estimated depths at which water, oil or gas formations are expected:**

Water	None expected in area
Oil	Bone Spring @ 9100'
Gas	Upper Morrow @ 13100'

4. **Proposed Casing Program:** See Form 3160-3 and Exhibit A
5. **Pressure Control Equipment:** See Exhibit B
6. **Drilling Fluid Program:** See Exhibit C
7. **Auxiliary Equipment:** A mud logging unit will be utilized to monitor penetration rate and hydrocarbon shows while drilling below 4600' to TD.
8. **Testing, Logging and Coring Program:**

Drill Stem Tests: (all DST's to be justified on the basis of valid show of oil or gas):

Bone Spring	9100'- 9200'
Atoka	12200'-12250'
Morrow	13100'-13150'

Logging:

Dual Laterolog W/MSFL and Gamma Ray 11850'-13600'

Compensated Neutron/Litho-Density/Gamma Ray 5000'-11850' & 11850'- 13600'

Compensated Neutron/Gamma Ray (thru csg) Surface-5000'

Coring: No conventional cores are planned.

9. **Abnormal Conditions, Pressures, Temperatures & Potential Hazards:**

Abnormally high pressured zones with a bottomhole pressure of approximately 7500 psi could possibly be encountered while drilling the Pennsylvanian interval. Sufficient barite will be on location to enable the weighting up to the estimated 11.5 ppg to control any high pressure zone encountered. Along with the above mentioned primary control, a Blow Out Preventer System as outlined in Exhibit B will be utilized should the need arise to shut the well in prior to running and cementing the drilling liner. The estimated bottom hole temperature is 170°F. No Hydrogen Sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. No major lost circulation zones have been reported in the offsetting wells.

10. **Anticipated Starting Date and Duration of Operations:**

Road and location work will not begin until approval has been received from the B.L.M. The anticipated spud date is April 25, 1997. Once spudded, the drilling operation should be completed in approximately 70 days. If the well is productive, an additional 30 days will be required for completion and testing before permanent facilities are installed.

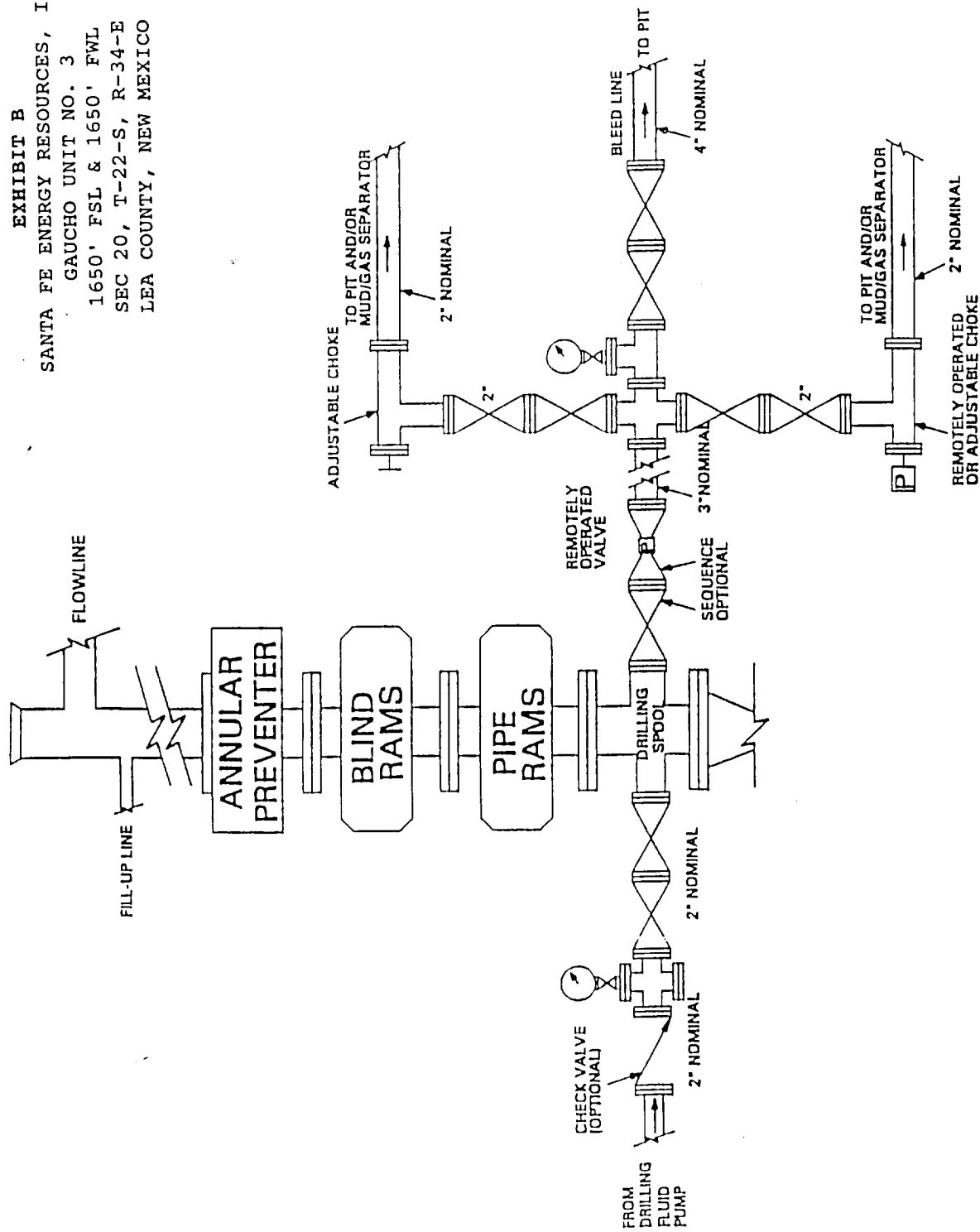
EXHIBIT A
OPERATIONS PLAN
SANTA FE ENERGY RESOURCES, INC.
GAUCHO UNIT No. 3
Section 20, T-22-S, R-34-E
Lea County, New Mexico

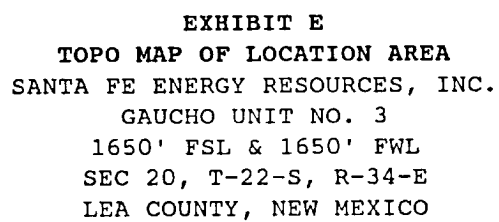
1. Drill a 17-1/2" hole to approximately 800'.
2. Run 13-3/8" 48.0 ppf H-40 ST&C casing. Cement with 850 sx Class "C" cement containing 2% CaCl_2 . Run centralizers on every other joint above the shoe. Apply thread lock to bottom two joints and guide shoe.
3. Wait on cement twelve hours prior to cutting off.
4. Nipple up an annular BOP system and test casing to 600 psi. WOC twenty-four (24) hours prior to drilling out.
5. Drill a 12-1/4" hole to approximately 5000'.
6. Run 9-5/8" 40.0 ppf K-55 ST&C casing. Cement with 1150sx Cl "C" Lite containing 12 pps salt and 1/4 pps celloflake followed by 400 sx Class "C" with 2% CaCl_2 . Run guide shoe on bottom and float collar two joints from bottom. Centralize every other joint for bottom 400' of casing and place two centralizers in surface casing. Thread lock bottom 2 joints.
7. Wait on cement for twelve hours prior to cutting off.
8. Nipple up and install a Double Ram and Annular BOP system with choke manifold.
9. Test BOP system to 3000 psi. Test casing to 1500 psi.
10. Drill 8-3/4" hole to the first good lime section after drilling into the Wolfcamp, which is anticipated to be at approximately $\pm 11850'$. Run logs.
11. Run 11850' of 7" 26.0 ppf S-95 & P-110 LT&C casing set @ 11850'. Cement with 500 sx "Light" cement followed with 300 sx Class "H". Run guide shoe on bottom and float collar two joints off bottom. Centralize bottom 1000' of casing with one centralizer on every other joint. Thread lock bottom two joints. Our plan is to bring the top of cement to $\pm 6000'$.
12. Nipple down BOP. Set slips. Cut off casing. Nipple up 10000 psi BOP Stack. Test to 10000 psi.
13. Test casing to 2500 psi.
14. Drill a 6-1/8" hole to ± 13600 . Log. Run and cement a 4-1/2" 13.5 ppf S-95 flush joint liner from 11650'-13600'. Cement with 225 sx Class "H" containing necessary additives. Lay down setting tool and RIH with a 6-1/8" bit to dress off the liner top. Perform negative test on liner top.
15. Clean out inside of 4-1/2" liner.
16. Run production equipment and test well as necessary.

PROPOSED 5-M BOPE AND CHOKE ARRANGEMENT

EXHIBIT B

SANTA FE ENERGY RESOURCES, INC.
GAUCHO UNIT NO. 3
1650' FSL & 1650' FWL
SEC 20, T-22-S, R-34-E
LEA COUNTY, NEW MEXICO





LEA COUNTY, NEW MEXICO

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