

N.M. OIL

OPER. OGRID NO. 22325FORM APPROVED
OMB NO. 1004-0136
Expires: February 28, 1995DEPARTMENT OF
BUREAU OF LANDPROPERTY NO. 1881POOL CODE 81852EFF. DATE 4/10/96API NO. 31.225-33375

APPLICATION FOR PERMIT

1a. TYPE OF WORK

DRILL ☒DEEPEIN ☐

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

(E) 1980' FNL & 660' FWL

At proposed prod. zone

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

27 miles NW of Eunice, New Mexico

15. DISTANCE FROM PROPOSED*

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

660'

16. NO. OF ACRES IN LEASE

240

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.

None

19. PROPOSED DEPTH

14,000

20. ROTARY OR CABLE TOOLS

Rotary

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

3674' GR

22. APPROX. DATE WORK WILL START*

March 29, 1996

23.

PROPOSED CASING AND CEMENTING PROGRAM

R-11-P-1000

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
26"	H-40 20"	94.0	450'	750 sx to circulate
17 1/2"	S-80 13 3/8"	68.0	3300'	2600 sx to circulate
11"	K-55 8 5/8"	32.0	5200'	TOC @ 3100' 200' inside 13 3/8"
7 7/8"	N-80 + S-95 5 1/2"	17.0	14000'	Stage collar @ 10000' TOC @ 4800'

We propose to 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 and Choke Manifold
Exhibit C - Drilling Fluid Program
Exhibit D - Auxiliary Equipment
Exhibit E - Topo Map at Location

Exhibit F - Map Showing Existing Wells
Exhibit G - Well Site Layout
Surface Use and Operations Plan
H2S Drilling Operations Plan

Approved Subject to
General Regulations and
Special stipulations
Attached

Santa Fe Energy Resources, Inc. accepts all applicable terms, conditions, stipulations and restrictions concerning operations conducted on the leased land or portion thereof, as described above. Bond Coverage: Blanket Bond BLM Bond File No.: MT0750

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 J. Phil StinsonTITLE Agent for Santa Fe EnergyDATE 2-28-96

(This space for Federal or State office use)

OPER. OGRID NO. _____

PROPERTY NO. _____

PERMIT NO. _____

APPROVAL DATE _____

POOL CODE _____

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject area which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

EFF. DATE _____

APPROVED BY

Richard A. Whalley

TITLE

Acting State Director

DATE

3-23-96

*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

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

DISTRICT III
1000 Rio Brazos Rd.
Aztec, NM 87410

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

☐ AMENDED REPORT

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 2025 33375		2 Pool Code 80 852		3 Pool Name Quail Ridge Morrow			
4 Property Code 18311		5 Property Name TOPAZ '30' FEDERAL				6 Well Number 1	
7 OGRID No. 20365		8 Operator Name SANTA FE ENERGY RESOURCES, INC.				9 Elevation 3674'	

10 SURFACE LOCATION

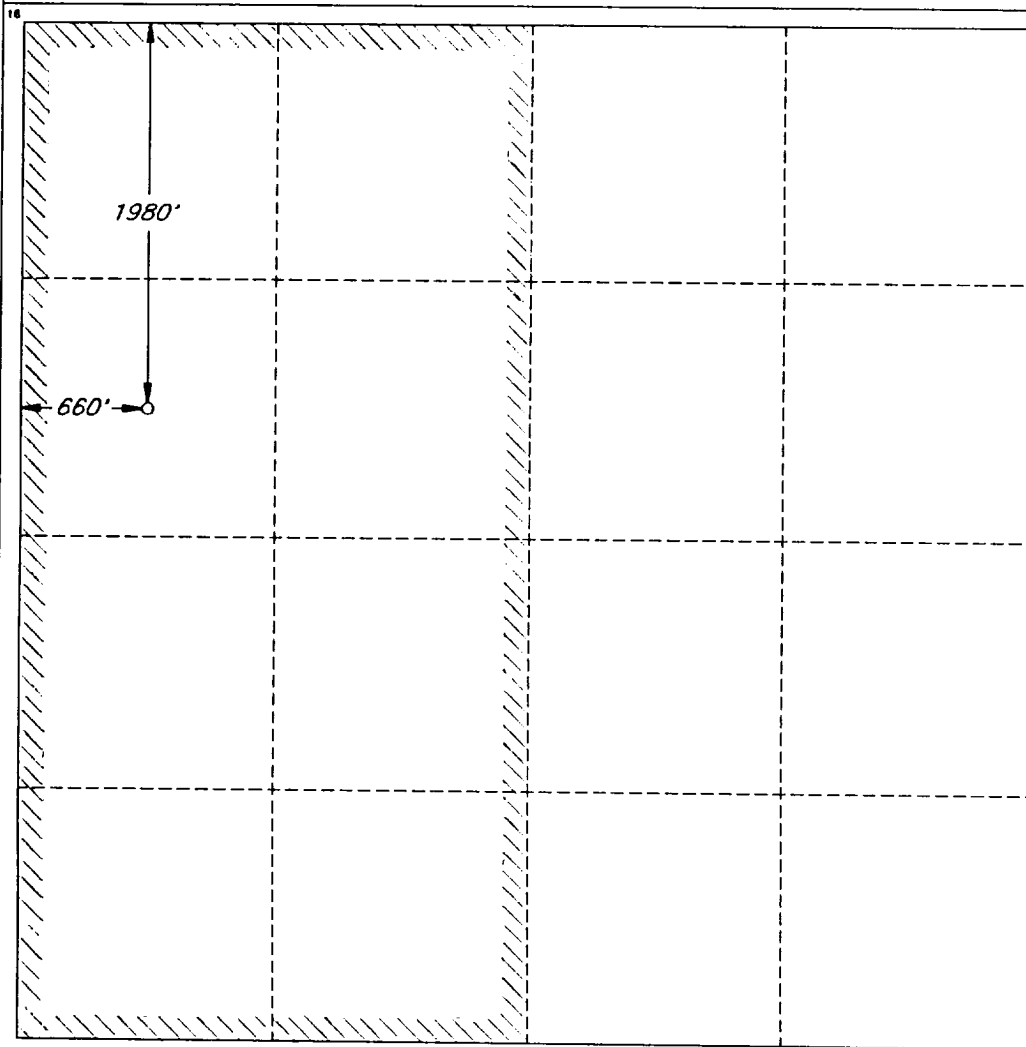
UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
E	30	20 SOUTH	34 EAST, N.M.P.M.		1980'	NORTH	660'	WEST	LEA

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 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
2.28.96

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 26, 1996

Signature and Seal of
Professional Surveyor

Certification No.
V. LYNN BEZNER, P.E. #7920
JOB #4056 / 22 SE / V.H.B.

Topaz "30" Fed Com #1 - W/2 Sec 30

	<u>WI Ownership</u>	<u>WI%</u>	<u>NRI%</u>
Bureau of Land Management NM-86168 Lot 1, NE/4NW/4 T-20-S, R-34-E	SFERI RI% = 12.5	100.00	75.00 Other Burdens % = 12.5
Bureau of Land Management NM-87274 Lot 2, 3, 4, SE/4NW/4, E/2SW/4 T-20-S, R-34-E	SFERI RI% = 12.5	100.00	75.00 Other Burdens % = 12.5

DRILLING PROGRAM

SANTA FE ENERGY RESOURCES, INC.

Topaz "30" Fed No. 1

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 Anhydrite	1,490'
Top of Salt	1,630'
Base of Salt	3,130'
Yates	3,310'
Delaware	5,400'
Bone Spring	8,350'
1st Bone Spring Sand	9,350'
Wolfcamp	11,250'
Strawn	12,250'
Atoka	12,500'
Morrow	12,850'
Lower Morrow	13,400'
Total Depth	14,000'

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

Water	None expected in area
Oil	Bone Spring 9400'-9500'
Gas	Morrow 13,300'-400'

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 the casing point at 5200.

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	9400'-9500'
Morrow	13300'-13400'

Logging:

Dual Laterolog W/MSFL and Gamma Ray	5200'-14000'
Compensated Neutron/Litho-Density/Gamma Ray	5200'-14000'
Compensated Neutron/Gamma Ray (thru csg)	Surface-5200'
Borehole Compensated Sonic	5200'-14000'
Phasor Induction/SFL/Gamma Ray	5200'-14000'
Coring: No conventional cores are planned	

DRILLING PROGRAM

Topaz "30" Fed No. 1

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

No abnormal pressures or temperatures are anticipated. The estimated bottom hole temperature is 190 degrees Fahrenheit and the estimated bottom hole pressure is 5900 psi. No Hydrogen Sulfide or other hazardous gases or fluids have been encountered in offset wells, but it is reported to exist in the Yates formation, therefore we are submitting a Hydrogen Sulfide Drilling Operations Plan to cover the unlikely event. 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 March 29, 1996. Once spudded, the drilling operation should be completed in approximately 45 days. If the well is productive, an additional 30 days will be required for completion and testing before permanent facilities are installed.

OPERATIONS PLAN

SANTA FE ENERGY RESOURCES, INC.

Topaz "30" Fed No. 1

1. Drill a 26" hole to approximately 450'.
2. Run 20" 94.0 ppf J-55 BT&C casing. Cement with 550 sx Class "C" Lite + 2% CaCl_2 and tail-in with 200 sx Class "C" + 2% CaCl_2 . Cement utilizing an inner string cement job. Run centralizers on every third joint above the shoe. Apply thread lock to bottom two joints and stab-in float shoe.
3. Wait on cement twelve hours prior to cutting off. Nipple up a annular BOP system or rotating head and test casing to 600 psi. Wait on cement twenty-four hours prior to drilling out.
4. Drill a 17-1/2" hole to approximately 3300'. T.D. should be at least 100' below the base of the Salt.
5. Run 13-3/8" 68.0 ppf S-80 BT&C casing. Cement with an estimated 2400 sx Class "C" Lite (35:65:6) + 9 pps Salt + 1/4 pps cello-flakes and tail-in with 200 sx Cl "C" +2% CaCl_2 to circulate to surface. A fluid caliper should be run prior to reaching TD and the cement volumes adjusted to fluid caliper volume + 30% excess. Run guide shoe on bottom and float collar one joint above shoe. Apply thread lock to bottom two joints, float collar and shoe. Place 15 centralizers one on every third collar, starting with the shoe joint.
6. Wait on cement 12 hours prior to cutting off. Cut off 20" casinghead. Orange peel 20" casing back to 13-3/8" casing, weld on 13-3/8" casinghead. NU an annular preventer BOP system. Test casing to 600 psi. WOC 24 hours prior to drilling out. Rig up H_2S monitoring equipment for the drilling of the Yates Section.
7. Drill a 11" hole to approximately 5200'.
8. Run 8-5/8" 32.0 ppf K-55 ST&C casing. Cement with 600 sx Cl "C" Lite containing 6 pps gilsonite & 1/4 pps cello-flakes followed by 400 sx Class "C" with 2% CaCl_2 to circulate cement at least 200' inside the 13-3/8" casing. Run guide shoe on bottom and float collar two joints off bottom. Place 18 centralizers one on every third collar, starting with the shoe joint. Thread lock bottom 2 joints.
9. Wait on cement for twelve hours prior to cutting off.
10. Nipple up and install a 5000 psi. Double Ram and Annular BOP system with choke manifold. Test BOP system to 5000 psi. Test casing to 1500 psi. Wait on cement twenty-four hours prior to drilling out. Release H_2S monitoring equipment.
11. Drill 7-7/8" hole to 14000'. Run logs.
12. Either run and cement 4000' of 5-1/2" 17.0 ppf S-95 LT&C casing followed by 10000' of 5-1/2" 17.0 ppf N-80 LT&C in two stages with a stage collar at approximately 10000' to bring cement to at least 200' inside the 8-5/8" casing or plug and abandon as per BLM requirements.

Exhibit "A"
Santa Fe Energy Resources, Inc.
Topaz "30" Fed Com No. 1
Section 30, T-20-S, R-34-E
Lea County, New Mexico

PROPOSED DRILLING FLUID PROGRAM

0 - 450'

Spud mud consisting of fresh water gel flocculated with Lime. Use ground paper for seepage control and to sweep the hole. MW-8.5 ppg and Vis-40.

450 - 3300'

Drill out with brine water circulating the inner portion of the reserve pit. Utilize ground paper mixed in prehydrated fresh gel to sweep the hole. MW-10.0 ppg and Vis-28.

3300 - 5200'

Fresh water - using paper in pills to sweep the hole. MW-8.3 ppg and Vis-28.

5200' - 14000'

Drill out with cut brine (30,000 ppm chlorides minimum) circulating the outer portion of the reserve pit. Maintain pH at 8.5-9.5 with caustic and sweep the hole as necessary with ground paper. If it becomes necessary to mud up due to hole conditions, utilize a cut bine/Drispac system for 15-20 WL and a Vis of 30-32. MW-8.5/8.9 ppg. At approximately 12000', displace with 10.0 ppg brine and mud-up with XCD polymer and Drispac for 32-35 vis and 15-20 WL, pH 9.0-9.5.

Exhibit "C"
Santa Fe Energy Resources, Inc.
Topaz "30" Fed No. 1
Section 30, T-20-S, R-34-E
Lea County, New Mexico

9/25/06

received
Hobbs
09/25/06

EXHIBIT B

SANTA FE ENERGY RESOURCES, INC.

TOPAZ "30" FED NO. 1

1980' FNL & 660' FWL

SEC 30, T-20-S, R-34-E

LEA COUNTY, NEW MEXICO

