Form 3160-3
(July 1992)

OPER. OGRID NO. 20305
PROPERTY NO. 19349
POOL CODE 538 / 538
EFF. DATE 8/13/96
API NO. 30-025-33539

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...ns on

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

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DEPARTMENT
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APPLICATION FOR PE...

1a. TYPE OF WORK
DRILL [X] DEEPEN [ ]

b. TYPE OF WELL
OIL WELL [X] GAS WELL [ ] OTHER SINGLE ZONE [X] 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
(M) 660' FSL & 467' FWL
At proposed prod. zone
Unit M

5. LEASE DESIGNATION AND SERIAL NO.
NM-86924

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME, WELL NO.
Tomcat "8" Fed No. 1

9. API WELL NO.

10. FIELD AND POOL, OR WILDCAT
Sand Dunes, S. Delaware/Bone Spring

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 8, T-23-S, R-32-E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
24 miles east of Loving, New Mexico

12. COUNTY OR PARISH: Lea
13. STATE: New Mexico

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
467'	320	40
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
None	8900'	Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
3578 GR

22. APPROX. DATE WORK WILL START*
August 5, 1996

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"	48.0	600'	600 sx to circulate
11"	K-55 8 5/8"	32.0	4600'	1300 sx to circulate
7 7/8"	K-55 5 1/2"	17.0	8900'	tie back to 4400'

We propose to drill to a depth sufficient to test the Bone Spring formation for oil. If productive, 5 1/2" casing 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 Manifold
- 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 or portion thereof, as described above.

Bond Coverage: Blanket Bond BLM Bond File No.: MT 0750

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 P. Phillips TITLE Agent for Santa Fe Energy DATE 7-2-96

(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:

General requirements and Special Stipulations Attached

APPROVED BY _____ TITLE _____ DATE AUG 5 1996

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

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

DISTRICT III
1000 Rio Brazos Rd.
Aztec, NM 87410

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

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

Form C-102
Revised 02-10-94

Instructions on back

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-025-33539	53817 / 53800	Sand Dunes SW Delaware/Bone Spring

4 Property Code	5 Property Name	6 Well Number
19249	TOMCAT "8" FEDERAL	1

7 OGRID No.	8 Operator Name	9 Elevation
	SANTA FE ENERGY RESOURCES, INC.	3578'

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
M	8	23 SOUTH	32 EAST, N.M.P.M.		660'	SOUTH	467'	WEST	LEA

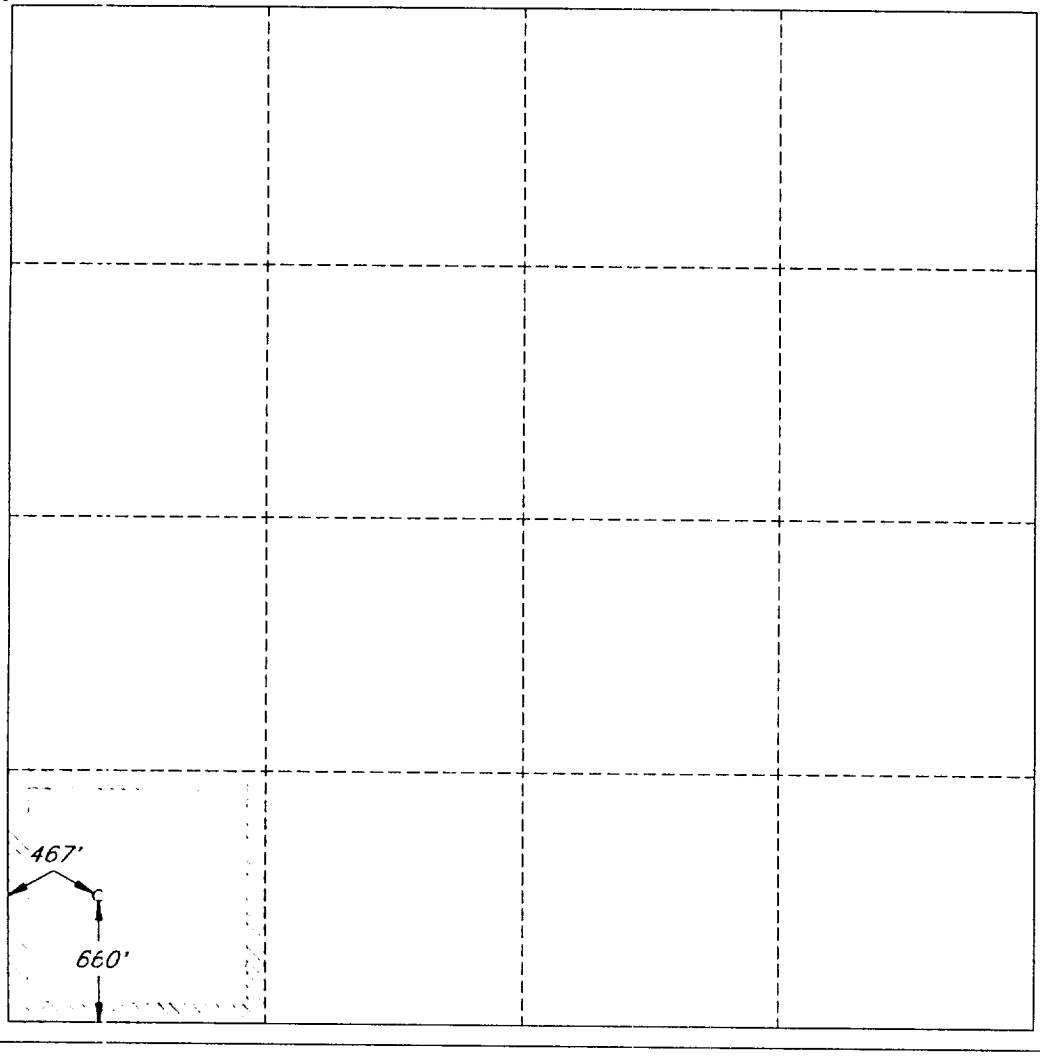
11 BOTTOM HOLE LOCATION IF DIFFERENT FROM SURFACE

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
						NORTH			

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
40			

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

16



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: 7-2-96

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: JUNE 24, 1996

Signature and Seal of Professional Surveyor:

STATE OF NEW MEXICO
V. LYNN BEZNER
NO. 7920
REGISTERED LAND SURVEYOR

Certificate No. V. L. BEZNER N.M.P.L.S. #7920

JOB #4611 / 43 SW / V.H.B.

DRILLING PROGRAM
SANTA FE ENERGY RESOURCES, INC.
TOMCAT "8" Fed. No. 1

In conjunction with Form 3160-3, Application For Permit 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:** Permian

2. **Estimated Tops of Significant Geologic Markers:**

Rustler	930'
Delaware Lime	4600'
Bell Canyon	4580'
Cherry Canyon	5650'
Bone Spring	8600'
Total Depth	8900'

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

Water	None expected in area
Oil	Delaware @ 4600'
	Bone Spring @ 8600'

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 intermediate casing at 4600'.

8. **Testing, Logging, and Coring Program:**

Drill Stem Tests: None Planned.

Logging:

Dual Laterolog w/MSFL and Gamma Ray	4600'-8900'
Compensated Neutron/Litho-Density/Gamma Ray	4600'-8900'
Compensated Neutron/Gamma Ray (thru csg)	Surface-4600'

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

No abnormal pressures or temperatures are anticipated. The estimated bottom hole temperature is 135° psi and the estimated bottom hole pressure is 3100 psi. 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 BLM. The anticipated spud date is August 5, 1996. Once spudded the drilling operation should be completed in approximately 15 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.
Tomcat "8" Federal No. 1
Section 8, T-23-S, R-32-E
Lea County, New Mexico

1. Drill a 17-1/2" hole to approximately 600'.

2. Run 13-3/8" 48.0 ppf H-40 ST&C casing. Cement with 600 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 11" hole to approximately 4600'.

6. Run 8-5/8" 32.0 ppf K-55 ST&C casing. Cement with 1100 sx Cl "C" Lite containing 12 pps salt and 1/4 pps celloflake followed by 200 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 3000 psi. Double Ram and Annular BOP system with choke manifold. WOC 24 hours prior to drilling out.

9. Test BOP system to 1500 psi with the rig pump. Test casing to 1500 psi.

10. Drill 7-7/8" hole to 8900'. Run logs.

11. Either run and cement 8900' of 5-1/2" 17.0 ppg K-55 LT&C 5-1/2" 15.50 ppf K-55 LT&C casing or plug and abandon as per BLM requirements.

EXHIBIT C
DRILLING FLUID PROGRAM
SANTA FE ENERGY RESOURCES, INC.
Tomcat "8" FED NO. 1
Section 8, T-23-S, R-32-E
Lea County, New Mexico

0-600'

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, Vis-40.

600'-4600'

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, Vis-28.

4600'-8900'

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 brine/Drispac system for 15-20 WL and a Vis of 30-32. MW-8.5/8.9 ppg.

EXHIBIT D
AUXILIARY EQUIPMENT
Santa Fe Energy Resources, Inc.
Tomcat "8" Federal No. 1
Section 8, T-23-S, R-32-E
Lea County, New Mexico

DRAWWORKS	BDW 650M 650 HP, with Parmac Hydromatic brake
ENGINES	Two Caterpillar D-353 diesels rated at 425 HP each
ROTARY	Ideco 23", 300 ton capacity
MAST/SUB	Ideal 132', 550,000 lb rated static hook load with 10 lines. Wagner 15' high substructure
TRAVELLING EQUIPMENT	Gardner-Denver, 300 ton, 5 sheave w/BJ 250 ton hook. Brewster Model 7 SX 300 ton swivel
PUMPS	Continental-EMSCO DC-700 and DB-550, 5-12 x 16" Duplex, Compound driven
PIT SYSTEM	1-Shale Pit 6X7X35', 1-Setting Pit 6X7X38', 1-Suction Pit 6X7X34' w/5 mud agitators. Two centrifugal mud mixing pumps and a Double Screen Shale Shaker.
LIGHT PLANT	Two CAT 3306 diesel electric sets 180 KW prime power
BOP EQUIP	13-5/8" 3000 psi WP double ram and 13-5/8" 3000 psi WP Shaffer Annular Preventer. Choke manifold rated at 3000 psi. Valvcon 5-station 80 gallon closing unit

EXHIBIT B
SANTA FE ENERGY RESOURCES, INC.
TOMCAT "8" FED #1
660' FSL & 467' FEL
SEC 8, T-23-S, R-32-E
LEA COUNTY, NEW MEXICO