

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

30-025-32400
Form approved.
Bureau No. 1004-0136
August 31, 1985

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. LC-062391	
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
2. NAME OF OPERATOR Santa Fe Energy Operating Partners, L.P. <020290>		7. UNIT AGREEMENT NAME	
3. ADDRESS OF OPERATOR 550 W. Texas, Suite 1330, Midland, Texas 79701		8. FARM OR LEASE NAME <009967> Kachina 5 Federal	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface (E), 2310' FNL and 990' FWL, Sec. 5, T-18S, R-33E At proposed prod. zone 2130		9. WELL NO. 7	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 10 miles Southeast from Maljamar, New Mexico		10. FIELD AND POOL, OR WILDCAT <1332> South Corbin Wolfcamp	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any) 990'		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 5, T-18S, R-33E	
16. NO. OF ACRES IN LEASE 640		12. COUNTY OR PARISH Lea	
17. NO. OF ACRES ASSIGNED TO THIS WELL 80		13. STATE NM	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 1650'		19. PROPOSED DEPTH 11,500'	
20. ROTARY OR CABLE TOOLS Rotary		21. APPROX. DATE WORK WILL START* January 5, 1994	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 3988.7' GR			

PROPOSED CASING AND CEMENTING PROGRAM				
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2"	13-3/8"	48.0	450'	450 sx to circulate
12-1/4"	8-5/8"	32.0	3,100'	1500 sx to circulate
7-7/8"	5-1/2"	17.0	11,500'	TOC 600' above possible pays

We propose to drill to a depth sufficient to test the Wolfcamp formation for oil. 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 Schematic
Exhibit C - Drilling Fluids Program
Exhibit D - Auxiliary Equipment

Exhibit E - Topo Map of Location
Exhibit F - Plat Showing Existing Wells
Exhibit G - Well Site Layout
Hydrogen Sulfide Drilling Operations Plan

- 1) We respectfully request a variance waiver to BLM requirements to install pit monitoring equipment when drilling below the Wolfcamp. The Wolfcamp is not over pressured in the area, therefore, the equipment serves no purpose. This request is based on the data presented with our APD for the Kachina 5 Fed No. 4, for which the waiver was approved.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, 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 Daniel Polato TITLE Sr. Drilling Engineer DATE Dec. 2, 1993

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____
APPROVED BY /s/ Ron Dunton TITLE AREA MANAGER DATE 1-5-94
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

NOTES FROM RE-100: 1304
O.O. 1000 1000
1000 1000 1000

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

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

DISTRICT II

P.O. Drawer DD, Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator SANTA FE ENERGY OPERATING PARTNERS, L.P.			Lease KACHINA 5 FEDERAL		Well No. 7
Unit Letter E	Section 5	Township 18 SOUTH	Range 33 EAST NMPM	County LEA	
Actual Footage Location of Well: 2130 feet from the NORTH line and 990 feet from the WEST line					
Ground Level Elev. 3988.7'	Producing Formation Wolfcamp		Pool South Corbin Wolfcamp		Dedicated Acreage: 80 Acres

- Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?
☐ Yes ☐ No If answer is "yes" type of consolidation _____

If answer is "no" list of owners and tract descriptions which have actually been consolidated. (Use reverse side of this form necessary.)

No allowable will be assigned to the well unit all interests have been consolidated (by communitization, unitization, forced-pooling, otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.

OPERATOR CERTIFICATION

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

Signature

Darrell Roberts

Printed Name

Darrell Roberts

Position

Sr. Drilling Engineer

Company Santa Fe Energy

Operating Partners, L.P.

Date

December 2, 1993

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 knowledge and belief.

Date Surveyed

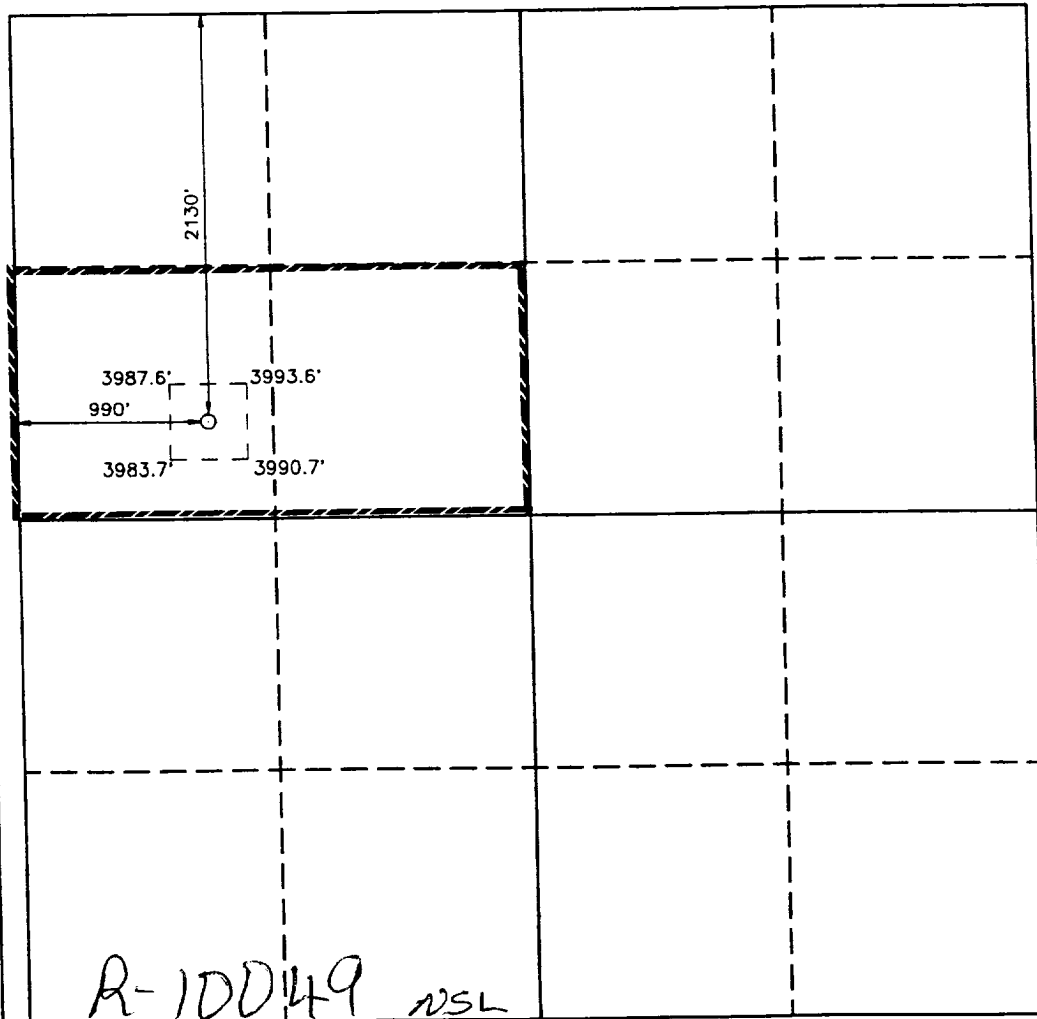
NOVEMBER 24, 1993

Signature & Seal of
Professional Surveyor



Certification No. 7077
Professional Surveyor
GARY L. JONES

93-11-2404



0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0

DRILLING PROGRAM
SANTA FE ENERGY OPERATING PARTNERS, L.P.
Kachina 5 Federal No. 7

In conjunction with Form 3160-3, Application to Drill the subject well, Santa Fe Energy Operating Partners,L.P., submits the following ten items of pertinent information in accordance with Onshore Oil & Gas Order No. 10.

1. **Geologic Name of Surface Formation:** Alluvium

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

Rustler Anhydrite	1,450'
Base of Salt	2,880'
Yates	3,120'
Seven Rivers	3,370'
Queen	4,200'
Penrose	4,550'
Delaware	5,590'
Bone Spring	6,510'
First Bone Spring Sand	8,240'
First Carbonate	8,490'
2nd Carbonate	9,340'
3rd Sand	9,550'
Wolfcamp	9,880'
Lower Wolfcamp	10,810'
Pennsylvanian Shale	11,440'
Total Depth	11,500'

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

Water	None expected in area
Oil	Lower Wolfcamp Carbonate @ 11,000'
Oil	Lower Wolfcamp Carbonate @ 11,200'

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 4100'.

DRILLING PROGRAM

Kachina "5" Federal No. 7

Page 2

8. Testing, Logging and Coring Program:

Drill Stem Tests (all DST's to be justified by a valid show of oil or gas):

Bone Spring 8,500' - 8,800'

Wolfcamp 10,000' - 11,000'

Logging:

Dual Laterolog w/MSFL and Gamma Ray 3,100'-11,500'

Compensated Neutron/Litho-Density/Gamma Ray 3,100'-11,500'

Compensated Neutron/Gamma Ray (thru csg) Surface-3,100'

Coring: No conventional cores are planned.

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

No abnormal pressures or temperatures are anticipated. The estimated bottom hole temperature is 145 °F and the estimated bottom hole pressure is 2769 psi. No Hydrogen Sulfide or other hazardous gases or fluids have been encountered in our wells, but hydrogen sulfide has been measured during production operations in the Central Corbin Queen Unit operated by Oxy. Our Hydrogen Sulfide Drilling Operations Plan addresses this potential situation. 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 January 5, 1994. Once spudded, the drilling operation should be completed in approximately 35 days. If the well is productive, an additional 30 days will be required for completion and testing before permanent facilities are installed.

SANTA FE ENERGY OPERATING PARTNERS,L.P.
OPERATIONS PLAN
Kachina "5" Federal No. 7

1. Drill a 17 1/2" hole to approximately 450'.
2. Run 13 3/8" 48.0 ppf H-40 ST&C casing. Cement with 450 sx Class "C" cement containing 2% CaCl₂. Run centralizers on every other joint above the shoe. Apply thread lock to bottom two joints and guide shoe.
3. Wait on cement four hours prior to cutting off.
4. Nipple up a annular BOP system and test casing to 600 psi. WOC 12 hours prior to drilling out.
5. Drill a 12 1/4" hole to approximately 3,100'.
6. Run 8 5/8" 32.0 ppf K-55 ST&C casing. Cement with 1250 sx Cl "C" Lite containing 12 pps salt and 1/4 pps celloflake followed by 250 sx Class "C" with 2% CaCl₂. Run guide shoe on bottom and float collar two joints of 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 six hours prior to cutting off.
8. Nipple up and install a 3000 psi Double Ram and Annular BOP system with choke manifold. WOC 12 hours prior to drilling out.
9. Test BOP system to 3000 psi. Test casing to 1500 psi.
10. Drill 7/8" hole to 11,500'. Run logs.
11. Either run and cement 2,500' 5 1/2" 17.0 ppf N-80 LT&C followed by 6,500' 17.0 ppf K-55 LT&C and 2,500' 17.0 ppf N-80 LT&C casing or plug and abandon as per BLM requirements.

Exhibit A
Santa Fe Energy Operating Partners,L.P.
Kachina "5" Federal No. 7
Section 5, T-18S, R-33E
Lea County, New Mexico

TJM:K57

PROPOSED 3-M BOPE AND CHOKE ARRANGEMENT

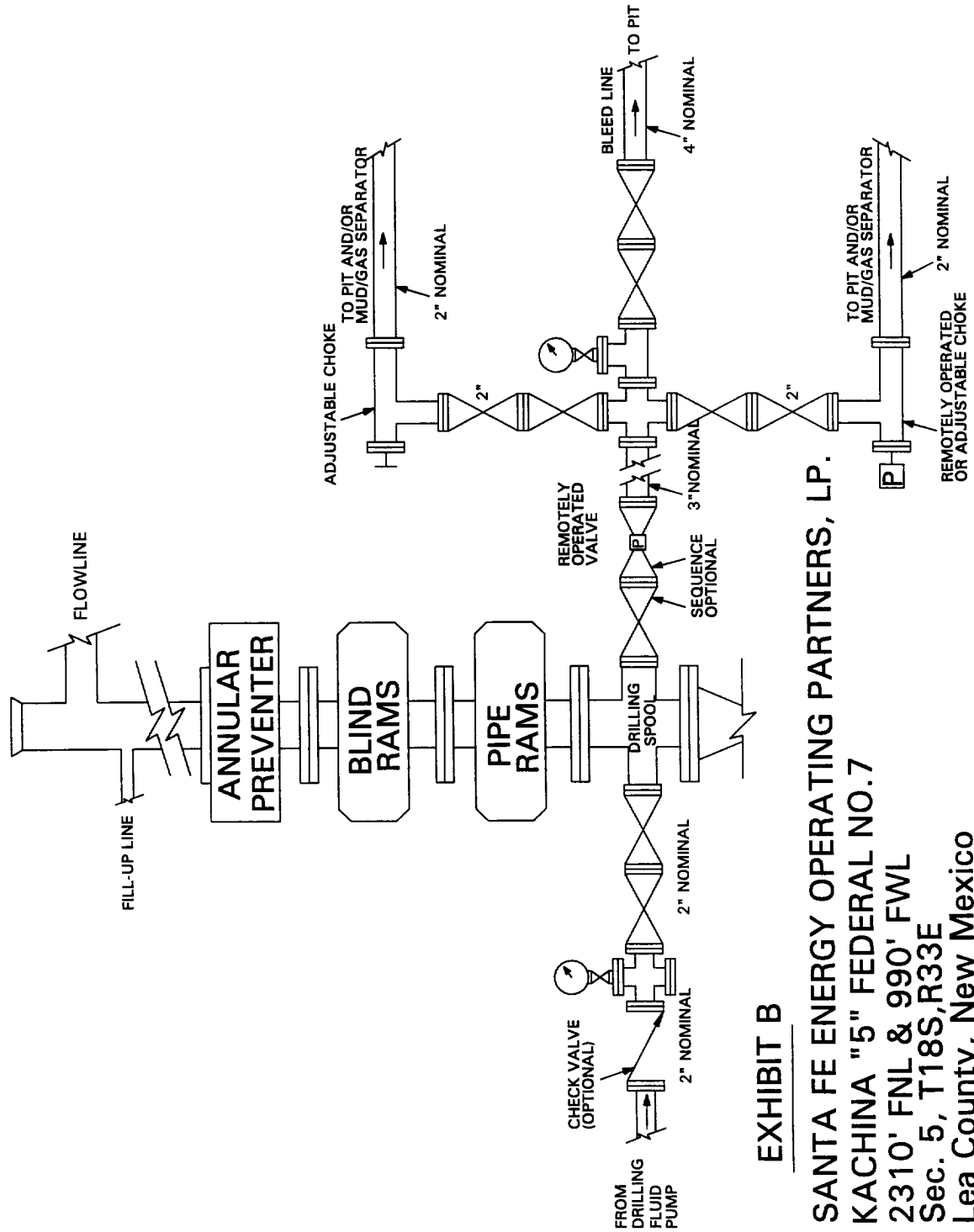


EXHIBIT B

SANTA FE ENERGY OPERATING PARTNERS, LP.

KACHINA "5" FEDERAL NO.7

2310' FNL & 990' FWL

Sec. 5, T18S, R33E

Lea County, New Mexico