

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on
reverse side)

38-015-26530
Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☒

GAS
WELL ☐

OTHER

SINGLE
ZONE ☐

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Santa Fe Energy Operating Partners, L.P.

3. ADDRESS OF OPERATOR

500 W. Illinois, Suite 500, Midland, TX 79701

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

At surface

1980' FSL & 660' FEL, Sec. 20, T-23S, R-26E

At proposed prod. zone

Same

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

10 miles southwest of Carlsbad, New Mexico

10. DISTANCE FROM PROPOSED*

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

660'

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.

None

19. PROPOSED DEPTH

11,800'

20. ROTARY OR CABLE TOOLS

Rotary

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

3367.7' GR

22. APPROX. DATE WORK WILL START*

December 15, 1990

23. 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	600'	650 sx CIRCULATE
12 1/4"	9 5/8"	36.0	2,800'	2000 sx CIRCULATE
8 3/4"	5 1/2"	15.5 & 17.0	11,800'	See below

Move in drilling rig. Drill 17 1/2" hole to 600'. Run 13 3/8" casing and cement to surface with 650 sx "C" cement w/2% CaCl₂ and 1/4 lbs/sx celloflake. WOC 8 hours. Nipple up BOP and test BOP and casing to 600 psi. Drill 12 1/4" hole to 2800'. Run 9 5/8" casing and cement with 1700 sx 35/65 Poz/"C" cement w/6% gel, 10% NaCl and 1 lb/sx celloflake followed by 300 sx of "C" cement w/2% CaCl₂. Install BOP and test rams and choke to 5000 psi, annular to 1000 psi. Drill 7 7/8" hole to 11,800'. Run logs. Run 5 1/2" casing and cement with 50/50 Poz/"H" cement, 2% gel, 6 lbs/sx NaCl and 0.75% fluid loss additive. Sufficient cement will be used to cover all potentially productive zones.

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

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 Roberto

TITLE Sr. Drilling Engineer

DATE 10-3-90

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

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

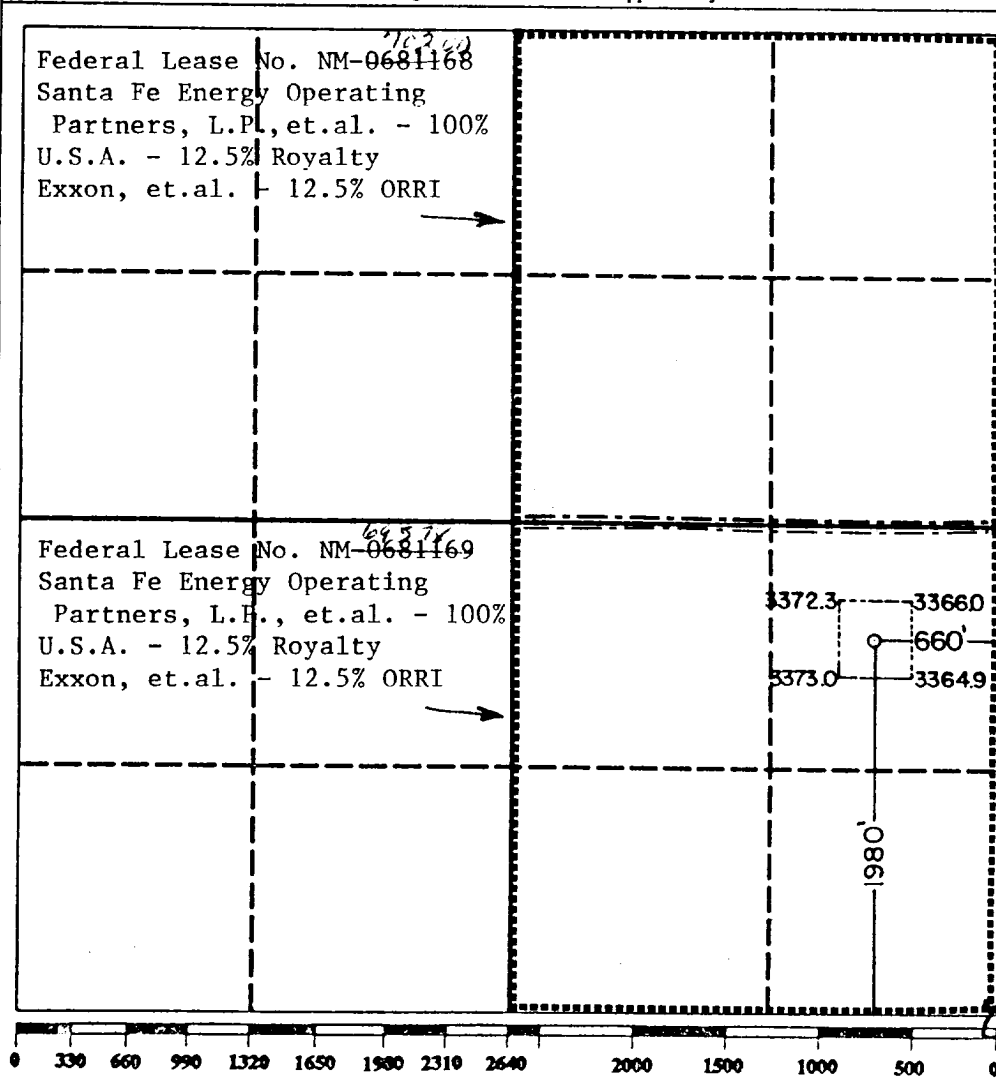
DISTRICT III
1000 Rio Branco Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator SANTA FE ENERGY OPERATING PARTNERS LP			Lease Sheep Dip "20" Fed Com		Well No. 1
Unit Letter I	Section 20	Township 23 South	Range 26 East	County NMPM	Eddy
Actual Footage Location of Well: 1980 feet from the South line and 660 feet from the East line					
Ground level Elev. 3367.7		Producing Formation Morrow		Pool Black River (Morrow)	Dedicated Acreage: 320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. 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 Farm-out
If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary).
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



OPERATOR CERTIFICATION

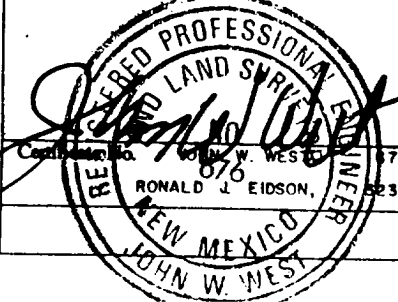
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature
Darrell Roberts
Printed Name
Darrell Roberts
Position
Sr. Drilling Engineer
Company
Santa Fe Energy Operating Partners, L.P.
Date
10-3-90

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
September 20, 1990
Signature & Seal of Professional Surveyor



APPLICATION FOR DRILLING
SANTA FE ENERGY OPERATING PARTNERS, L.P.
Sheep Dip "20" Fed Com No. 1

In conjunction with Form 3160-3, Application to Drill subject well, Santa Fe Energy Operating Partner, L.P., submits the following ten items of pertinent information in accordance with BLM requirements.

1. The geologic surface formation is alluvium.
2. The estimated tops of geologic markers are as follows:

Delaware	1,800'
Bone Spring	5,050'
1st Bone Spring	5,980'
2nd Bone Spring	8,100'
Wolfcamp	8,710'
Wolfcamp Carbonate	9,250'
Cisco	9,400'
Canyon	10,000'
Strawn	10,110'
Atoka	10,760'
Morrow	11,180'
Middle Morrow	11,340'
Barnett Shale	11,740'
Total Depth	11,800'

3. The estimated depth at which water, oil, or gas formations are expected to be encountered:

Water	Water is not expected to be encountered
Oil or Gas	Strawn - 10,200'
	Morrow - 11,400'

4. Proposed Casing Program: See Form 3160-3 and Exhibit A.
5. Pressure Control Equipment: See Form 3160-3 and Exhibit B.
6. Drilling Fluid Program: See Exhibit C.
7. Auxiliary Equipment: See Exhibit D.
8. Testing, Logging and Coring Programs:

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

Strawn	10,200 - 300'
Morrow	11,400 - 500'

Logging:

Logging from 2800' - TD:
Dual Laterolog with Gamma Ray
Neutron-Density with Gamma Ray
Computer Process Log over selected intervals

Logging from 2800' - surface:
Neutron with Gamma Ray

9. Abnormally high pressured zones are expected at this location. Sufficient Barite will be on location to enable the weighting up of the drilling fluid to control any high pressured zone encountered. 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 production casing.
10. Starting Date: December 15, 1990

Darrell Roberts
10-03-90

SANTA FE ENERGY OPERATING PARTNERS, L.P.
OPERATIONS PLAN
Sheep Dip "20" Fed Com No. 1

1. Drill a 17-1/2" hole to 600'±.
2. Run 13 3/8" 48.0 ppf H-40 ST&C casing. Cement with 650 sacks Class "C" cement containing 2% Calcium Chloride. Run centralizers on every other joint above shoe. Apply thread lock to bottom two joints, float collar and guide shoe.
3. Wait on cement eight hours.
4. Cut off casing. Nipple up and install BOP system.
5. Test casing to 600 psi.
6. Drill a 12 1/4" hole to 2800'.
7. Run 9 5/8" 36.0 ppg K-55 ST&C casing. Cement with 1700 sacks "C" lite containing 12 ppg salt and 1/4 ppg flocele followed by 300 sacks Class C with 2% CaCl₂. Run guide shoe on bottom and float collar one joint off of bottom. Centralize every other joint for bottom 400' of casing and place two centralizers in surface casing. Thread lock bottom 2 joints.
8. Wait on cement eight hours.
9. Cut off casing. Nipple up and install BOP system and choke manifold.
10. Test BOP to 5000 psi. Test casing to 1500 psi.
11. Drill 8-3/4" hole to 11,800'. Run logs.
12. Either run and cement 5-1/2" production casing or plug and abandon as per BLM instructions.

Exhibit A
Santa Fe Energy Operating Partners, LP
Sheep Dip "20" Fed Com No. 1
Section 20, T23S-R26E
Eddy County, New Mexico

DDR:dw-2348

PROPOSED BOPE AND CHOKE ARRANGEMENT

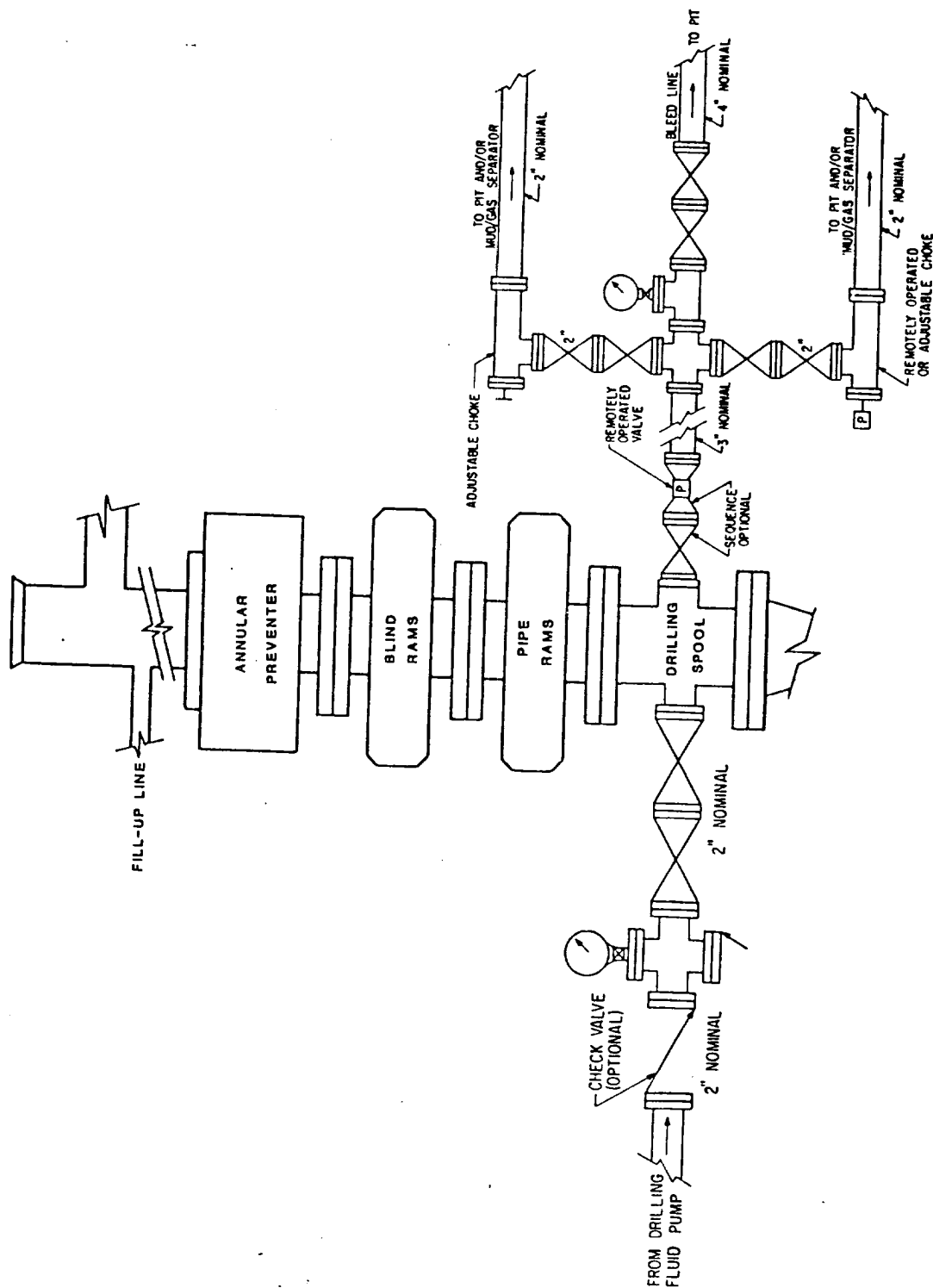


EXHIBIT B

SANTA FE ENERGY OPERATING PARTNERS, LP.
 SHEEP DIP "20" FED. COM. No. 1
 SEC 20, T 23 S, R 26 E
 1980' FSL & 660' FEL
 EDDY CO., NEW MEXICO

PROPOSED DRILLING FLUID PROGRAM

0 - 600'

Spud mud consisting of AQUAGEL flocculated with Lime. Use ground paper for seepage loss of fluid and KWIK-SEAL, FIBERTEX and Cottonseed Hulls for severe or total loss.

If total loss of circulation occurs, we suggest mixing two or three 150-200 barrel pills of viscous AQUAGEL/Lime mud treated with 10-15 ppb KWIK-SEAL and/or Cottonseed Hulls. If this does not regain circulation, we suggest drilling to casing point without returns and spotting a similar pill on bottom prior to logging and running casing.

600 - 2,800'

Drill out with brine water and treat with CON DET and BEN-EX/MF-1 to flocculate solids. Circulate controlled section of the reserve pit. Use ground paper for seepage loss. Use pre-hydrated AQUAGEL or ZEOGEL/paper slugs as needed to sweep hole. For corrosion control, use Sodium Bichromate.

2,800 - 11,800'

Drill out with fresh water or cut brine circulating a controlled section of the reserve pit using BEN-EX/MF-1 and CON DET for control of solids build up. The fluid weight in this interval should be 8.5-9.5 p.H. Use ZEOGFL/ground paper or pre-hydrated AQUAGEL pills to sweep the hole free of cutting when needed and prior to trips. Use Lime for a 9.0-9.5 p.H. Use Sodium Bichromate at 600-800 ppm concentration for drill pipe and casing corrosion control.

The additions of MR-1/BEN-EX and CON DET may be used for control of solids build up. Use ZEOGEL/ground paper sweeps for seepage and additional hole cleaning. Should abnormal pressures be encountered in the Strawn formation, an early mud up may be necessary.

Exhibit C
Santa Fe Energy Operating Partners, LP
Sheep Dip "20" Fed Com No. 1
Section 20, T23S, R26E
Eddy County, New Mexico

AUXILIARY EQUIPMENT

DRAW WORKS	National 80-B
COMPOUND/ENGINES	National 3 Section Compound Three Caterpillar D379 diesel engines.
ROTARY	27-1/2" National C-275
MAST/SUBSTRUCTURE	Derrick Service International 142' jackknife. 25' high substructure.
TRAVELLING EQUIPMENT	National 545-G 350 ton hook and block. National P-400 400 ton swivel.
PUMPS	Two National 8-P-80, 6-1/4" x 8-1/2" 800 HP triplex pumps charged by 6" x 8" centrifugal pump.
PIT SYSTEM	Three steel mud pits with lightning mixers. Two 6" x 8" centrifugal pumps each driven by a 75 HP electric motor.
GENERATORS	Two 320 KW AC generators each powered by a turbocharged diesel engine.
BOP EQUIPMENT	One annular and two ram preventers rated at 5000 psi. Choke manifold rated at 5000 psi.

Exhibit D
Santa Fe Energy Operating Partners, LP
Sheep Dip "20" Fed Com No. 1
Section 20, T23S, R26E
Eddy County, New Mexico

DDR:dw-2348

MULTI-POINT SURFACE USE AND OPERATIONS PLAN
SANTA FE ENERGY OPERATING PARTNER, L.P.
Sheep Dip "20" Fed Com No. 1
1980' FSL & 660' FEL
Section 20, T23S, R26E
Eddy County, New Mexico

This plan is submitted with Form 3160-3, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of necessary surface disturbance involved, and the procedures to be followed by rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effects associated with the operation.

1. EXISTING ROADS.

- A. Exhibit F is a 15 minute topographic map which shows location of the proposed wellsite and roads in the vicinity. The proposed location is situated approximately 10 miles southwest of Carlsbad, New Mexico.

DIRECTIONS:

1. Traveling southwest on Hwy 62/180 go 9 1/2 miles past the port of entry and turn right on county road to Dark Canyon.
2. Continue west on county road for 1 1/4 miles and location will be on the south side of the road.

2. PLANNED ACCESS ROAD.

A 14' wide access road will extend from an existing road 1/8 mile north of the proposed well.

3. LOCATION OF EXISTING WELLS.

- A. The well locations in the vicinity of the proposed well are shown in Exhibit E.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES.

- A. There is no producing well on this lease at this time.
- B. In the event the well is productive, the necessary production equipment will be installed on the drilling pad. If the well is productive of oil, a gas or diesel self-contained unit will be used to provide the necessary power. No power will be required if the well is productive of gas.

5. LOCATION AND TYPE OF WATER SUPPLY.

- A. It is planned to drill the well with both fresh water and brine water systems. Both types of waters will be hauled to the location by truck over existing roads. Both types will be obtained from commercial sources.

6. SOURCES OF CONSTRUCTION MATERIALS.

- A. Any caliche required for construction of the drilling pad will be obtained from a pit located off the wellsite.

7. METHODS OF HANDLING WASTE DISPOSAL.

- A. Drill cuttings will be disposed of in the reserve pits.
- B. Drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry.
- C. Water produced during operations will be either placed in the reserve pits and allowed to evaporate or collected in tanks until hauled to an approved disposal system or a separate disposal application will be submitted to the USGS for appropriate approval.
- D. Oil produced during operations will be stored in tanks until sold.
- E. Human waste will be buried.
- F. Trash, waste paper, garbage, and junk will be buried in a separate trash pit and covered with a minimum of 24" of dirt. All waste materials will be contained to prevent scattering by the wind.
- G. All trash and debris will be buried or removed from the wellsite within 30 days after finishing drilling and/or completion operations.

8. ANCILLARY FACILITIES.

None required.

9. WELLSITE LAYOUT.

- A. Exhibit G shows the dimensions of the well pad and reserve pits, and the location of major rig components.
- B. The ground surface of the location is sloping down toward the west. Cutting will be required to level the pad area, which will be covered with at least six inches of compacted caliche.
- C. The reserve pits will be plastic lined.
- D. A 400' x 400' work area which will contain the pad and pit area has been staked and flagged.

10. PLAN FOR RESTORATION OF THE SURFACE.

- A. After finishing drilling and/or completion operations, all equipment and other material not needed for further operations will be removed. The location will be cleared of all trash and junk, to leave the wellsite in as aesthetically pleasing a condition as possible.
- B. Unguarded pits, if any, containing fluids will be fenced until they have been filled.
- C. If the proposed well is non-productive, all rehabilitation and/or vegetation requirements of the Bureau of Land Management and the United States Geological Survey will be complied with and will be accomplished as expeditiously as possible. All pits will be filled and levelled within 300 days after abandonment.

11. TOPOGRAPHY.

- A. The wellsite and access route are located in a flat area.
- B. The top soil at the wellsite is loamy.
- C. The vegetation cover at the wellsite is moderately sparse, with prairie grasses, some yucca, and miscellaneous weeds.
- D. No wildlife was observed but it is likely that rabbits, lizards, insects, and rodents traverse the area.

- E. There are no ponds, lakes, streams, or rivers within one mile of the wellsite.
- F. One isolated manifestation was recorded during an archaeological survey, but clearance was suggested.

12. OPERATOR'S REPRESENTATIVES.

- A. The field representative responsible for assuring compliance with the approved surface use plan are:

Lou Shufflin
District Manager
Santa Fe Energy Operating
Partners, L.P.
500 W. Illinois, Suite 500
Midland, Texas 79701
915-687-3551 - office

Michael R. Burton
District Drilling Engineer
Santa Fe Energy Operating
Partners, L.P.
500 W. Illinois, Suite 500
Midland, Texas 79701
915-687-3551 - office
915-699-1260 - home
915-683-1118 - mobile

13. CERTIFICATION.

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Santa Fe Energy Operating Partners, L.P., and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

SIGNED this 3 day of OCTOBER, 1990.

Darrell Roberts
Darrell Roberts
Senior Drilling Engineer

R 26 E

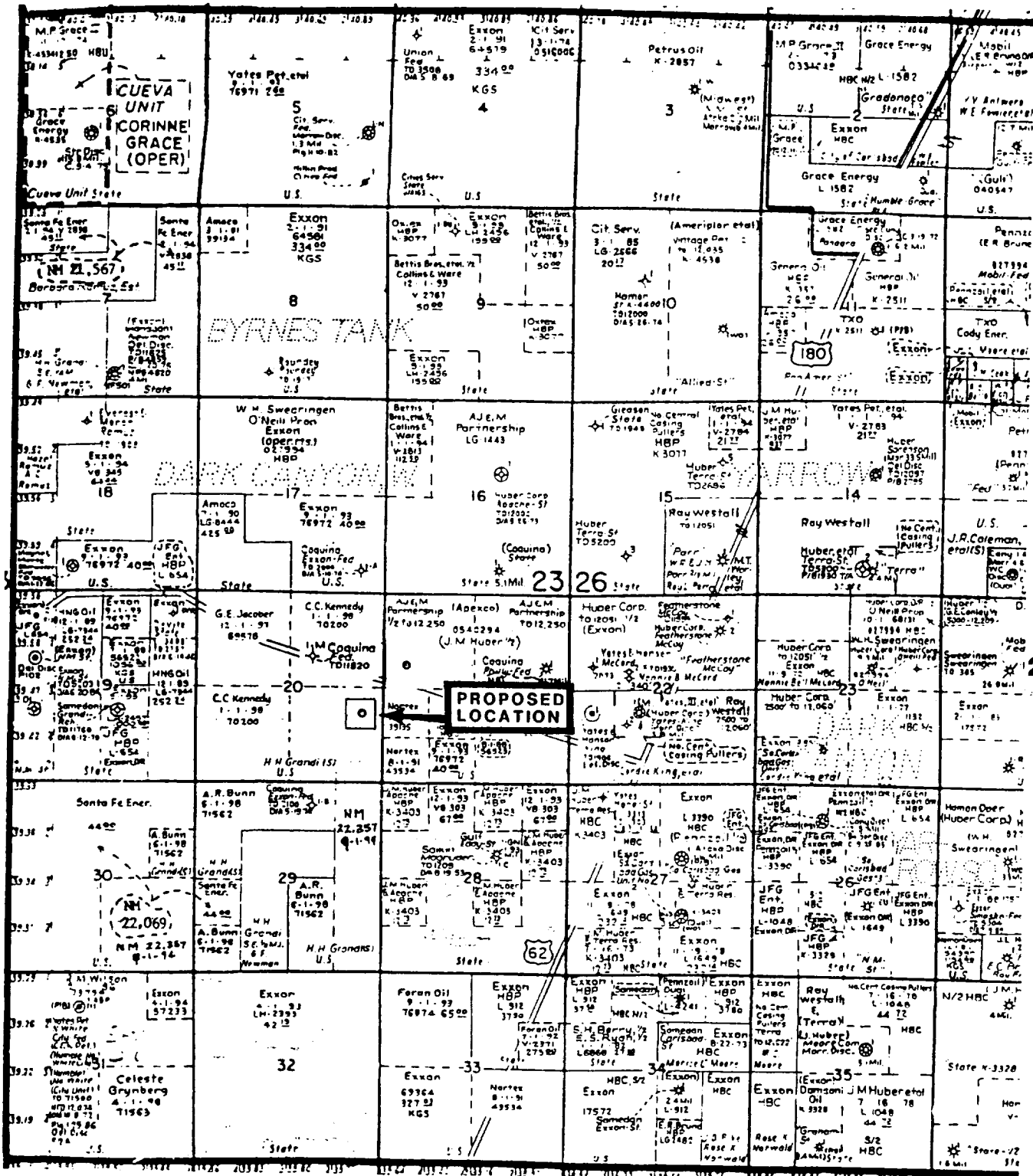


EXHIBIT E

SANTA FE ENERGY OPERATING PARTNERS, LP.
SHEEP DIP "20" FED. COM. No. 1
SEC 20, T 23 S, R 26 E
1980' FSL & 660' FEL
EDDY CO., NEW MEXICO

EXHIBIT G
WELL SITE LAYOUT

SANTA FE ENERGY OPERATING PARTNERS, L.P.
SHEEP DIP "20" FED. COM. No. 1
SEC 20, T 23 S, R 26 E
1980' FSL & 660' FEL
EDDY CO., NEW MEXICO

