Form 3160-3
(November 1983)
formerly 9-331C)

NM OIL CONS. OMMISSION
DRAWER DD
ARTESIA, NM 88210

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN T ICATE*
(Other instructions on reverse side)

30-015-27674

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 [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] OTHER — SINGLE ZONE [ ] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR: Santa Fe Energy Operating Partners, L.P.

3. ADDRESS OF OPERATOR: 550 W. Texas, Suite 1330, Midland, Texas 79701

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: (N), 660' FSL and 1980' FWL, Sec. 8, T-22S, R-24E
At proposed prod. zone: Unit N

RECEIVED
SEP 15 1993
C. D.

5. LEASE DESIGNATION AND SERIAL NO.: NM-83552
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT AGREEMENT NAME:
8. FARM OR LEASE NAME: Old Ranch Knoll 8 Fed Com
9. WELL NO.: 2
10. FIELD AND POOL, OR WILDCAT: Indian Basin (Upper Penn)
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 8, T-22S, R-24E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 17 miles West of Carlsbad, New Mexico
12. COUNTY OR PARISH: Eddy
13. STATE: NM

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
660'	160	320
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**
N/A	8400'	Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 4120.4' GR
22. APPROX. DATE WORK WILL START*: October 1, 1993

23. PROPOSED CASING AND CEMENTING PROGRAM

Carlsbad Controlled Water Basin

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2"	13-3/8"	48.0 H-40	350'	400 sx to circulate
12-1/4"	9-5/8"	36.0 K-55	2500'	1200 sx to circulate
8-3/4"	7"	26.0 K-55	8400'	TOC @ 6000'

We propose to drill to a depth sufficient to test the Cisco/Canyon formation for oil. If productive, 7" 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
Exhibit C - Drilling Fluid Program
Exhibit D - Auxiliary Equipment
Exhibit E - Topo Map of Location
Exhibit F - Plat Showing Existing Wells
Exhibit G - Well Site Layout
Surface Use and Operations Plan
H_2S Drilling Plan

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 Darrell Roberts TITLE Sr. Drilling Engineer DATE July 27, 1993

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY /s/ Lou Dunton TITLE AREA MANAGER DATE SEP 13 1993

CONDITIONS OF APPROVAL, IF ANY:

*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

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	Lease	Well No.
SANTA FE ENERGY OPERATING PARTNERS, L.P.	OLD RANCH KNOLL 8 FEDERAL COM.	2

Unit Letter	Section	Township	Range	County
N	8	22 SOUTH	24 EAST NMPM	EDDY

Actual Footage Location of Well:
660 feet from the SOUTH line and 1980 feet from the WEST line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
4120.4'	Cisco Canyon	Indian Basin (Upper Penn)	320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

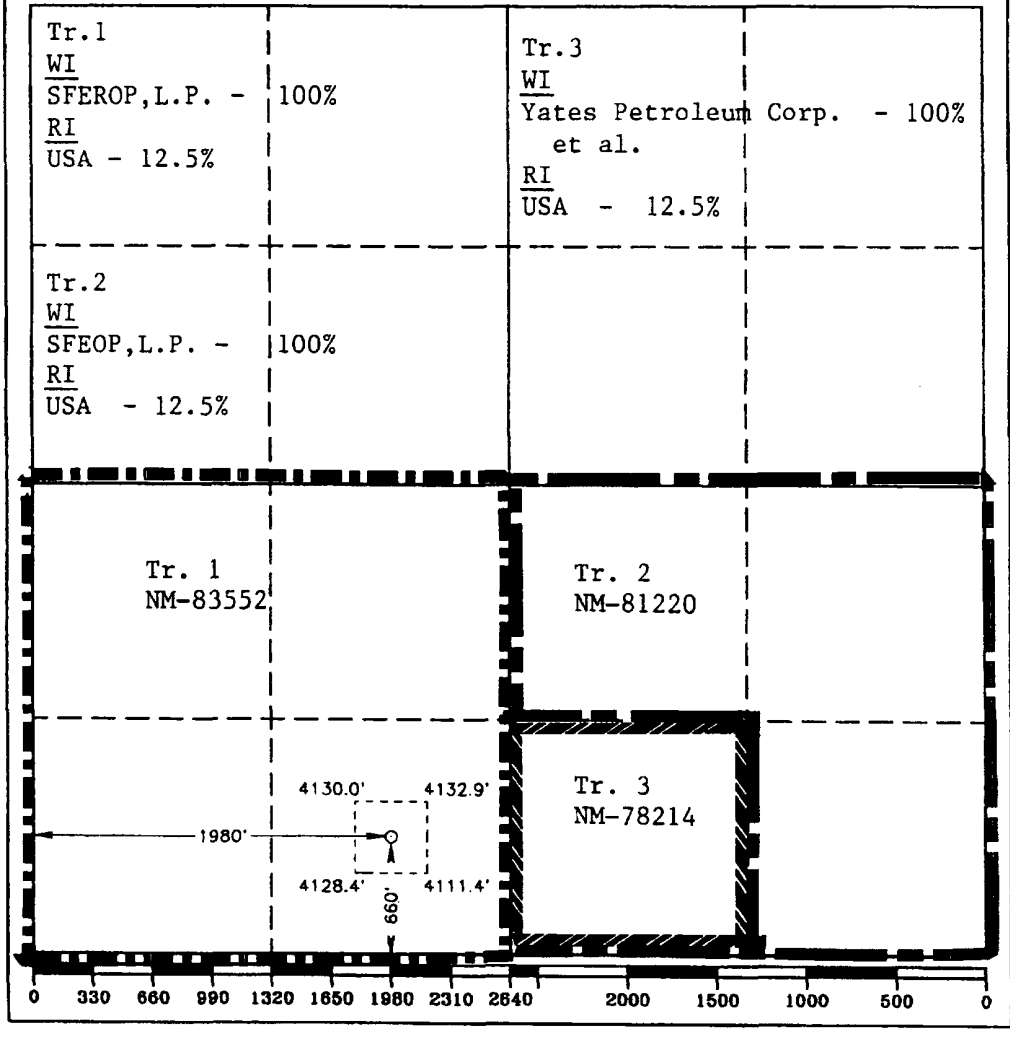
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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.?

[X] Yes [ ] No If answer is "yes" type of consolidation Communitization

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: Senior Drilling Engineer
Company: Santa Fe Energy Operating Partners, L.P.
Date: July 27, 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 supervison, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed: JULY 16, 1993
Signature & Seal of Professional Surveyor

GARY L. JONES NEW MEXICO 7977 REGISTERED PROFESSIONAL LAND SURVEYOR

Certificate No. JOHN W. WEST 676
RONALD J. EIDSON 3239
GARY L. JONES 7977

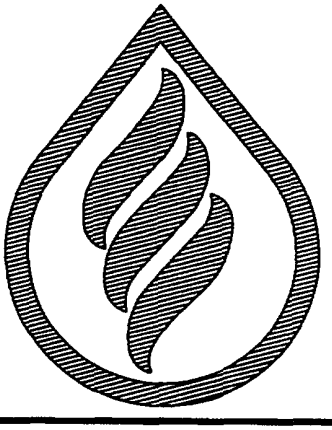
WARNING

YOU ARE ENTERING AN H2S AREA

TIGHT HOLE LOCATION

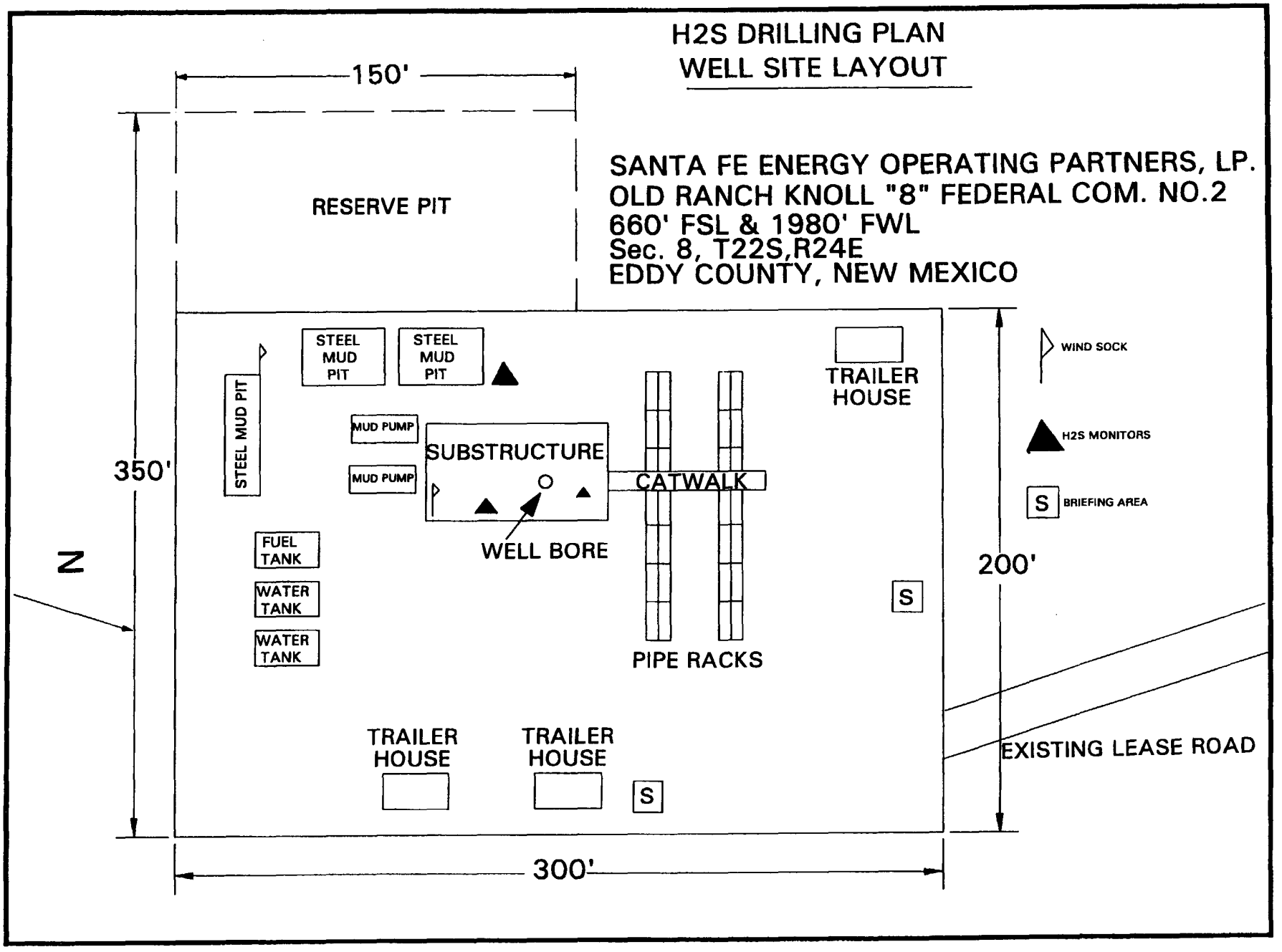
DO NOT ENTER UNLESS YOU WERE CALLED !!

SANTA FE ENERGY OPERATING PARTNERS,L.P.



H2S DRILLING PLAN
WELL SITE LAYOUT

SANTA FE ENERGY OPERATING PARTNERS, LP.
OLD RANCH KNOLL "8" FEDERAL COM. NO.2
660' FSL & 1980' FWL
Sec. 8, T22S,R24E
EDDY COUNTY, NEW MEXICO



6. Metallurgy:

   A. All of the drill string, casing, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H_2S service.

   B. All elastomers used for packing and seals shall be H_2S trim.

7. Communication:

   A. Cellular phone communications in company vehicles.

   B. Radio communications on the drilling rig.

8. Well Testing:

   A. All tests in the Cisco/Canyon formation will be conducted using the closed chamber method of drill stem testing.

Darrell Roberts
Senior Drilling Engineer
Santa Fe Energy Operating Partners.L.P.

ORKNOLL8.H2S

II. H_2S Safety Equipment and Systems

Note: All H_2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the Cisco/Canyon zone at 7700'.

1. Well Control Equipment:

   A. An annular preventer capable of accomodating all pipe sizes with properly sized closing unit.

   B. Auxiliary equipment to include: rotating head and annular preventer.

2. Protective Equipment for Personnel:

   A. Scott Air-Pack Units located on the rig floor and at briefing areas, as indicated on well site diagram.

3. H_2S Detection and Monitoring Equipment:

   A. 2-portable H_2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H_2S levels of 20 ppm are reached.

   B. 1-portable SO_2 monitor positioned near flow line.

4. Visual Warning Systems:

   A. Wind direction indicators as shown on well site diagram.

   B. Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. See Example Attached.

5. Mud Program:

   A. The mud program is designed to minimize any H_2S circulated to the surface. Proper mud weight, safe drilling practices, and the use of H_2S scavengers will be used to minimize hazards when penetrating H_2S bearing zones (Cisco/Canyon).

Santa Fe Energy Operating Partners,L.P.
HYDROGEN SULFIDE DRILLING OPERATIONS PLAN
Old Ranch Knoll "8" Federal Com. No.2
Section 8,T22S,R24E
Eddy County, New Mexico

In drilling the Cisco/Canyon formation there is a very remote possibility that H_2S will be encountered. The zone is hydrogen sulfide productive in the area. It is our understanding that hydrogen sulfide is only detected in the area whenever the reservoir fluids are produced up the wellbore. Our drilling fluid hydrostatic head will prevent fluid entry due to the reservoir being overbalanced. The following is our plan for drilling the Cisco/Canyon formation.

I. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unsheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on the well:

1. The hazards and characteristics of hydrogen sulfide (H_2S).

2. The proper use and maintenance of personal protective equipment and life support systems.

3. The proper use of H_2S detectors,alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.

4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H_2S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.

2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.

3. The contents and requirements of the Hydrogen Sulfide Drilling Operations Plan.

There will be an initial training session prior to encountering the Cisco/Canyon (training will take place within 3 days or 500 feet) and we will have weekly H_2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific Hydrogen Sulfide Drilling Operations Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

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 27 th day of July,1993.

Darrell Roberts
Senior Drilling Engineer

B. Unguarded pits, if any, containing fluid 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 draw between large hills on the Northeast and Southwest.

B. The top soil at the wellsite is alluvium from the surrounding hills.

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 deer, rabbits, coyotes, and rodents traverse the area.

E. There are no ponds, lakes, streams, or rivers within one mile of the wellsite.

F. There is no evidence of any archaeological, historical, or cultural sites in the vicinity of the location.

12. OPERATOR'S REPRESENTATIVES.

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

Michael R. Burton
Division Operations Manager
Santa Fe Energy Operating
Partners, L.P.
550 W. Texas, Suite 1330
Midland, Texas 79701
915-686-6616 - office
915-699-1260 - home
915-559-6842 - cellular

Darrell Roberts
Senior Drilling Engineer
Santa Fe Energy Operating
Partners, L.P.
550 W. Texas, Suite 1330
Midland, Texas 79701
915-686-6614 - office
915-684-4130 - home
915-553-1214 - cellular

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 BLM for appropriate approval.

   D. Oil produced during operations will be stored in tanks until sold.

   E. Human waste will be disposed of per current standards.

   F. Trash, waste paper, garbage, and junk will be collected in trash trailers and disposed of in an approved waste facility such as a land fill. The trash trailers will contain all of the material to prevent scattering by the wind.

   G. All trash and debris will be 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 located in a draw between large hills. The location will constructed by leveling the necessary area and covering the area 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.

MULTI-POINT SURFACE USE AND OPERATIONS PLAN
SANTA FE ENERGY OPERATING PARTNERS,L.P.
OLD RANCH KNOLL "8" FEDERAL COM. NO.2
660' FSL & 1980' FWL
Section 8, T-22S, R-24E
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 E is a 15 minute topographic map which shows the location of the proposed wellsite and roads in the vicinity. The proposed location is situated approximately 17 miles West of Carlsbad, New Mexico.

   DIRECTIONS:

   1. From Carlsbad, go north 12 miles to the intersection of Hwy 285 & 137. Turn west onto Hwy 137 travel southwest for 12 miles and turn left (east) onto lease road. Travel 1-1/2 miles going southeast on the lower road to the location.

2. PLANNED ACCESS ROAD.

   No access road required, the location fell on an existing lease road.

3. LOCATION OF EXISTING WELLS.

   A. The well Locations in the vicinity of the proposed well are shown on Exhibits E & F. One well has been drilled in the north half of this section. It is currently plugged and abandoned.

4. LOCATION OF EXISTING AND/ OR PROPOSED FACILITIES.

   A. There are not any existing wells in this section.

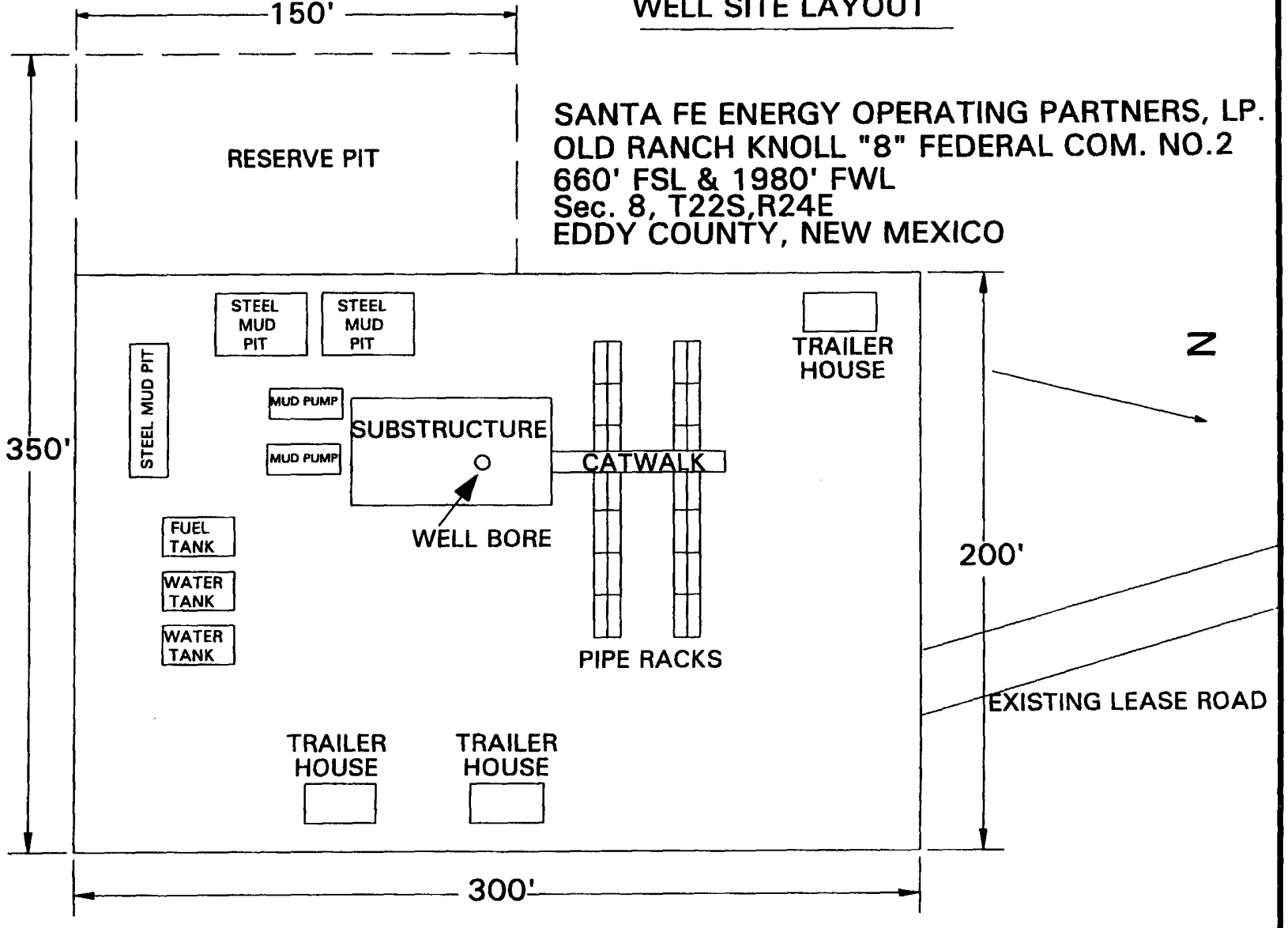
   B. In the event the well is productive, the necessary production equipment will be installed on the drilling pad. If the well is productive of oil, a gas or diesel self-contained unit will be used to the necessary power.

5. LOCATION AND TYPE OF WATER SUPPLY

   A. It is planned to drill the well with fresh water systems. The water will be hauled to the location by truck over existing roads. It will be obtained from commercial sources.

EXHIBIT G
WELL SITE LAYOUT

SANTA FE ENERGY OPERATING PARTNERS, LP.
OLD RANCH KNOLL "8" FEDERAL COM. NO.2
660' FSL & 1980' FWL
Sec. 8, T22S,R24E
EDDY COUNTY, NEW MEXICO



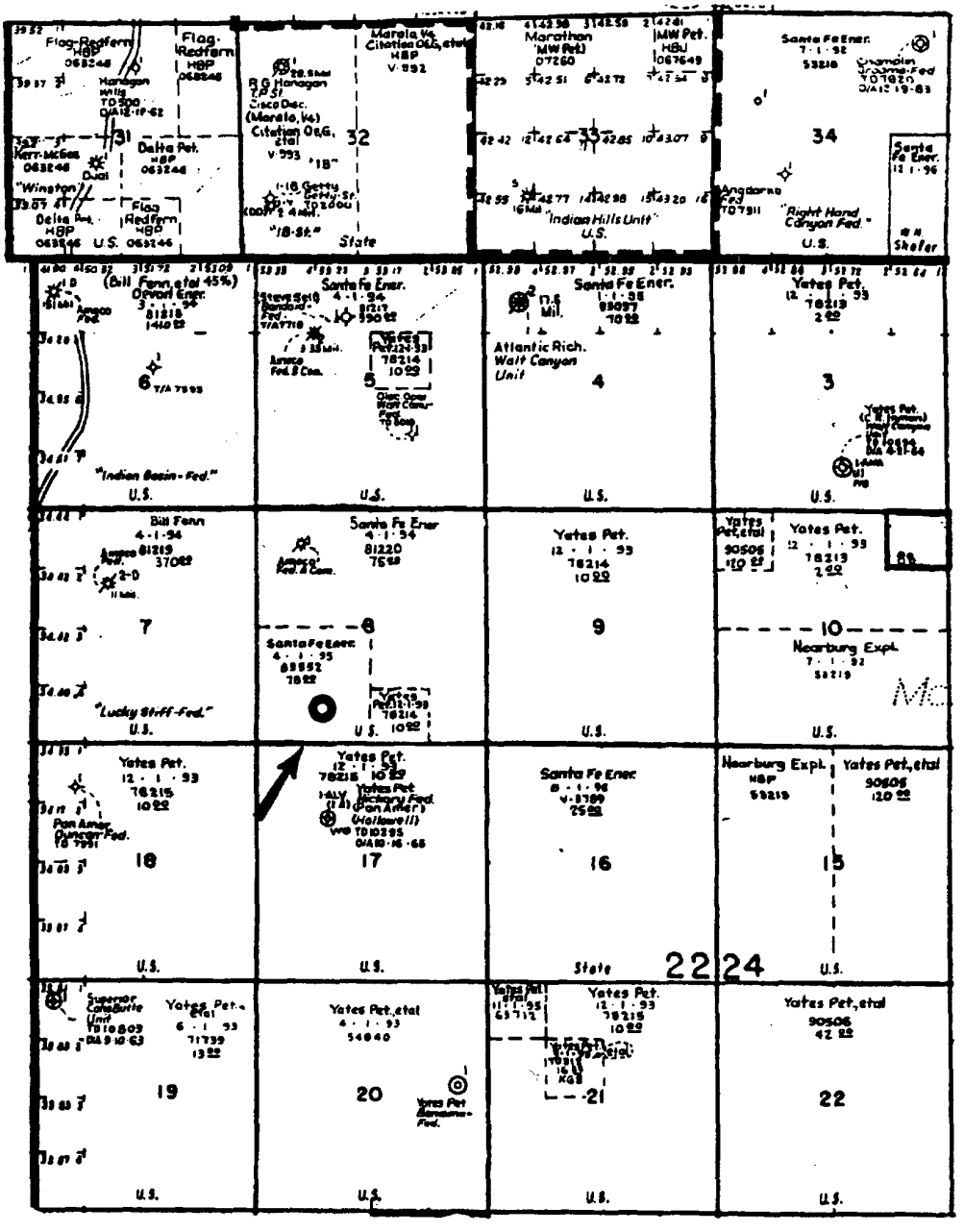
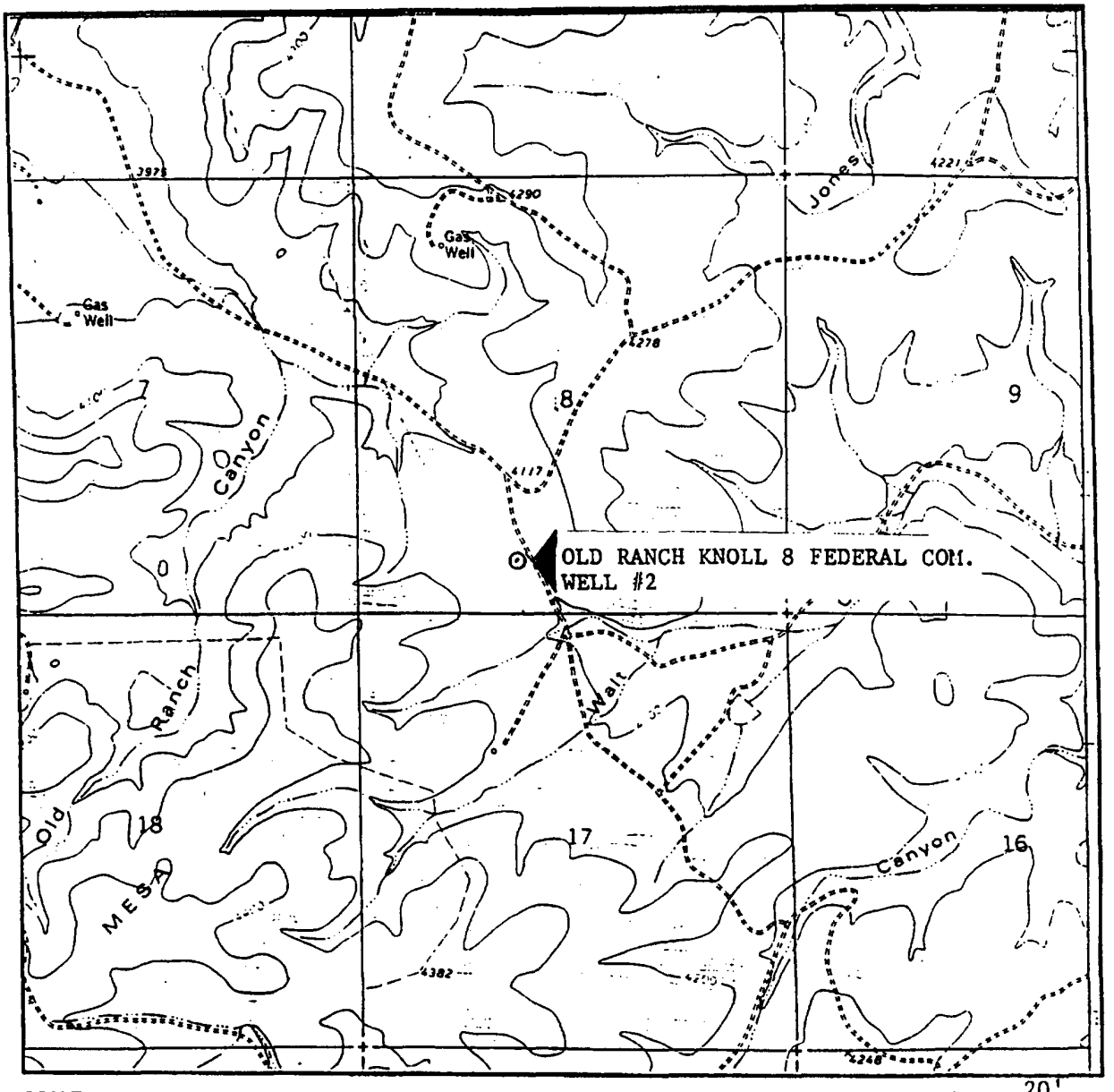


EXHIBIT F

SANTA FE ENERGY OPERATING PARTNERS,L.P.
OLD RANCH KNOLL "8" FEDERAL COM. NO.2
660' FSL & 1980' FWL
SEC.8, T22S,R24E
EDDY COUNTY,NEW MEXICO



SCALE: 1" = 2000'

CONTOUR INTERVAL 20'

EXHIBIT E

SANTA FE ENERGY OPERATING PARTNERS,L.P.
OLD RANCH KNOLL "8" FEDERAL COM. NO.2
660' FSL & 1980' FWL
SEC.8, T22S,R24E
EDDY COUNTY,NEW MEXICO

AUXILIARY EQUIPMENT

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 line 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 1/2 X 16" Duplex, Compound driven.
PIT SYSTEM	1-Shale Pit 6X7X35',1-Settling 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" 5000 psi WP double ram and 13 5/8" 5000 psi WP Shaffer Annular Preventer. Choke manifold rated at 5000 psi. Valvcon 5-station 80 gallon closing unit.

Exhibit D
Santa Fe Energy Operating Partners,L.P.
Old Ranch Knoll "8" Federal Com. No.2
Section 8, T-22S,R-24E
Eddy County, New Mexico

DDR:ORKNOLL8.PMT

PROPOSED DRILLING FLUID PROGRAM

0 - 350'

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.

350-2500'

Drill out with fresh water circulating the reserve pit. Utilize ground paper mixed in prehydrated fresh gel to sweep the hole. MW-8.5 ppg and Vis-28.

2500-8400'

Drill out with fresh water circulating 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 fresh water/Drispac system for 15-20 WL and a Vis of 30-32. MW-8.3/8.5 ppg.

Exhibit C
Santa Fe Energy Operating Partners,L.P.
Old Ranch Knoll "8" Federal Com. No.2
Section 8,T-22S,R-24E
Eddy County, New Mexico

DDR:ORKNOLL8.PMT

PROPOSED 3-M BOPE AND CHOKE ARRANGEMENT

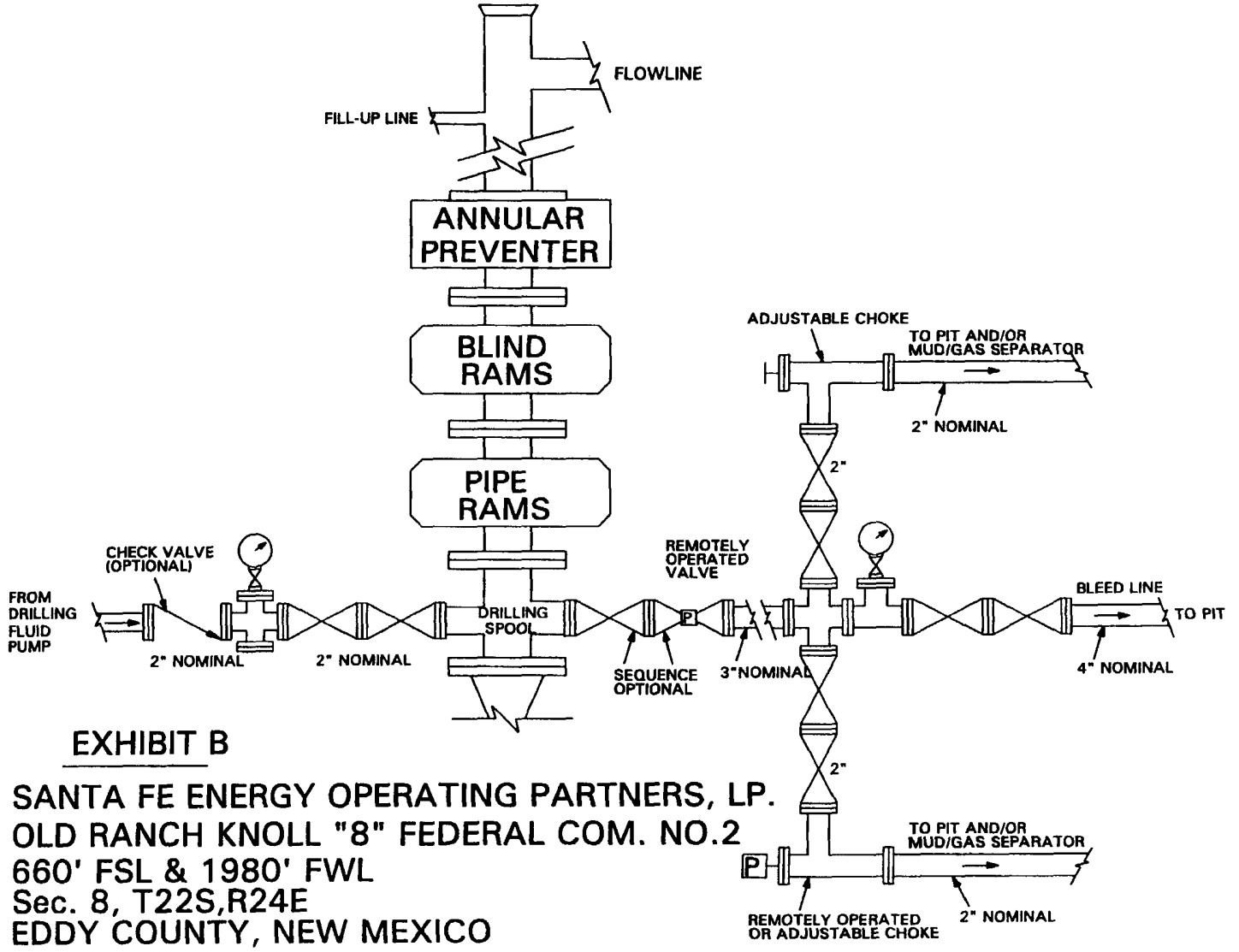


EXHIBIT B

SANTA FE ENERGY OPERATING PARTNERS, LP.
OLD RANCH KNOLL "8" FEDERAL COM. NO.2
660' FSL & 1980' FWL
Sec. 8, T22S,R24E
EDDY COUNTY, NEW MEXICO

SANTA FE ENERGY OPERATING PARTNERS,L.P.
OPERATIONS PLAN
OLD RANCH KNOLL "8" FEDERAL COM. NO.2

1. Drill a 17 1/2" hole to approximately 350'.

2. Run 13 3/8" 48.0 ppf H-40 ST&C casing. Cement with 400 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 four hours prior to cutting off.

4. Nipple up a annular BOP system and test casing to 600 psi. WOC 18 hrs prior to drilling out.

5. Drill a 12 1/4" hole to approximately 2500'.

6. Run 9 5/8" 36.0 ppf K-55 ST&C casing. Cement with 1000 sx Cl "C" Lite containing 1/4 pps celloflake followed by 200 sx Class "C" with 2% $CaCl_2$. 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 18 hours prior to drilling out.

9. Test BOP system to 3000 psi. Test casing to 1500 psi.

10. Drill 8 3/4" hole to 8400'. Run logs.

11. Either run and cement 8400' of 7" 26.0 PPF LT&C casing or plug and abandon as per BLM requirements.

Exhibit A
Santa Fe Energy Operating Partners,L.P.
Old Ranch Knoll "8" Federal Com. No.2
Section 8,T-22S,R-24E
Eddy County, New Mexico

DDR:ORKNOLL8.PMT

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

No abnormal pressures or temperatures are anticipated. The estimated bottom hole temperature is 130 °F and the estimated bottom hole pressure is 2500 psi. 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 production casing. The Cisco/Canyon zones are our primary objective. The zone is hydrogen sulfide productive in the area. Our plan is to have everyone on location trained in H_2S safety procedures and install monitors and Scott Air Packs at strategic locations around the rig by 7000', prior to encountering the Cisco/Canyon. It is our understanding that H2S is only detected in the area whenever the reservoir fluids are produced up the wellbore. Our drilling fluid hydrostatic head will prevent fluid entry due to the reservoir being overbalanced. We will have a rotating head installed and monitors operational during the drilling of the Cisco/Canyon zone. Due to the remote location of this drillsite, H_2S warning signs will be placed prior to entry of the drillsite, a public protection plan is not required for this location.

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 October 1,1993. Once spudded, the drilling operation should be completed in approximately 20 days. If the well is productive, an additional 30 days will be required for completion and testing before permanent facilities are installed.

DRILLING PROGRAM
SANTA FE ENERGY OPERATING PARTNERS, L.P.
OLD RANCH KNOLL "8" FEDERAL COM. NO.2

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:**

San Andres	980'
Glorieta	2520'
Bone Spring	4550'
Wolfcamp	7095'
Cisco	7760'
Canyon	8260'
Total Depth	8400'

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

Water	None expected in area
Oil/Gas/Water	Cisco/Canyon 7800'-8300'

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 2500'.

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

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

   Two Drill Stem Tests are Planned.

Cisco	8000'-8100'
Canyon	8200'-8300'

   Logging:

Dual Laterolog w/MSFL and Gamma Ray	2500'- 8400'
Compensated Neutron/Litho-Density/Gamma Ray	2500'- 8400'
Compensated Neutron/Gamma Ray (thru csg)	Surface-2500'

   Coring: None Planned