NM-55141
3162.41 (065)

FEB 22 1988

Santa Fe Energy Operating Partners, L.P.
500 W. Illinois, Suite 500
Midland, TX 79701

Dear Sir:

Your application for permit to drill the Sterling Silver 3-2 Federal No. 1 Well in the SW¼ NE¼, sec. 3, T. 24 S., R. 31 E., Eddy County, New Mexico, lease NM-55141, to a depth of 15,300 feet to test the Morrow formation in the Oil-Potash area, is hereby approved as amended by stipulations attached to the application.

One copy of the application is returned herewith. Please notify the Bureau of Land Managment office checked on the attached special stipulation, in sufficient time for a representative to witness all cementing operations.

Approval of this application 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.

Sincerely,

Orig. Sgd. Francis R. Cherry, Jr.

Francis R. Cherry, Jr.
District Manager

Enclosure

cc:
NMOCD - Artesia-2
NM (067) - 2
NM (065) - 1

C/SF

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

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

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

30-015-25879

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

FEB 23 88
O. C. D.
ARTESIA, OFFICE

RECEIVED
JAN 21 1988
BUREAU OF LAND MANAGEMENT
CARLSBAD, New Mexico

5. LEASE DESIGNATION AND SERIAL NO.: NM-55141

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Sterling Silver 3-2 Federal

9. WELL NO.:

10. FIELD AND POOL, OR WILDCAT: Undesignated West Sand Dunes Morrow

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 3, T-24S, R-31E

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' FNL, 1980' FEL, Section 3, T-24S, R31E
At proposed prod. zone: Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 35 miles NW from Jal, NM

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): 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.: N/A

19. PROPOSED DEPTH: 15,500'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 3450.9

22. APPROX. DATE WORK WILL START*: as soon as possible

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	650'	1175 cu.ft. circulated
12-1/4"	9-5/8"	40.0	4,350'	3892 cu.ft. circulated
8-1/2"	7"	26.0 & 29.0	12,000'	1200 cu.ft. circulated
6"	4-1/2"	13.5	11,500-15,500'	660 cu.ft.

13-3/8" casing will be cemented with sufficient Class "C" cement containing 4% gel, 1/4#/sk cellofane flakes to circulate to surface when followed by 330 cu. ft. of Class "C" with 2% Calcium Chloride.

9-5/8" casing to be cemented with sufficient lite cement to circulate to surface when followed by 264 cu.ft. Class "C" containing 2% Calcium Chloride.

7" casing to be cemented with 50/50 Class "H" Poz containing 6# salt per sack and 0.6% fluid loss reducer to bring cement to 8,000'.

4-1/2" casing to be cemented with sufficient Class "H" cement containing 0.6% fluid loss reducer, 0.4% friction reducer, 0.6% gas block agent and 5#/sk KCl to fill to 300' above liner top. All cement to weigh at least 1 ppg more than mud weight used to drill the interval.

POST ID #1
NL & APF
2-26-88

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 Michael R. Burton — TITLE District Drilling Entineer — DATE 1/18/88

(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**

EW MEXICO OIL CONSERVATION COMM. ION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section

Operator	Lease	Well No.
Santa Fe Operating Co. L.P.	Sterling Silver 3 Federal	1

Unit Letter	Section	Township	Range	County
G	3	24 South	31 East	Eddy

Actual Footage Location of Well:
1980 feet from the North line and 1980 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3450.9	MORROW	Undes. West Sand Dunes	320.11 Acres

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

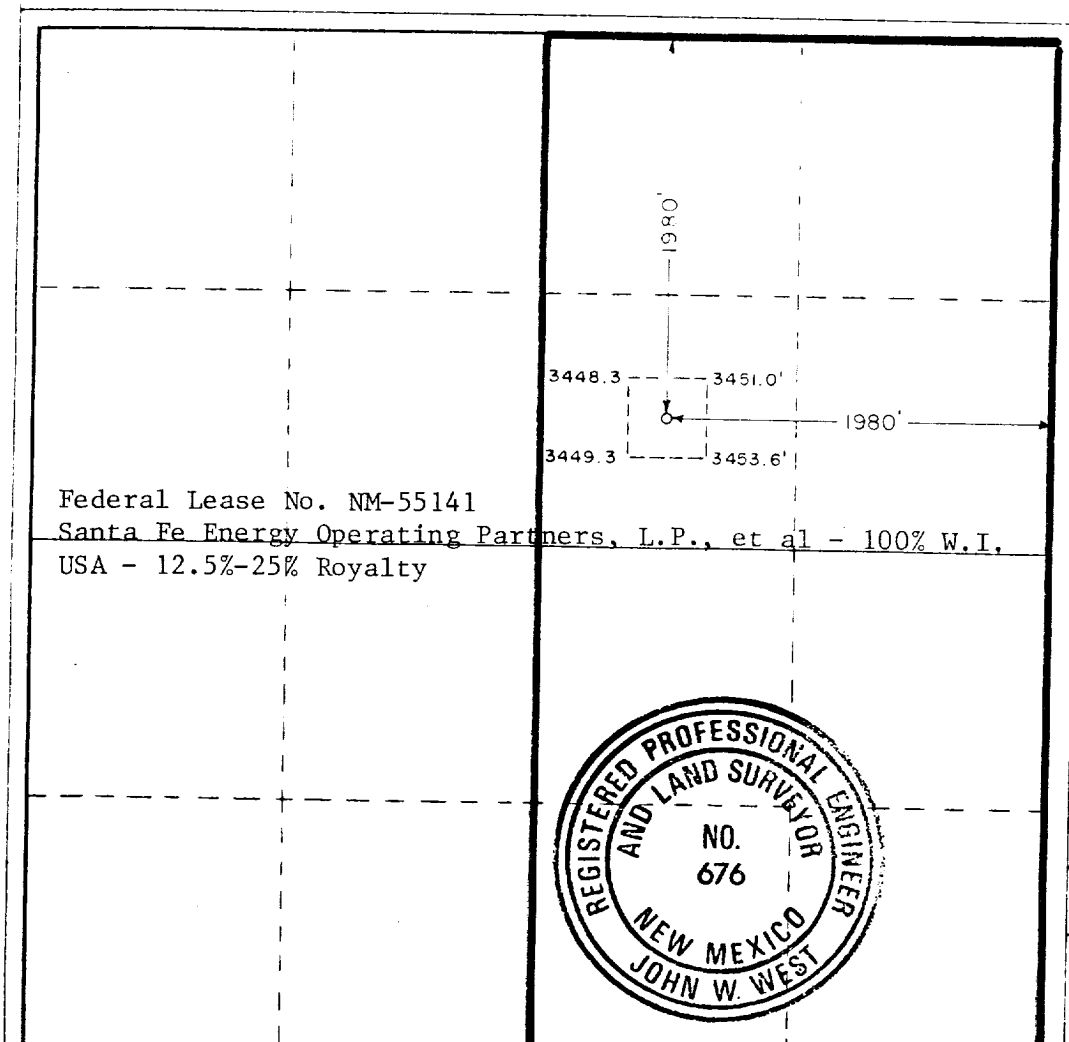
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests 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 the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) One lease - see reverse side

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 interests, has been approved by the Commission.



Federal Lease No. NM-55141
Santa Fe Energy Operating Partners, L.P., et al - 100% W.I.
USA - 12.5%-25% Royalty

96560

CERTIFICATION

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

Name: Michael R. Bunton
Position: District Drilling Engineer
Company: Santa Fe Energy Operating Partners, L.P.
Date: 1/18/88

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: January 13, 1988

Registered Professional Engineer and/or Land Surveyor

Certificate No. JOHN W. WEST, 676
RONALD J. EIDSON, 3239

T-24-S, R-31-E, Eddy County, New Mexico
Section 3: Lots 1, 2 & S/2NE/4, SE/4

WI

Santa Fe Energy Operating Partners, L.P.	33 1/3%
Pogo Producing Company	66 2/3%
	100.000%

RI
USA - 12.5%-25%*

*Federal Sliding Scale Royalty

APPLICATION FOR DRILLING
SANTA FE ENERGY COMPANY
Sterling Silver 3 Federal No. 2

In conjunction with form 9-331C, Application to Drill subject well, Santa Fe Energy Company submits the following ten items of pertinent information in accordance with BLM requirements.

1. The geologic surface formation is sand.

2. The estimated tops of geologic markers are as follows:

Rustler	959'
Base of Salt	4234'
Delaware Lamar Lime	4314'
Cherry Canyon	5344'
Bone Springs	8124'
Wolfcamp	11534'
Strawn	13234'
Atoka	13684'
Lower Morrow Clastics	14924'
TD	15500'

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	Wolfcamp 11,534-13,1234'
	Strawn 13,234-13,684'
	Atoka 13,684-14,924'
	Morrow 14,924-15,500'

4. Proposed casing program: See Form 9-331C and Exhibit A.

5. Pressure control Equipment: See Form 9-331C and Exhibit B.

6. Drilling Fluid Program: See Exhibit C.

7. Auxilliary 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):

Wolfcamp	11534-13234'
Strawn	13234-13684'
Atoka	13684-14924'
Morrow	14924-15500'

Logging:

Logging from 4314 - TD:
Dual Laterolog with Gamma Ray
Neutron-Density with Gamma Ray
Computer Process Log over selected intervals

Logging from surface to 4314':
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. Along with the above mentioned primary control, 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.

10. Starting Date: As soon as possible.

MRB:SL-904

MULTI-POINT SURFACE USE AND OPERATIONS PLAN
SANTA FE ENERGY OPERATING PARTNERS, L.P.
Sterling Silver 3 Federal No. 2
1980' FNL, 1980' FEL
Section 3, T-24S, R-31E
Eddy County, New Mexico

This plan is submitted with Form 9-331C, 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 topographic map of a scale of approximately one inch to 2000' which shows location of the proposed wellsite and roads in the vicinity. The proposed location is situated approximately 38 miles northwest of Jal, New Mexico.

      DIRECTIONS:

      1. Proceed West on Highway 128 from Jal, New Mexico for 38 miles.

      2. Turn left (south) onto oilfield road and continue for 2.5 miles.

      3. Turn left on dirt road into location.

2. PLANNED ACCESS ROAD.

   A 14' wide access road will extend from an existing location in Section 3 into the well site in Section 3.

3. LOCATION OF EXISTING WELLS.

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

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 of waters 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 of the wellsite. The pit is located in Section 3, T-24S, R-31E.

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 unitl 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 material 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 northwest. 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 600' X 600' 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 90 days after abandonment.

11. TOPOGRAPHY.

A. The wellsite and access route are located in a hilly area.

B. The top soil at the wellsite is sandy.

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. The wellsite is located on federal surface.

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

12. OPERATOR'S REPRESENTATIVES.

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

Hugh Boyt
District Production Manager
Santa Fe Energy Operating
Partners, L.P.
500 West Illinois
Midland, Texas 79701
915/687-3551 - office
915/697-4768 - home

Michael R. Burton
District Drilling Engineer
Santa Fe Energy Operating
Partners, L.P.
500 West Illinois
Midland, Texas 79701
915/687-3551 - office
915/699-1260 - home
806/373-1911 - 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.

1/19/98
Date

Michael R. Burton
Michael R. Burton

MRB:SL-904a

SANTA FE ENERGY OPERATING PARTNERS, L.P.
OPERATIONS PLAN
Sterling Silver 3 Federal No. 2

1. Drill a 17 1/2" hole to 650'.

2. Run 13 3/8" 48.0 ppf H-40 casing. Cement with 500 sacks lite weight cement containing 3% salt and 1 lb./sack hi-seal followed by 400 sacks Class C containing 2% Calcium Chloride. Run Texas Pattern shoe on bottom and float collar one joint above shoe. Run centralizers on every other joint above shoe. Apply thread lock to bottom two joints, float collar, and guide shoe.

3. Wait on cement six hours.

4. Cut off casing. Nipple up and install BOP system.

5. Test casing to 600 psi after cement has attained 500 psi compressive strength.

6. Drill a 12 1/4" hole to 4350'.

7. Run 9 5/8" 40.0# K-55 casing. Cement with sufficient lite weight cement containing 5# salt per sack and 1# Hi-seal per sack followed by 640 sacks class C neat to circulate cement to surface. Centralize bottom 1000' of casing with one centralizer on every third joint above shoe. Run guide shoe on bottom and float collar two joints above shoe. Apply thread lock to bottom two joints, float collar, and shoe.

8. Wait on cement six hours.

9. Cut off 13 3/8" casing head. Install 9 5/8" casing head. Install BOP stack and choke manifold.

10. Test BOP stack and choke manifold to 5000 psi. Test casing to 1500 psi.

11. Drill 8 1/2" hole to first good lime section after topping wolfcamp. This is anticipated to be at 12000'±.

12. Run Logs.

13. Run 7" 29.0# S-95 casing. Cement with sufficient lite weight cement containing 0.75% fluid loss reducer 2#/sk hi-seal followed by 300 sacks class H with 1% fulid loss reducer to fill 8000'. Run guide shoe on bottom and float collar two joints above shoe. Centralize bottom 1000' with centralizers placed on every other joint above shoe.

14. Nipple down BOP. Set slips. Cut off casing. Nipple up BOP.

15. Test BOP and choke manifold to 5000 psi.

16. Test casing to 5000 psi.

17. Drill 6" hole to 15500'.

18. Run logs.

19. Run 4 1/2" 13.5# S-95 liner to extend from 11500' to 15500'. Cement with sufficient Class H cement containing 1.5% fluid loss to circulate liner. Run float collar two joints above float shoe.

20. Blow out preventer equipment will be pressure tested to 5000 psi upon initial installation, anytime equipment is worked on or changed, and every 30 days, whichever is sooner.

21. Blowout preventer equipment including both pipe ram preventers, blind ram preventer, and values on choke manifold will be rated at 5000 psi working pressure or greater.

Exhibit A
Santa Fe Energy Operating Partners, L.P.
Sterling Silver 3 Federal No. 2
Sec. 3, T-24S, R-31E
Eddy County, New Mexico

MRB:SL-904b

Proposed BOP stack Arrangement

after Prentice and Records

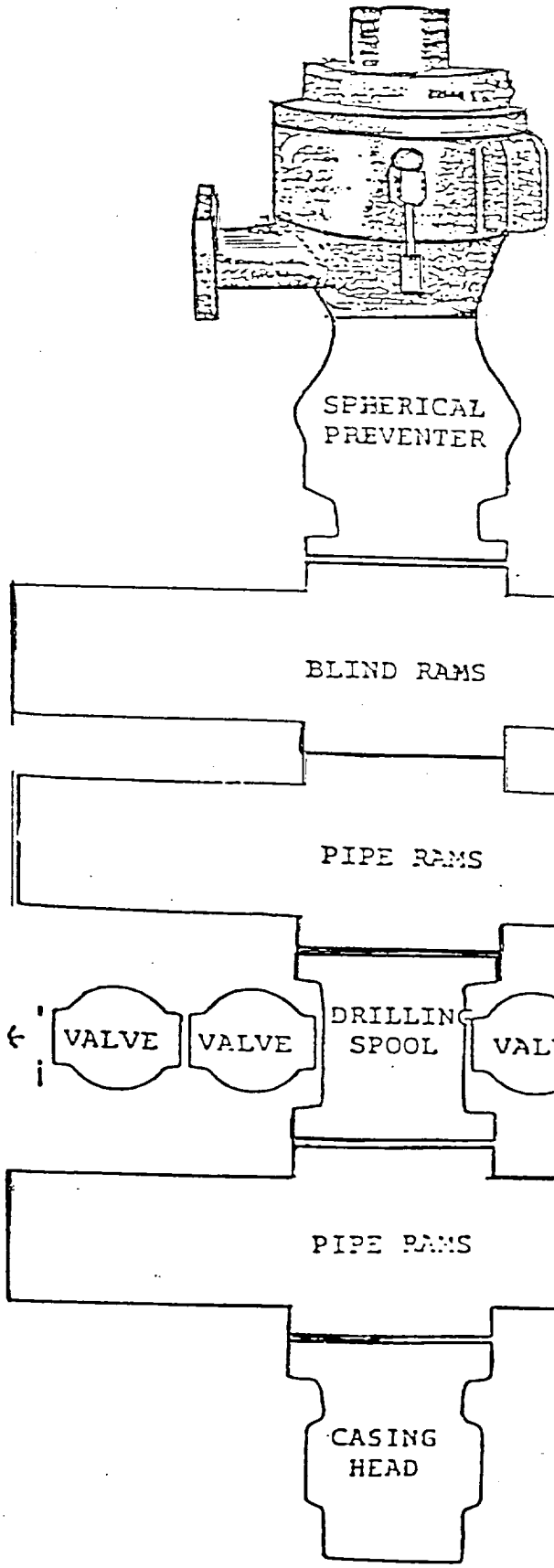
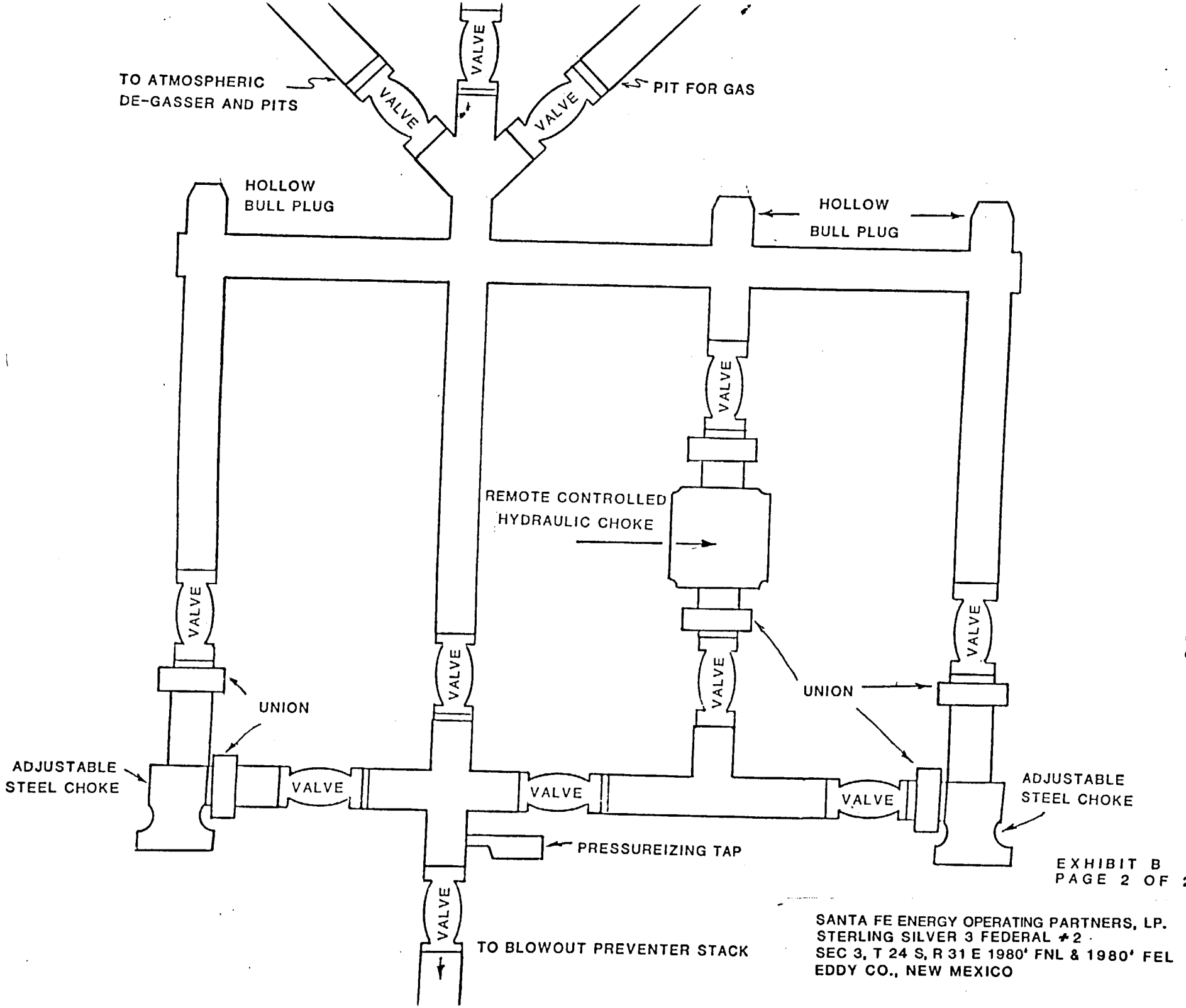


EXHIBIT B PAGE 1 OF 2

SANTA FE ENERGY OPERATING PARTNERS, LP.
STERLING SILVER 3 FEDERAL #2
SEC 3, T 24 S, R 31 E 1980' FNL & 1980' FEL
EDDY CO., NEW MEXICO



PROPOSED CHOKE MANIFOLD DESIGN
AFTER PRENTICE AND RECORDS

EXHIBIT B
PAGE 2 OF 2

SANTA FE ENERGY OPERATING PARTNERS, LP.
STERLING SILVER 3 FEDERAL #2
SEC 3, T 24 S, R 31 E 1980' FNL & 1980' FEL
EDDY CO., NEW MEXICO

PROPOSED DRILLING FLUID PROGRAM

0 - 650'

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.

650 - 4350'

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 AQAGEL or ZEOGEL/paper slugs as needed to sweep hole. For corrosion control, use Sodium Bichromate.

4350 - 12000'

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 pH. Use ZEOGEL/ground paper or pre-hydrated AQUGEL pills to sweep the hold free of cutting shen needed and prior to trips . Use Lime for a 9.0 - 9.5 pH. 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.

12000 - 15500'

Prior to entering the Atoka, limit circulation to the steel pits and treat out hardness with Soda Ash. Lower filtrate to 10 -15 cc with DEXTRID/PAC-R. Add XC Polymer for desired viscosity. Use BAROID for density as dictated by hole conditions. This non-dispersed bipolymer system should have the following properties: Weight: to be dicated by hole conditions, Viscosity: 34 - 38 sec/1000 cc, Filter Loss: 10 -15 ml.

Exhibit C, Page 1
Santa Fe Energy Operating Partners, L.P.
Sterling Silver 3 Federal No. 2
Section 3, T-24S, R-31E
Eddy County, New Mexico

MRB:SL-904c

AUXILLIARY 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' jacknife. 25' high substructure.
TRAVELING 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 320KW AC generators each powered by a turbo-charged diesel engine.
BOP EQUIPMENT	One annular and three ram preventers rated at 5000 psi. Choke Manifold rated at 5000 psi.

Exhibit D
Santa Fe Energy Operating Partners, L.P.
Sterling Silver 3 Federal No. 2
Section 3, T-24S, R-31E
Eddy County, New Mexico

MRB:SL-904d

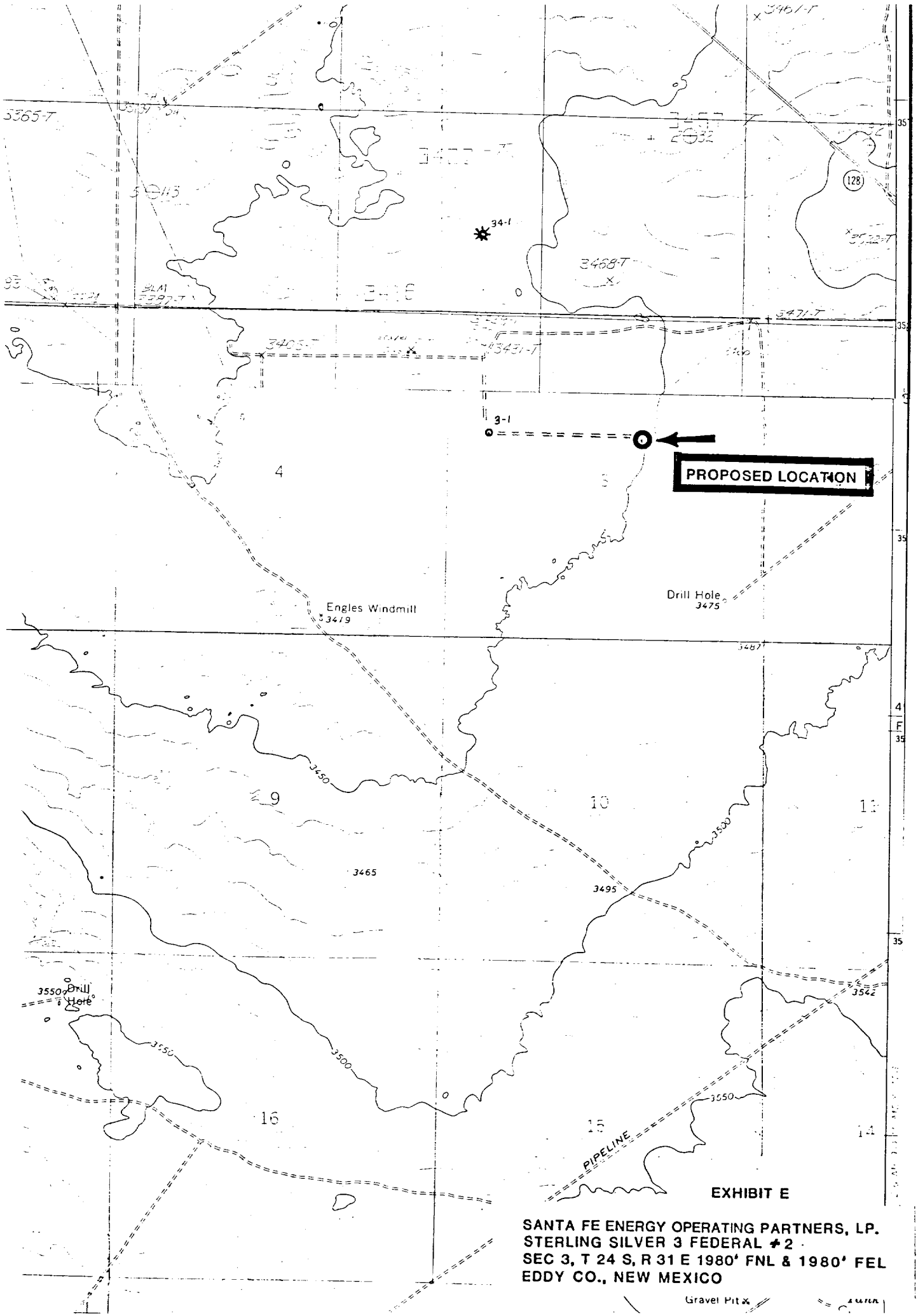


EXHIBIT E

SANTA FE ENERGY OPERATING PARTNERS, LP.
STERLING SILVER 3 FEDERAL # 2
SEC 3, T 24 S, R 31 E 1980' FNL & 1980' FEL
EDDY CO., NEW MEXICO

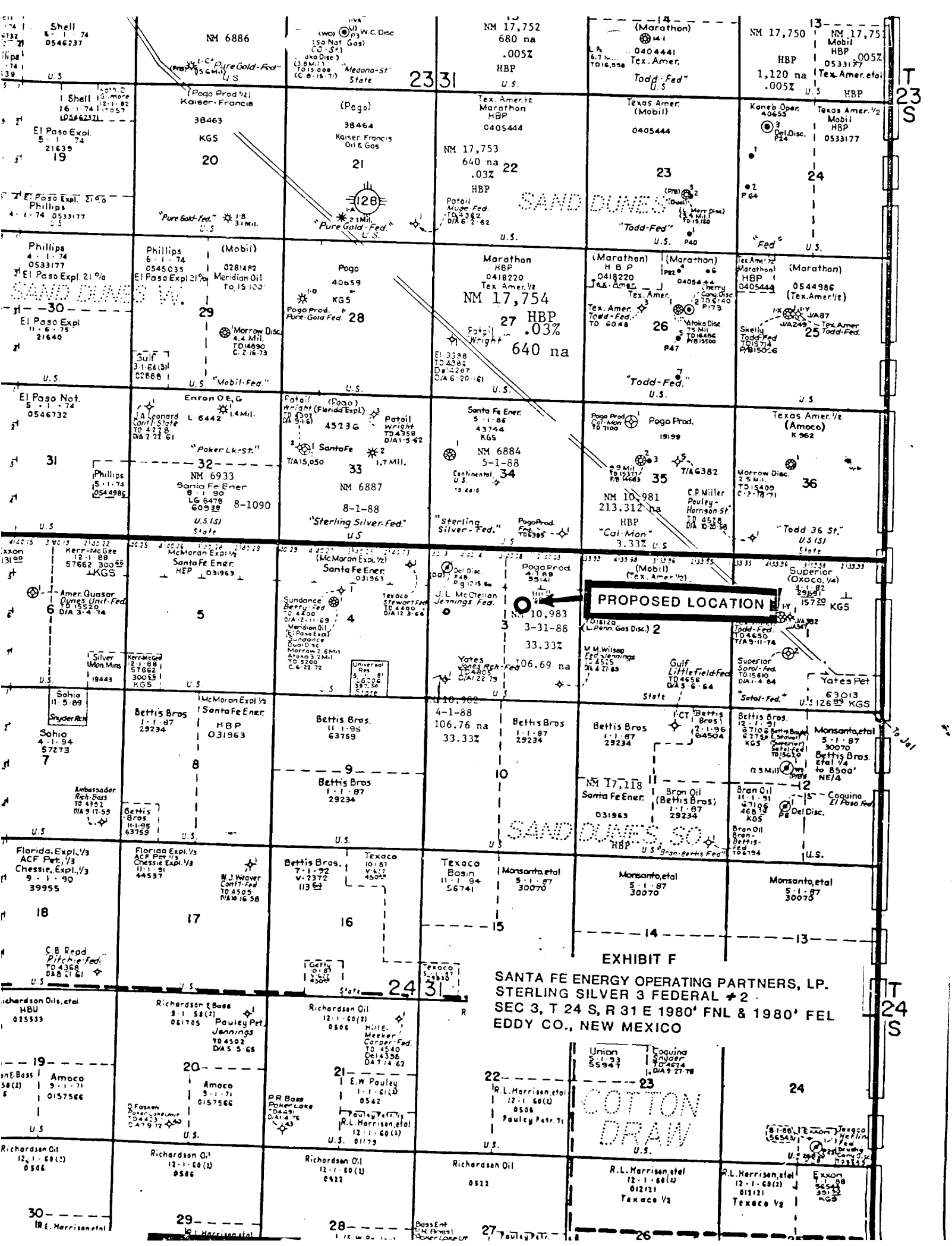

PROPOSED LOCATION
SAND DUNES
COTTON DRAW
T 23 S
T 24 S
EXHIBIT F
SANTA FE ENERGY OPERATING PARTNERS, LP.
STERLING SILVER 3 FEDERAL # 2
SEC 3, T 24 S, R 31 E 1980' FNL & 1980' FEL
EDDY CO., NEW MEXICO

EXHIBIT G

WELL SITE LAYOUT

SANTA FE ENERGY OPERATING PARTNERS, LP.
STERLING SILVER 3 FEDERAL # 2
SEC 3, T 24 S, R 31 E 1980' FNL & 1980' FEL
EDDY CO., NEW MEXICO