

OIL CONS. COMMISSION
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
NEW MEXICO 88240
RECEIVEDSUBMIT IN TRIPLICATE*
(Other Instructions on
reverse side)FORM APPROVED
OMB NO. 1004-0136
Expires: February 28, 1995

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒DEEPEN ☐

FEB 9 10 27 AM '96

b. TYPE OF WELL

OIL
WELL ☒GAS
WELL ☐

OTHER

SINGLE
ZONE ☒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) 682-6272

4. LOCATION OF WELL (Report location clearly and in accordance with BLM Form 3160-3, Appendix A)

At surface

(A) 660' FNL & 990' FEL

At proposed prod. zone

PROPERTY NO. 18777

POOL CODE 53800

EFF. DATE 4/2/96

API NO. 20-025-33364

10. DISTANCE FROM PROPOSED*

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

330'

40

11. NO. OF ACRES ASSIGNED
TO THIS WELL.

40

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

None

19. PROPOSED DEPTH

8850'

20. ROTARY OR CABLE TOOLS

Rotary

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

3575 GR

22. APPROX. DATE WORK WILL START*

March 10, 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	8850'	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. "Phil" Johnson

TITLE Agent for Santa Fe Energy

DATE 2-6-96

(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:

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

APPROVED

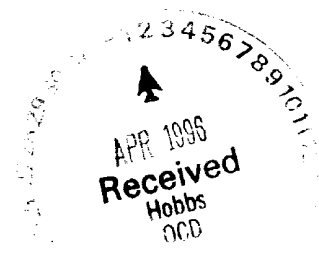
FOR THE DIRECTOR, BLM

TITLE

DATE

MAY 2 8 1996

*See Instructions On Reverse Side



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

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

Form C-102
Revised 02-10-94

Instructions on back

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

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

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

☐ AMENDED REPORT

DISTRICT III
1000 Rio Brazos Rd.
Aztec, NM 87410

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number		2 Pool Code		3 Pool Name Sand Dunes SE Delaware /Bone Spring			
4 Property Code		5 Property Name TOMCAT '18' FEDERAL				6 Well Number 1	
7 OGRID No.		8 Operator Name SANTA FE ENERGY RESOURCES, INC.				9 Elevation 3575'	

10 SURFACE LOCATION

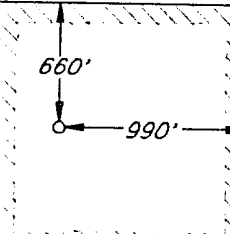
UL or lot no. A	Section 18	Township 23 SOUTH	Range 32 EAST, N.M.P.M.	Lot Ida	Feet from the 660'	North/South line NORTH	Feet from the 990'	East/West line EAST	County LEA
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11 BOTTOM HOLE LOCATION IF DIFFERENT FROM SURFACE

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
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12 Dedicated Acres 40	13 Joint or Infill	14 Consolidation Code	15 Order No.
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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

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

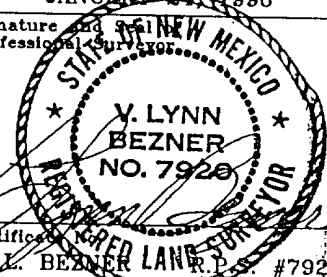
Date
2-6-96

SURVEYOR CERTIFICATION

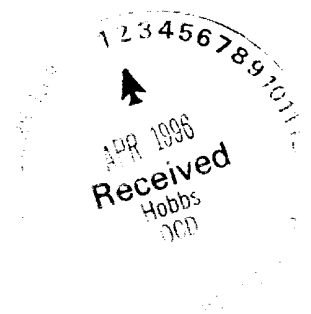
I hereby certify that the well
location shown on this plat was
plotted from field notes of actual
surveys made by me or under
my supervision, and that the
same is true and correct to the
best of my belief.

Date of Survey
JANUARY 24, 1996

Signature and Seal of Professional Surveyor


Certified Surveyor
V. L. BEZNER LAND SURVEYOR #7920

JOB #43439 / 47 SW / 199



DRILLING PROGRAM
SANTA FE ENERGY RESOURCES, INC.
TOMCAT "18" 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	8850'

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.

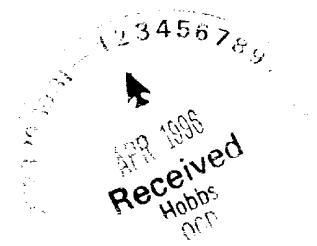
7. **Auxiliary Equipment:** A mud logging unit will be utilized to monitor penetration rate and hydrocarbon shows while drilling below the intermediate casing at 4600'.

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

Drill Stem Tests: None Planned.

Logging:

Dual Laterolog w/MSFL and Gamma Ray	4600'-8850'
Compensated Neutron/Litho-Density/Gamma Ray	4600'-8850'
Compensated Neutron/Gamma Ray (thru csg)	Surface-4600'



DRILLING PROGRAM

Tomcat "18" Fed. No. 1

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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 March 10, 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.

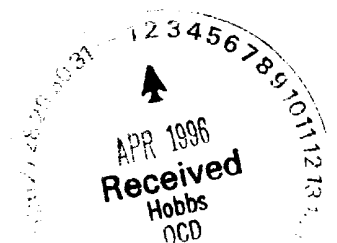


EXHIBIT A
OPERATIONS PLAN
SANTA FE ENERGY RESOURCES, INC.
Tomcat "18" Federal No. 1
Section 18, T-23-S, R-32-E
Lea County, New Mexico

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 8850'. Run logs. ~~SB~~
11. Either run and cement 8850' of 5-1/2" 17.0 ppf K-55 LT&C 5-1/2" 15.50 ppf K-55 LT&C casing or plug and abandon as per BLM requirements.

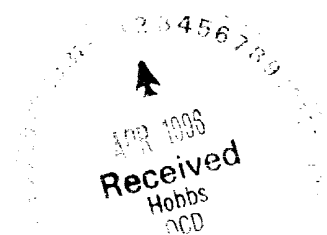


EXHIBIT B
 SANTA FE ENERGY RESOURCES, INC.
 TOMCAT "18" FED NO. 1
 660' FNL & 990' FEL
 SEC 18, T-23-S, R-32-E
 LEA COUNTY, NEW MEXICO

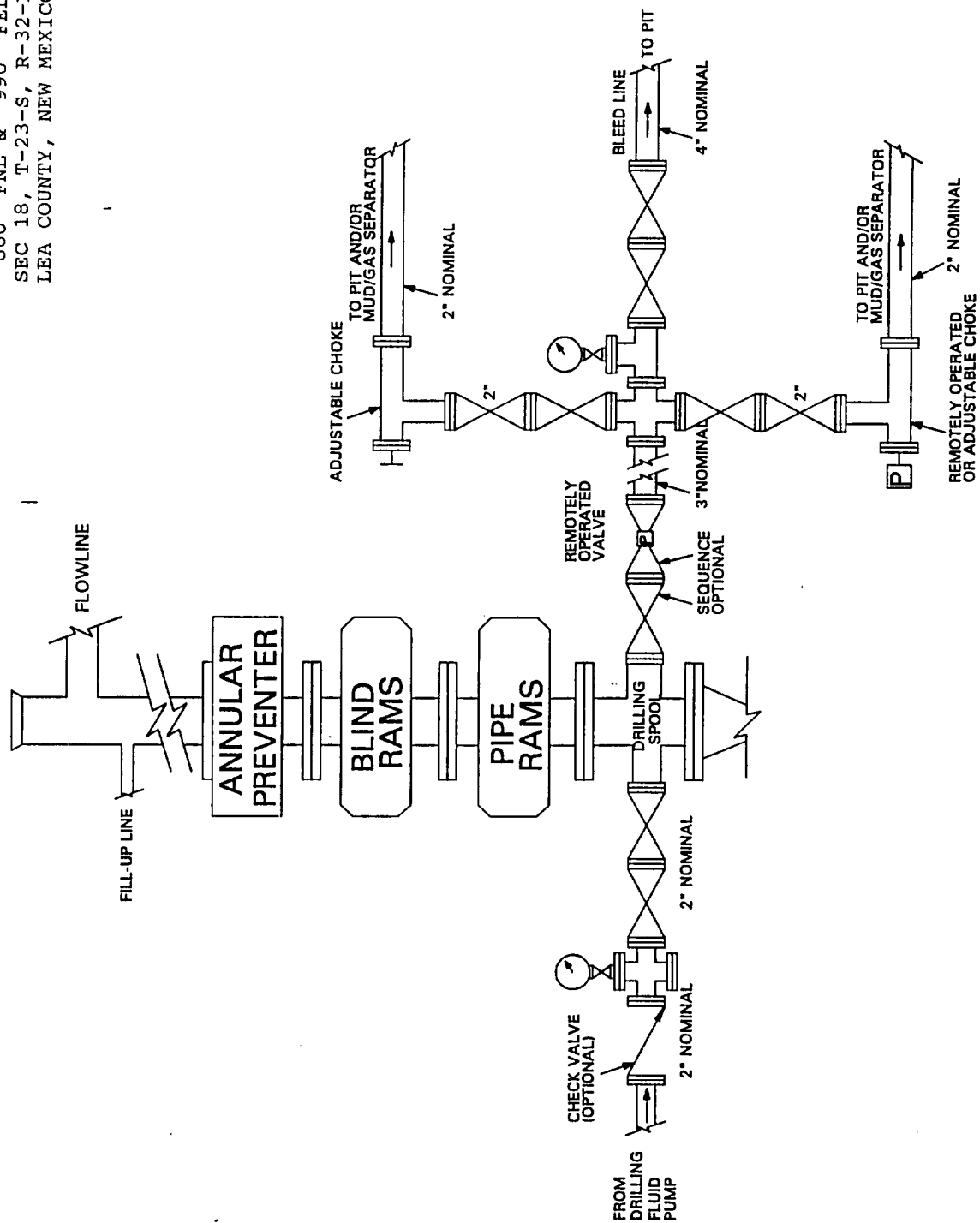




EXHIBIT C
DRILLING FLUID PROGRAM
SANTA FE ENERGY RESOURCES, INC.
Tomcat "18" FED NO. 1
Section 18, T-23-S, R-32-E
Lea County, New Mexico

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'-8850'

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 "18" Federal No. 1
Section 18, 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



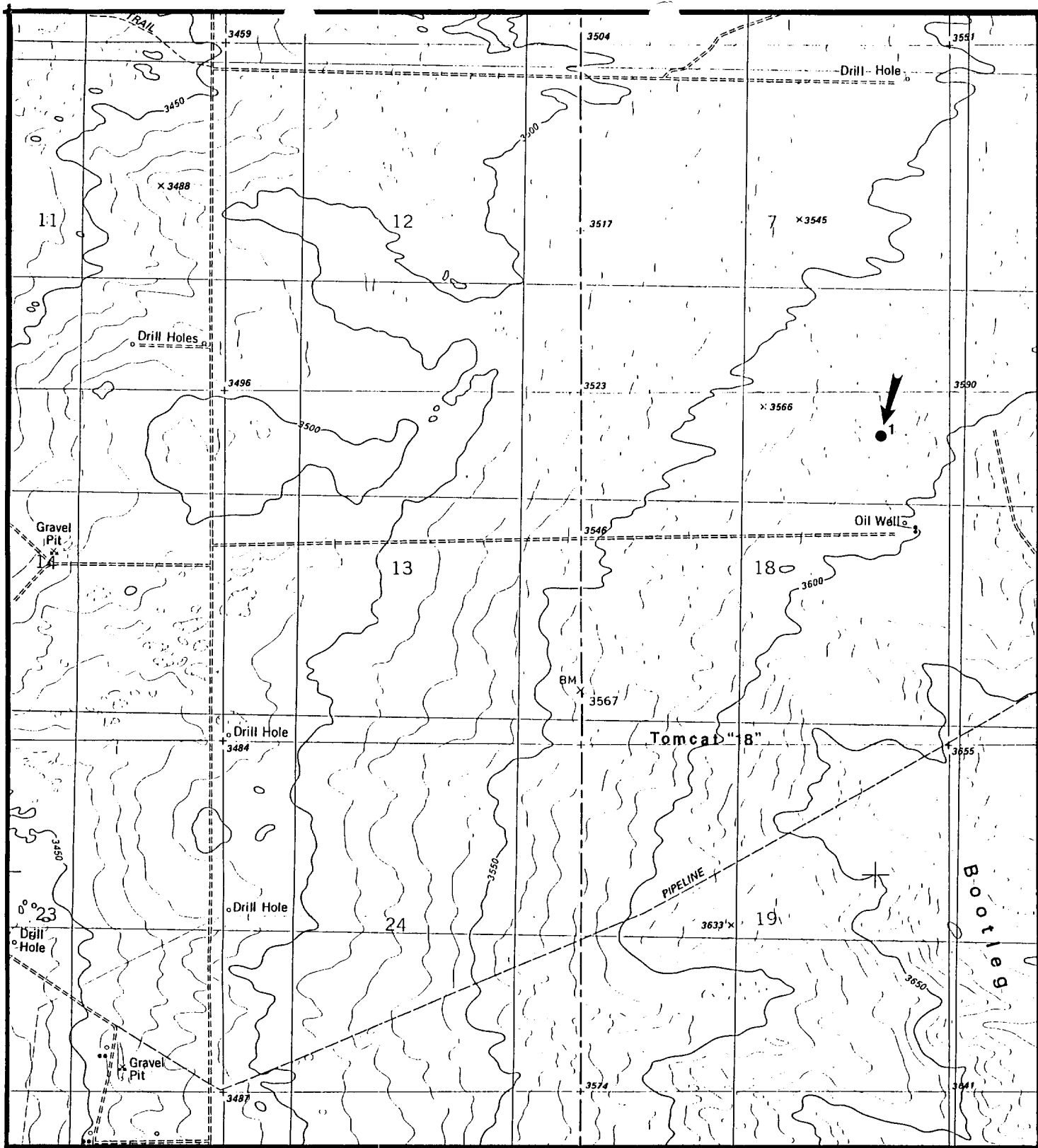
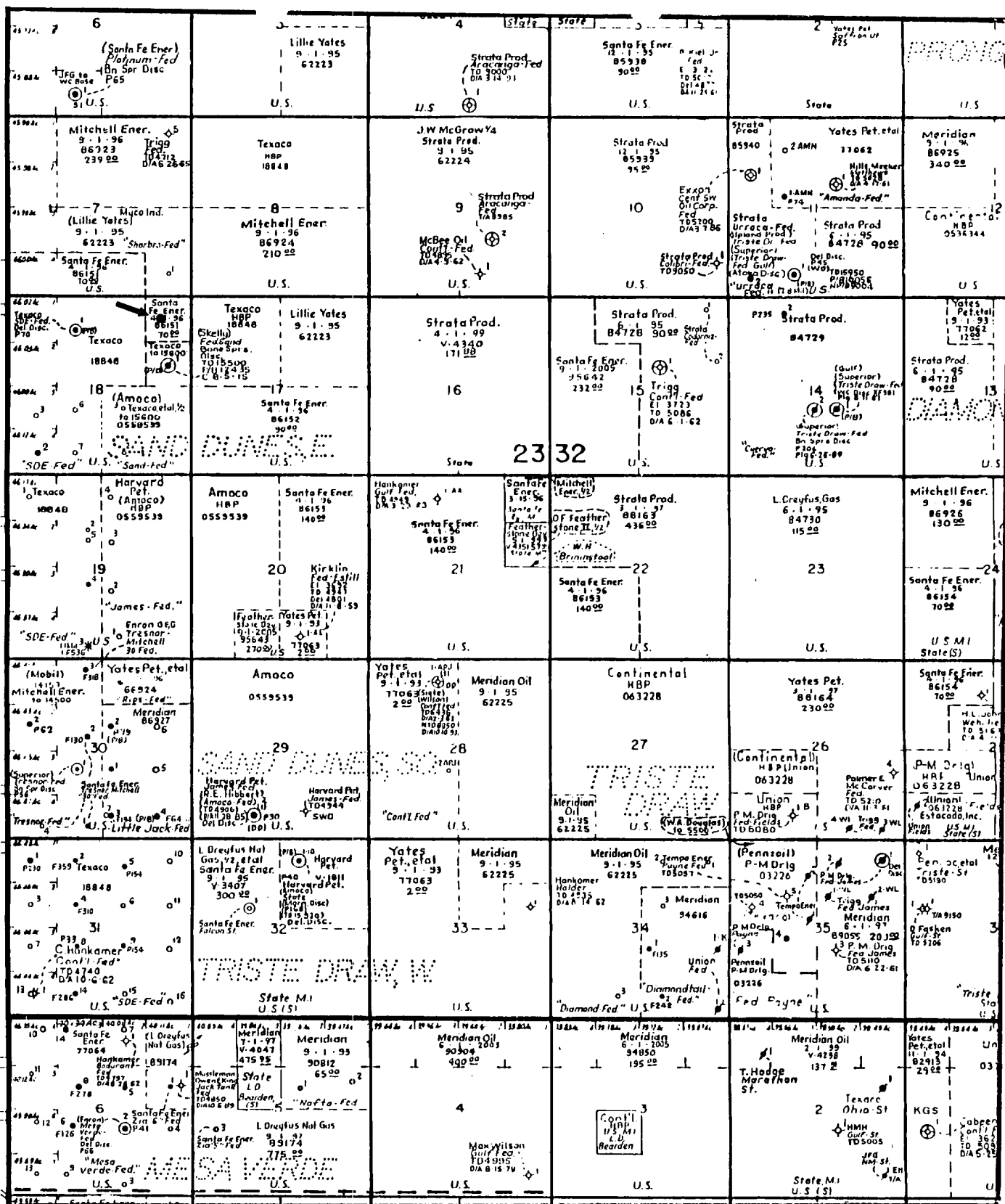


EXHIBIT E
 TOPO MAP OF LOCATION AREA
 SANTA FE ENERGY RESOURCES, INC.
 TOMCAT "18" FED NO. 1
 660' FNL & 990' FEL
 SEC 18, T-23-S, R-32-E
 LEA COUNTY, NEW MEXICO



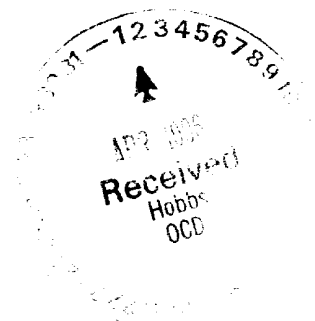
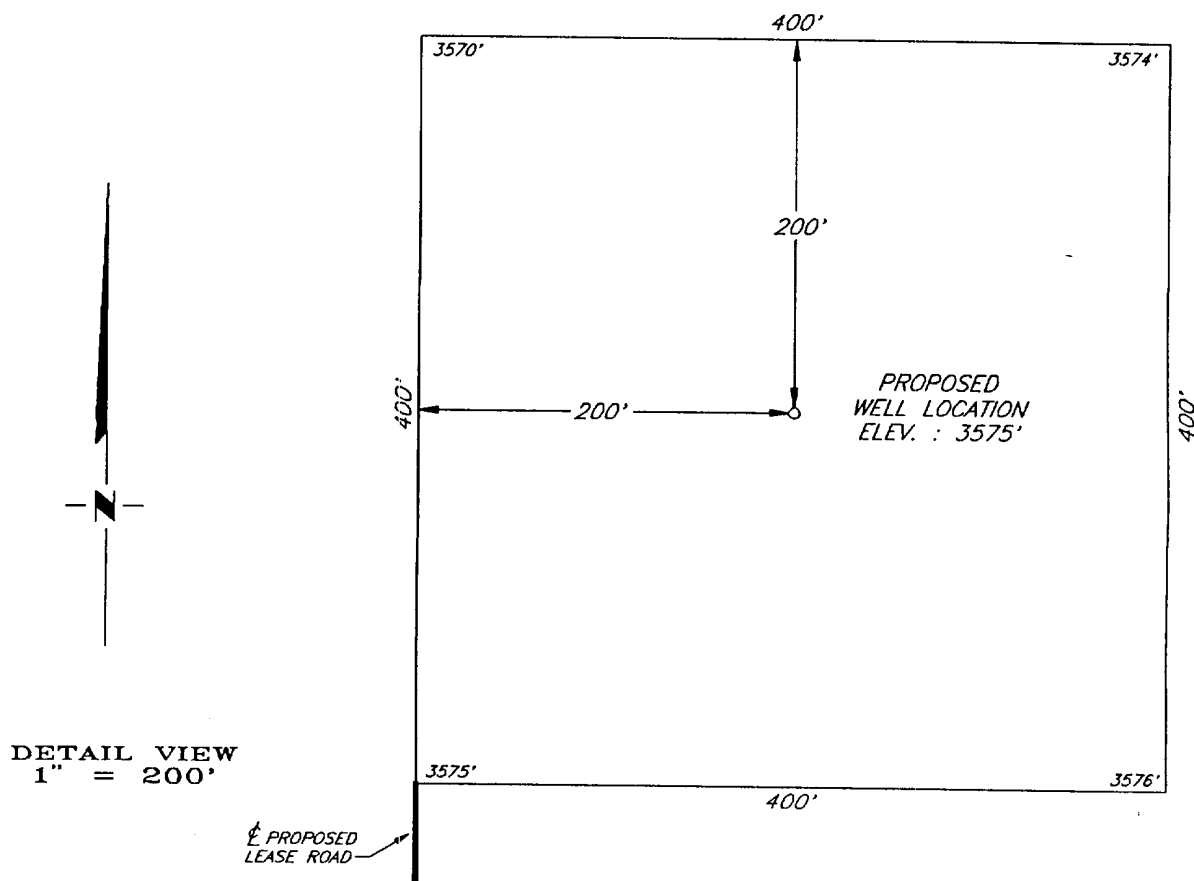
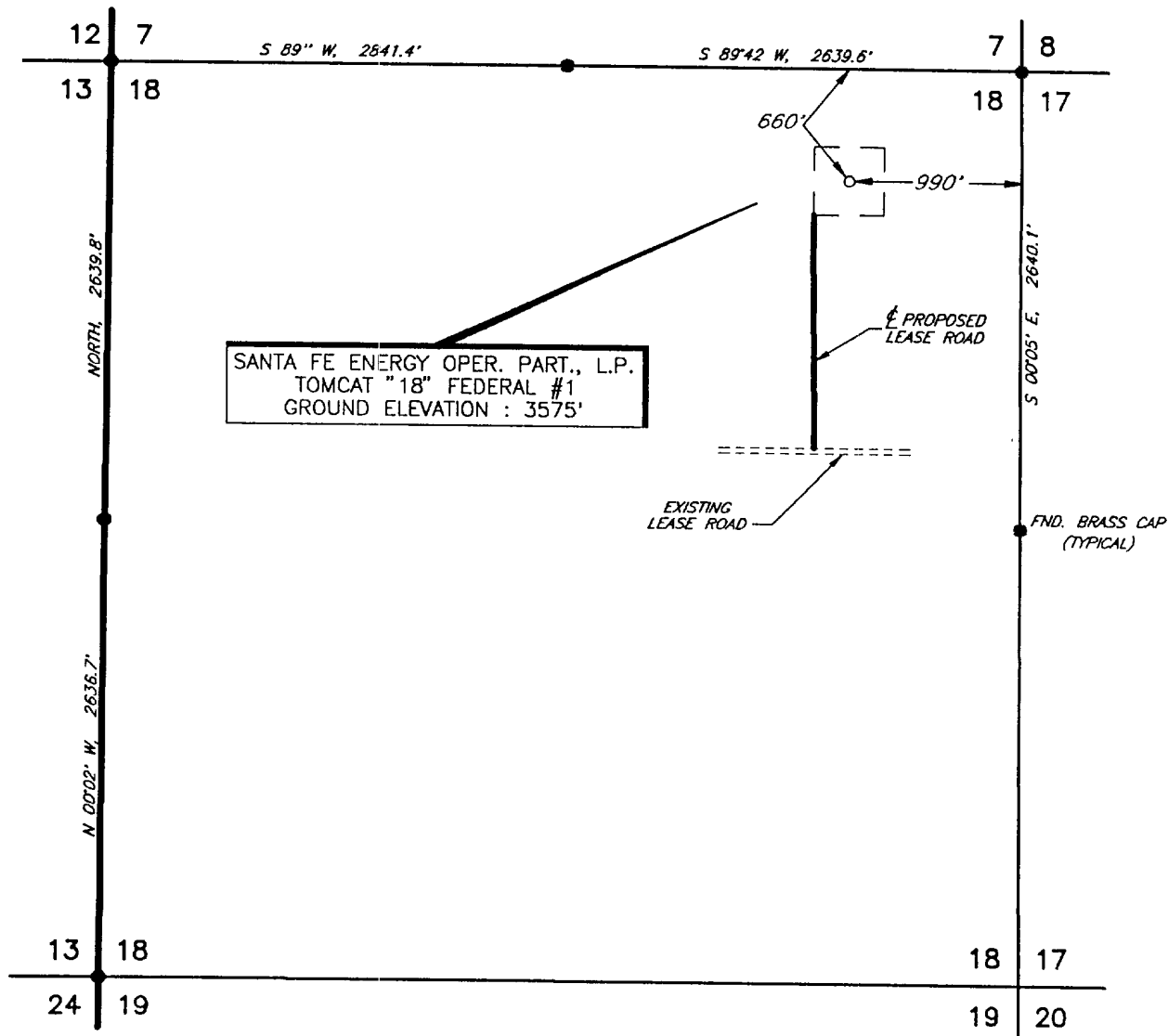


EXHIBIT F (A)
PLAT OF LOCATION
 SANTA FE ENERGY RESOURCES, INC.
 TOMCAT "18" FED NO. 1
 660' FNL & 990' FEL
 SEC 18, T-23-S, R-32-E
 LEA COUNTY, NEW MEXICO



				SANTA FE ENERGY RESOURCES, INC. <i>MIDLAND, TEXAS</i>	SCALE: AS SHOWN
NO.	REVISION	DATE	BY		DATE: JANUARY 24, 1996
SURVEYED BY: R.B.				<i>SURVEYING AND MAPPING BY</i> TOPOGRAPHIC LAND SURVEYORS <i>MIDLAND, TEXAS</i>	JOB NO.: 43439-F
DRAWN BY: JSJ					47 SW
APPROVED BY: V.L.B.					SHEET : 1 OF 1

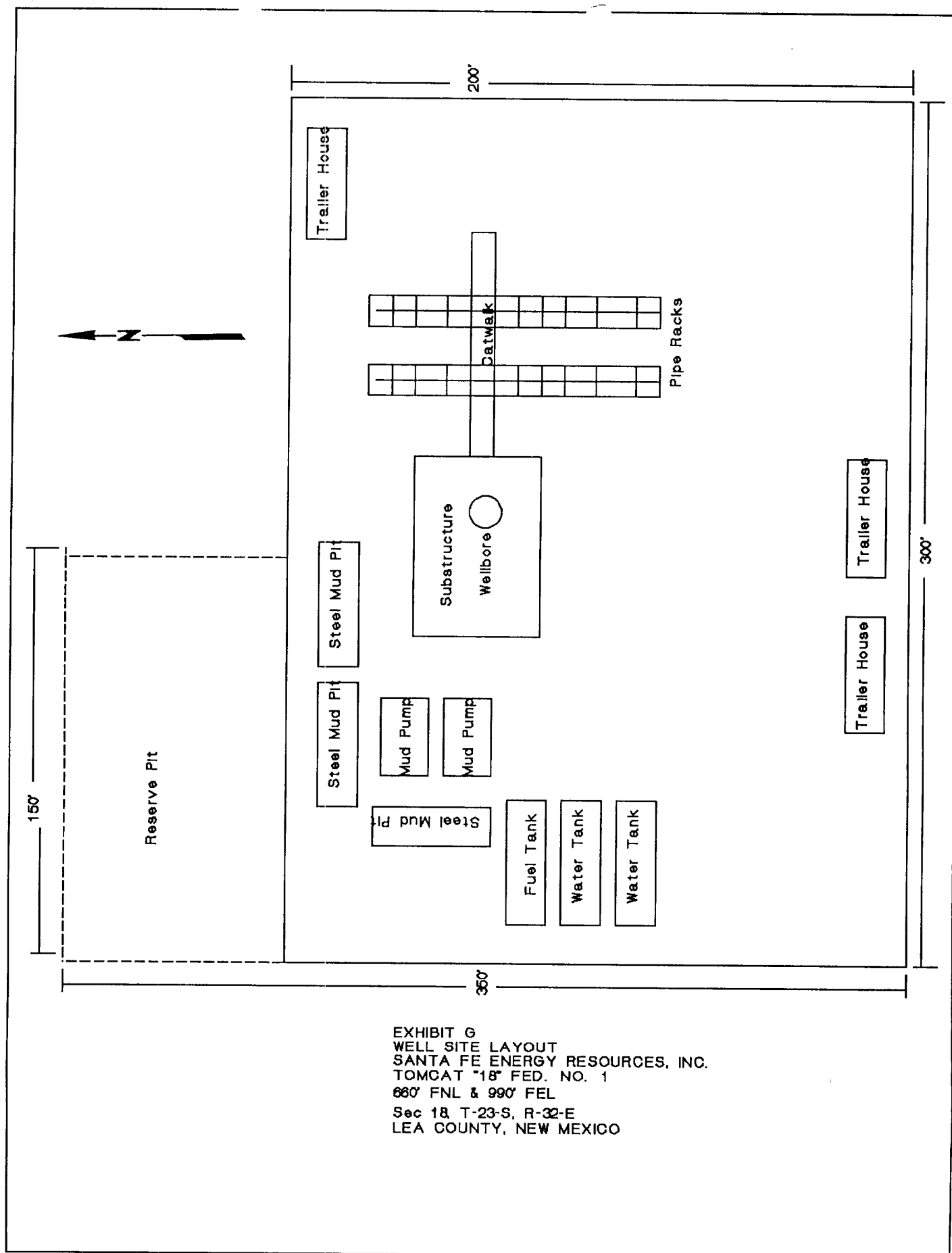


EXHIBIT G
 WELL SITE LAYOUT
 SANTA FE ENERGY RESOURCES, INC.
 TOMCAT "18" FED. NO. 1
 660' FNL & 990' FEL
 Sec 18, T-23-S, R-32-E
 LEA COUNTY, NEW MEXICO

MULTI-POINT SURFACE USE AND OPERATIONS PLAN
SANTA FE ENERGY RESOURCES, INC.
Tomcat "18" FEDERAL NO. 1
SECTION 18, T-23-S, R-32-E
LEA 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 in 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 24 miles east of Loving, New Mexico.

DIRECTIONS:

1. From the intersection of State Hwy 128 & Hwy 31, (east of Carlsbad, N.M.) go east on Hwy 128 for 18 miles. Turn left (north) on paved road (Red Road), go north for 3 miles and turn right on existing lease road for 1.7 miles. The proposed location will be $\pm 1400'$ to the north.

2. PLANNED ACCESS ROAD.

Approximately 3000' of the existing lease road will have to be repaired and $\pm 1400'$ of new access road will have to be built to the proposed location.

3. LOCATION OF EXISTING WELLS.

- A. The well locations in the vicinity of the proposed well are shown in Exhibits E & F.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES.

- A. There are no producing oil wells on the lease at this time.
- B. In the event the well is productive, the necessary production facilities will be installed on the location.

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

Tomcat "18" FED No. 1

Page 2

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. We also plan to use produced water from our offsetting wells to drill the intermediate portion of the hole.

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 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

- A. None required at this time.

9. WELLSITE LAYOUT

- A. Exhibit G shows the dimensions of the well pad and reserve pits, and the location of major rig components.

Multi-Point Surface Use and Operations Plan

Tomcat "18" FED No. 1

Page 3

- B. The ground surface of the location is sandy with sparse vegetation. The location will be constructed by leveling the necessary dunes and covering the sand 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 an aesthetically pleasing a condition as possible.
- 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 relatively flat area.
- B. The top soil at the wellsite is sandy.
- C. The vegetation cover at the wellsite is moderately sparse with prairie grasses, some mesquite bushes, and shinnery oak.
- 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.

12. OPERATOR'S REPRESENTATIVES

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

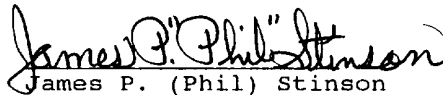
Michael R. Burton
Division Operations Manager
Santa Fe Energy Resources, Inc.
550 W. Texas, Suite 1330
Midland, Texas 79701
915-686-6616 - office
915-699-1260 - home
915-529-6842 - cellular

Darrell Roberts
Division Drilling Engineer
Santa Fe Energy Resources, Inc.
550 W. Texas, Suite 1330
Midland, Texas 79701
915-686-6614 - office
915-684-4130 - home
915-553-1214 - cellular

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 Resources, Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

SIGNED this 6th day of Feb., 1995.



James P. (Phil) Stinson
Agent for Santa Fe Energy Resources, Inc.

70/8/9

