UNIT. STATES HOURS, NEW PLEASE and DEPARTMENT OF THE INTERIOR

	FORM APPROVED
	OMB NO. 1004-0136
	Expires: February 28, 1995
5.	LEASE DESIGNATION AND SERIAL NO.

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	APPROVED BY	1111	.e			DATE		

<u>DISTRICT I</u> P. O. Box 1980 Hobbs, NM 88241-1980

State of New Mexico
Energ finerals, and Natural Resources Dep. ment

Form C-102 Revised 02-10-94

Instructions on back

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

<u>DISTRICT III</u> 1000 Rio Brazos Rd. Aztec, NM 87410

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

12123

#12128

Certificate Nov,

ROGER M. ROBBINS HERE'S.

JOB #53547 / 47 SE

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 30 -025 -North Bell Lake (Morrow) Property Code ⁵ Property Name ⁶ Well Number 216665 GAUCHO UNIT 5 OGRID No. Operator Name Blevation 0305 SANTA FE ENERGY RESOURCES, INC. 3438' "SURFACE LOCATION UL or lot no. Section Township Range Lot Ida Feet from the North/South line Feet from the East/West line County 22 SOUTH 34 EAST, N.M.P.M. 1980' H 30 NORTH 990 **EAST** LEA "BOTTOM HOLE LOCATION IF DIFFERENT FROM SURFACE Lot Ida Feet from the North/South line Feet from the East/West line UL or lot no. Section Township Range 12 Dedicated Acres 13 Joint or Infill 14 Consolidation Code 15 Order No. 320 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. frinted Name 1980' James P. "Phil" Stinson <u>Agent for Santa Fe Energy</u> Date 9-2-97 990 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. AUGUST 14. 1997
Signature and Star of
Professional Surveyor Date of Survey

DRILLING PROGRAM

SANTA FE ENERGY RESOURCES, INC.

Gaucho Unit No. 5

In conjunction with Form 3160-3, Application 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: Alluvium
- 2. Estimated Tops of Significant Geologic Markers:

Rustler	1050'
Salado	1400'
Delaware	5000
Bone Spring	8450'
Wolfcamp	10900'
Strawn	11900'
Atoka	12100'
Morrow	12700'
Total Depth	13600'

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

Water	None	expected	in area
Oil	Bone	Spring @	9100'
Gas	Upper	Morrow (13100'

- 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 4600' to TD.
- 8. Testing, Logging and Coring Program:

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

Bone Spring 9100'- 9200' Atoka 12200'-12250' Morrow 13100'-13150'

Logging:

Dual Laterolog W/MSFL and Gamma Ray 11850'-13600'
Compensated Neutron/Litho-Density/Gamma Ray 5000'-11850' & 11850'- 13600'
Compensated Neutron/Gamma Ray (thru csg) Surface-5000'

Coring: No conventional cores are planned.

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

Abnormally high pressured zones with a bottomhole pressure of approximately 7500 psi could possibly be encountered while drilling the Pennsylvanian interval. Sufficient barite will be on location to enable the weighting up to the estimated 11.5 ppg to control any high pressure 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 the drilling liner. The estimated bottom hole temperature is 170°F. 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.

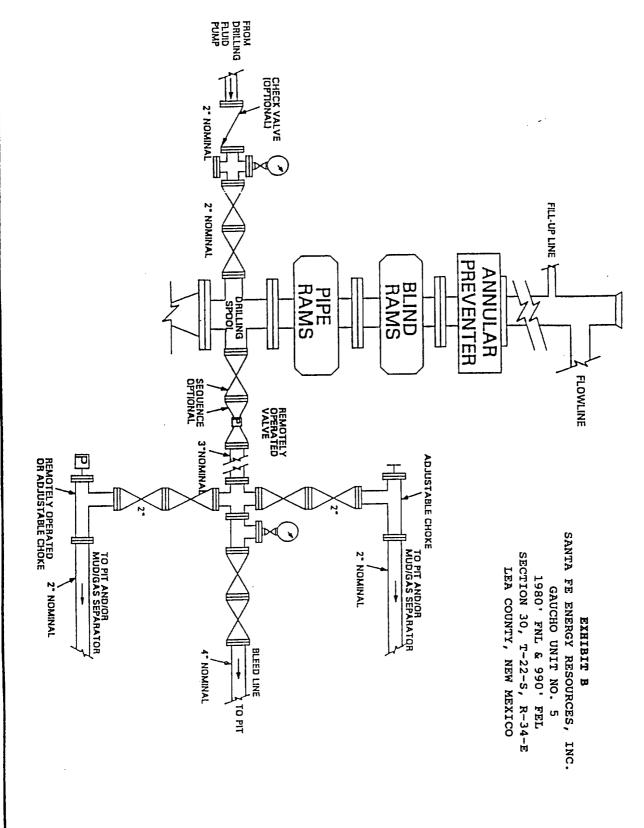
10. Anticipated Starting Date and Duration of Operations:

Road and location work will not begin until approval has been received from the B.L.M. The anticipated spud date is <u>October 10, 1997</u>. Once spudded, the drilling operation should be completed in approximately 70 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. GAUCHO UNIT No. 5 Section 30, T-22-S, R-34-E Lea County, New Mexico

- 1. Drill a 17-1/2" hole to approximately 800'.
- 2. Run 13-3/8" 48.0 ppf H-40 ST&C casing. Cement with 850 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 12-1/4" hole to approximately 5000'.
- 6. Run 9-5/8" 40.0 ppf K-55 ST&C casing. Cement with 1150sx Cl "C" Lite containing 12 pps salt and 1/4 pps celloflake followed by 400 sx Class "C" with 2% CaCl₂. 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.
- Nipple up and install a Double Ram and Annular BOP system with choke manifold.
- 9. Test BOP system to 3000 psi. Test casing to 1500 psi.
- 10. Drill 8-3/4" hole to the first good lime section after drilling into the Wolfcamp, which is anticipated to be at approximately ± 11850 '. Run logs.
- 11. Run 11850' of 7" 26.0 ppf S-95 & P-110 LT&C casing set @ 11850'. Cement with 500 sx "Light" cement followed with 300 sx Class "H". Run guide shoe on bottom and float collar two joints off bottom. Centralize bottom 1000' of casing with one centralizer on every other joint. Thread lock bottom two joints. Our plan is to bring the top of cement to ±6000'.
- 12. Nipple down BOP. Set slips. Cut off casing. Nipple up 10000 psi BOP Stack. Test to 10000 psi.
- 13. Test casing to 2500 psi.
- 14. Drill a 6-1/8" hole to ±13600. Log. Run and cement a 4-1/2" 13.5 ppf S-95 flush joint liner from 11650'-13600'. Cement with 225 sx Class "H" containing necessary additives. Lay down setting tool and RIH with a 6-1/8" bit to dress off the liner top. Perform negative test on liner top.
- 15. Clean out inside of 4-1/2" liner.
- 16. Run production equipment and test well as necessary.

PROPOSED 5-M BOPE AND CHOKE ARRANGEMENT



PROPOSED 10-M BOPE AND CHOKE ARRANGEMENT

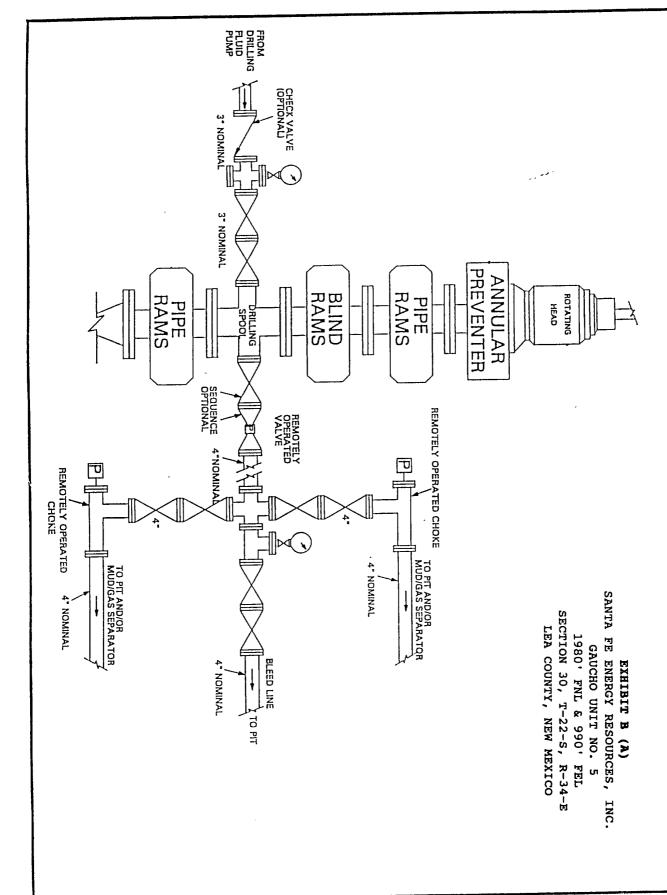


EXHIBIT C DRILLING FLUID PROGRAM SANTA FE ENERGY RESOURCES, INC. GAUCHO UNIT NO. 5 Section 30, T-22-S,R-34-E Lea County, New Mexico

0 - 800

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.

800 - 5000'

Drill out with fresh water circulating the reserve pit. Utilize ground paper mixed in prehydrated fresh gel to sweep the hole. MW-8.5 - 8.8 ppg and Vis-28.

<u>5000 - 11850'</u>

Drill out with fresh water 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. Keep mud weight as low as possible. MW-8.4/8.6 ppg and Vis-28.

11850'-13600'

Drill out with brine containing MF-55, circulating the steel pits. At 12000' mud up existing brine with XCD polymer/Drispac Plus mud system to an initial mud weight of 11.0 ppg with a 38-40 VIS. Add barite as required to control formation pressures and shale.

EXHIBIT D AUXILIARY EQUIPMENT Santa Fe Resources, Inc. GAUCHO UNIT NO. 5 Section 30, T-22-S, R-34-E Lea County, New Mexico

DRAWWORKS

National 80-B

ENGINES

National 3 Section Compound w/3 Caterpillar D379 diesel

engines

ROTARY

27-1/2" National C-275

MAST/SUB

Derrick Service International 142' jackknife. 25' high

substructure

TRAVELLING EQUIPMENT

National 545-G 350 ton hook and block. National P-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

LIGHT

Two 320 KW AC generators each powered by a turbocharged

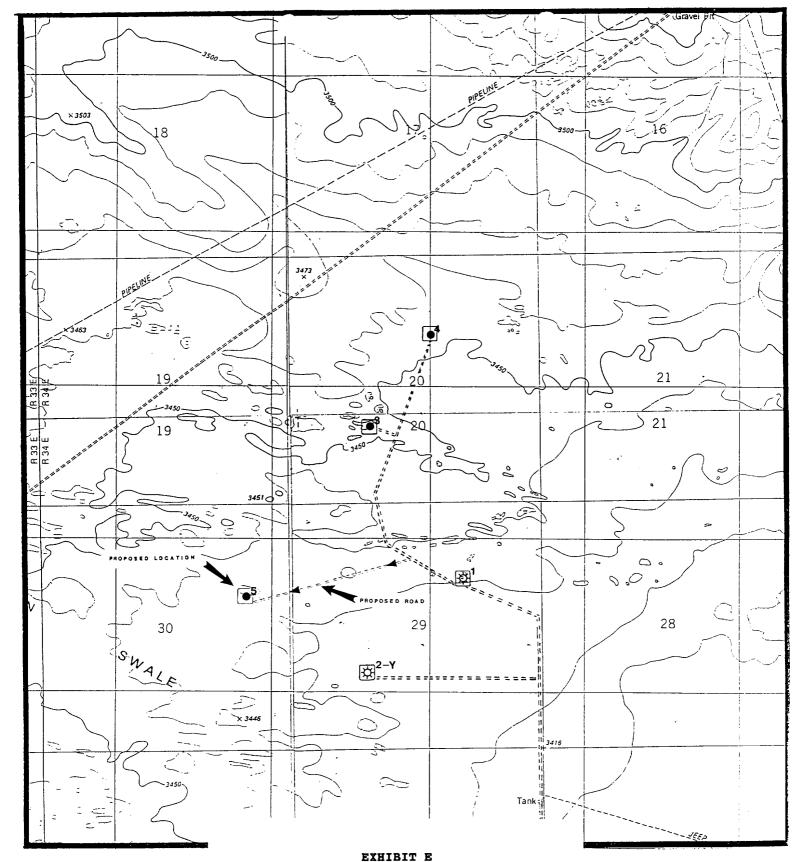
PLANT

diesel engine

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.



TOPO MAP OF LOCATION AREA
SANTA FE ENERGY RESOURCES, INC.
GAUCHO UNIT NO. 5
1980' FNL & 990' FEL
SECTION 30, T-22-S, R-34-E
LEA COUNTY, NEW MEXICO

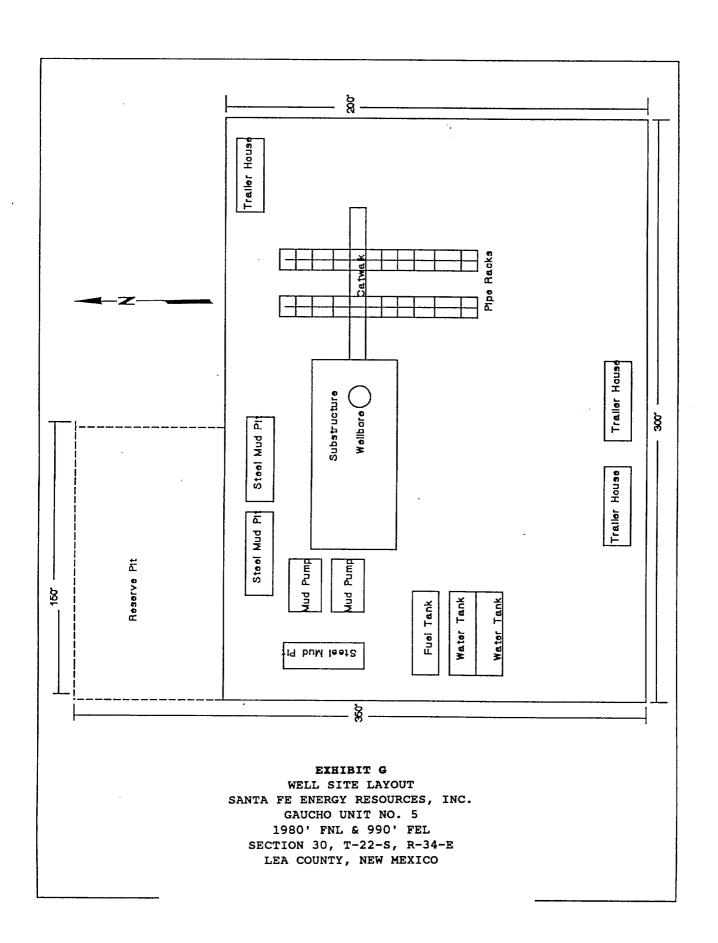
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1980' FNL & 990' FEL SECTION 30, T-22-S, R-34-E LEA COUNTY, NEW MEXICO

SANTA FE ENERGY RESOURCES, INC. GAUCHO UNIT NO. 5 1980' FNL & 990' FEL SECTION 30, T-22-S, R-34-E LEA COUNTY, NEW MEXICO FND. BRASS CAP (TYPICAL) 19 20 N 89'55' E, 2642.5 25 30 30 29 1980' PROPOSED ROAD R-33-E R-34-E SANTA FE ENERGY RESOURCES GAUCHO UNIT #5 GROUND ELEVATION: 3438' 25 30 30 29 31 32 PLAN VIEW 1" = 1000' 3437' 3438' 200' PROPOSED WELL LOCATION ELEV. : 3438' 200' PROPOSED ROAD 3435 400' DETAIL VIEW 1" = 100' SCALE: AS SHOWN SANTA FE ENERGY RESOURCES DATE: AUGUST 14, 1997 REVISION DATE BY JOB NO.: 53547-F SURVEYED BY: R.J.O. SURVEYING AND MAPPING BY 47 SE DRAWN BY: JSJ TOPOGRAPHIC LAND SURVEYORS APPROVED BY: MIDLAND, TEXAS R.M.R. SHEET : 1 OF 1

EXHIBIT F(A)
PLAT OF LOCATION

NO.



SANTA FE ENERGY RESOURCES, INC. MULTI-POINT SURFACE USE AND OPERATIONS PLAN GAUCHO UNIT NO 5 Section 30, T-22-S,R-34-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 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 7.5 minute topographic map which shows the location of the proposed wellsite and roads in the vicinity. The proposed location is situated approximately 20 miles West of Jal, New Mexico.

DIRECTIONS

1. From the intersection of State Hwy 128 & CR-21, go North and back East 9.6 miles, turn North 2.8 miles to the Gaucho Unit No. 1 location, continue northwest 0.2 miles, and turn left (west) 0.7 miles to the proposed location.

2. PLANNED ACCESS ROAD.

- A. Build ±0.7 miles of new road from the existing lease road 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.
- 4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES
 - A. There are two producing gas wells within the Gaucho Unit 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 supply the necessary power to run to pump jack.
- 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.

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GAUCHO UNIT No. 5 Multi-point Surface Use and Operations Plan Page 2

6. SOURCES OF CONSTRUCTION MATERIALS.

A. Any caliche required for construction of the drilling pad will be obtained from a pit approved by the BLM.

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 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.
- B. The ground surface of the location is relatively flat. Minor 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

GAUCHO UNIT No.5 Multi-Point Surface Use and Operations Plan Page 4

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 is approved.

SIGNED this 2nd day of Scotember, 1997

James P. (Phil) Stinson

Agent for Santa Fe Energy Resources, Inc.

ELF 945/

ABOVE DATE DOES NOT INDICATE WHEN CONFIDENTIAL LOGS WILL BE RELEASED



GAUCHO UNIT No. 5 Multi-Point Surface Use and Operations Plan Page 3

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 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 and access route 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.

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 Resouces, Inc.
550 W. Texas, Suite 1330
Midland, Texas 79701
915-686-6616 - office
915-559-6842 - cellular