Roswell Controlled Water Basin

WITNESS ! 13 19" CSG CEMENT SUB

United States any false, fictitious or fraudulent statements or representations as to any matter eral requirements and ecial stipulations er en Strak

State of New Mexico

TRICT I

Energy, Minerals and Natural Resources Department

DISTRICT II

1220 S ST FRANCIS DR

1301 W. GRAND AVENUR, ARTESIA, NM 88210

DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410 OIL CONSERVATION DIVISION 1220 SOUTH ST. FRANCIS DR. Santa Fe, New Mexico 87505 Form C-102 Revised JUNE 10, 2003 Submit to Appropriate District Office

State Lease - 4 Copies Fee Lease - 3 Copies

DISTRICT IV

SANTA FE, NM 87505	WELL	LOCATION	AND	ACREAGE	DEDICATION	PLAT	
	1	~ . ~ .		•		D	

☐ AMENDED REPORT

API Number	84872 - 5 and	Mew
Property Code	Property Name JACKSON FEDERAL	Well Number
ogrid No. 162683	Operator Name GRUY PETROLEUM MANAGEMENT	Elevation 3585'

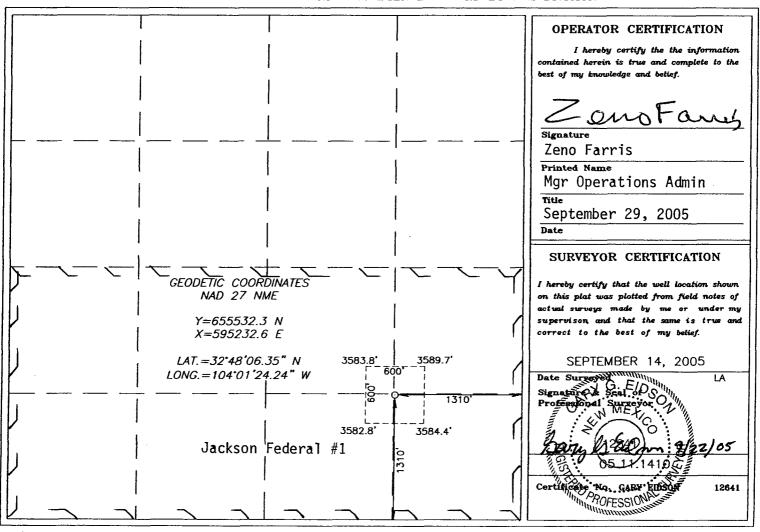
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	25	17-S	29-E		1310	SOUTH	1310	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres	Joint o	r Infill C	onsolidation (Code Or	der No.	L	L		<u> </u>
320	'	v I							

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



District I 1625 N. French Dr., Hobbs, NM 88240 District II

District III

District III District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico **Energy Minerals and Natural Resources**

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

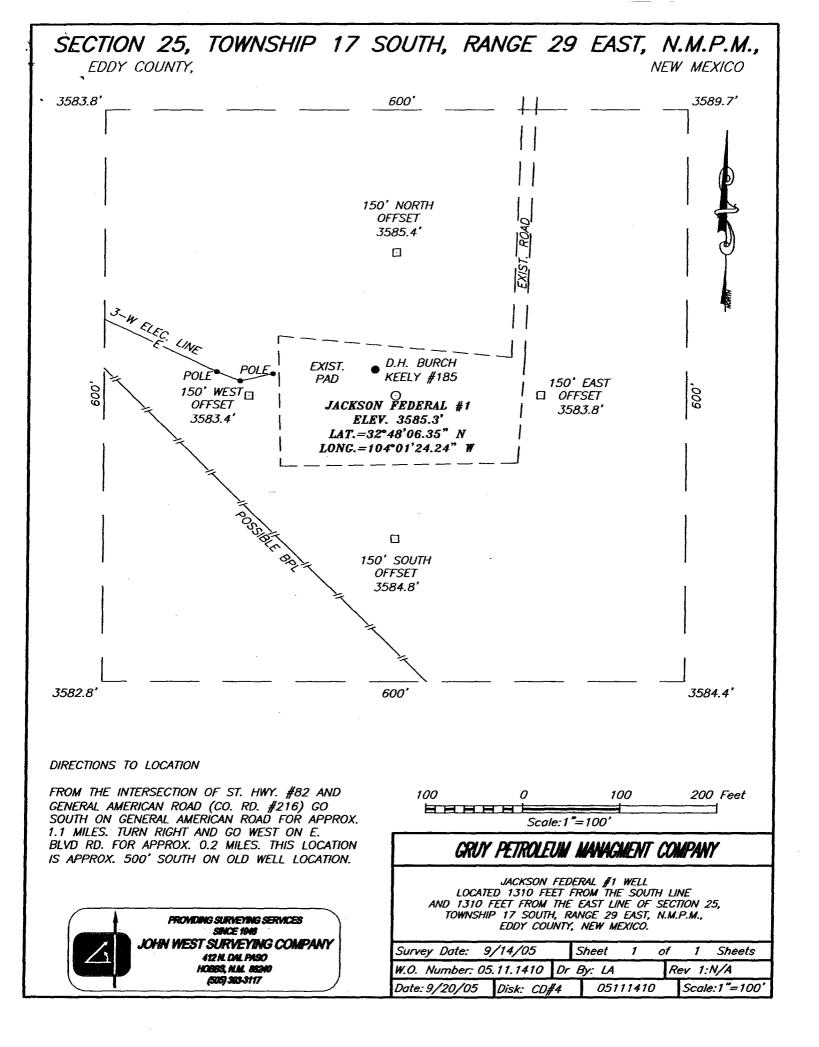
March 12, 2004

Form C-144

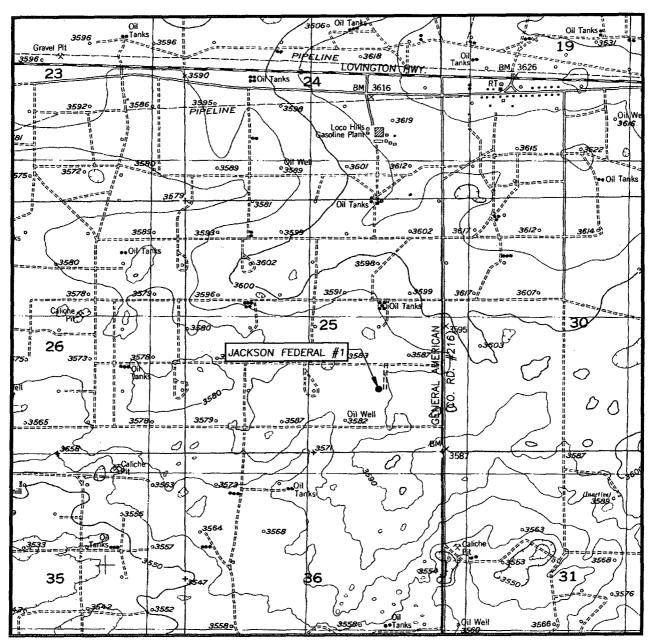
For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Is pit or below-grade tan	de Tank Registration or Clos k covered by a "general plan"? Yes \(\subseteq \) N r below-grade tank \(\subseteq \) Closure of a pit or below-	√o 🛛	
Operator: Gruy Petroleum Management Co. Telephone: 9 Address: P.O. Box 140907, Irving, Tx 75014-0907	72_443_6489_e-mail address: zfarris@magnumhu	inter.com	
•	U/L or Qtr/Qtr P Sec 25 T 24.24W NAD: 1927 ⊠ 1983 ☐ Surface		e 🗍 Private 🔲 Indian 🗍
Pit [ype: Drilling ☑ Production ☐ Disposal ☐ Workover ☐ Emergency ☐ Lined ☑ Unlined ☐ Liner type: Synthetic ☑ Thickness 12 mil Clay ☐ Volume bbl	Below-grade tank Volume:bbl Type of fluid: Construction material: Double-walled, with leak detection? Yes ☐ If		
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more	(20 points) (10 points) (0 points)	OCT 0 & 2005
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes No	(20 points)	OCU-APITS BIA
Distance to surface water: (horizontal distance to all wetlands, playas, rrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet 200 feet or more, but less than 1000 feet	(20 points) (10 points) (0 points)	
	Ranking Score (Total Points)	-0-	
If this is a pit closure: (1) attach a diagram of the facility showing the pit's onsite ☐ offsite ☐ If offsite, name of facility	(3) Attach a general description of remedial	action taken including r	remediation start date and en
I hereby certify that the information above is true and complete to the best of been/will be constructed or closed according to NMOCD guidelines a.	a general permit , or an (attached) alternative. Signature Company Co	ts of the pit or tank cont	taminate ground water or
Approval: Date: 0CT 3 2005 Field Supervisor Printed Name/Title	Signature		

Signature_



LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: RED LAKE SE, N.M. — 10'

SEC. 25 TWP. 17—S RGE. 29—E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 1310' FSL & 1310' FEL

ELEVATION 3585'

GRUY PETROLEUM

OPERATOR MANAGEMENT COMPANY

LEASE JACKSON FEDERAL

U.S.G.S. TOPOGRAPHIC MAP

RED LAKE SE, N.M.

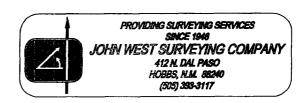
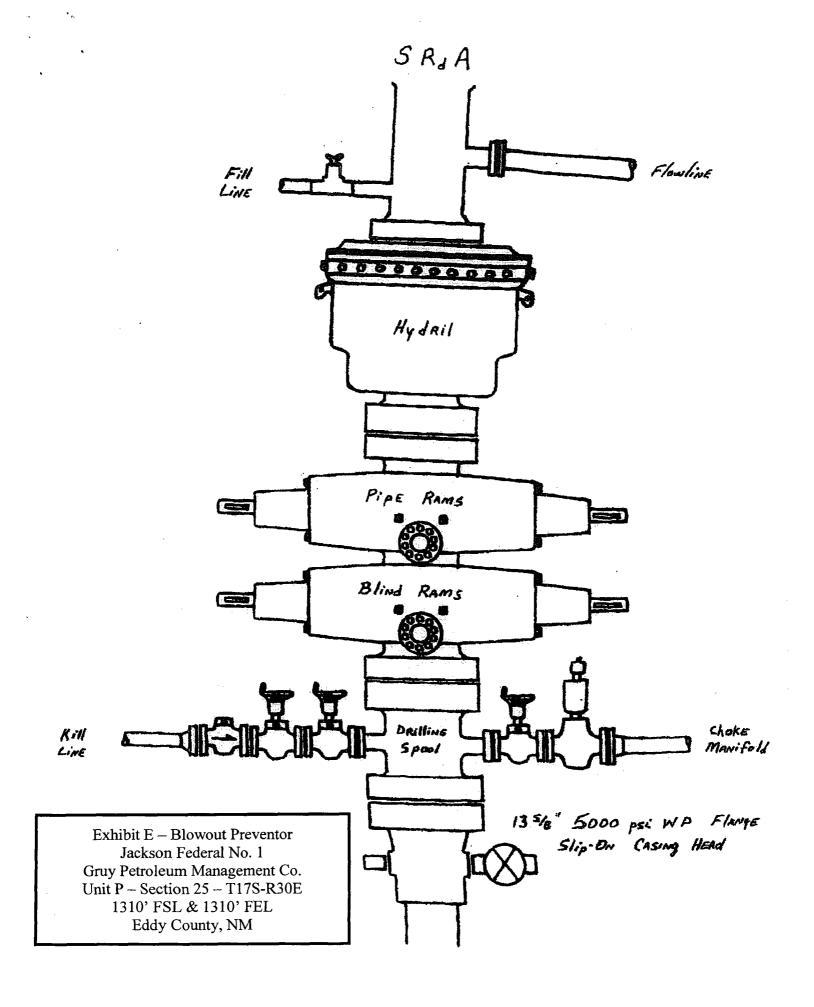


Exhibit C



ORILLING OPERATIONS CHOKE MANIFOLD 5M SERVICE

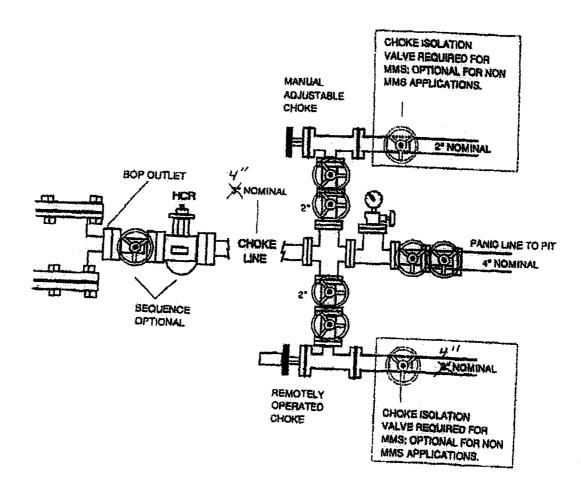


Exhibit E Cont'd – Choke Manifold Jackson Federal No. 1 Gruy Petroleum Management Co. Unit P – Section 25 – T17S-R30E 1310' FSL & 1310' FEL Eddy County, NM



Gruy Petroleum Management Co.

600 East Las Colinas Blvd. • Suite 1100 • Irving, TX 75039 • (972) 401-3111 • Fax (469) 420-2710 Mailing Address: P.O. Box 140907 • Irving, TX 75014-0907

A wholly-owned subsidiary of Cimarex Energy Co., a NYSE company, "XEC"

STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

Bureau of Land Management 2909 West 2nd Street Roswell New Mexico 88201-2019

Attn: Ms. Linda Askwig

Gruy Petroleum Management Co. accepts all applicable terms, conditions, stipulations and restrictions concerning operations conducted on the leased land, or portion thereof, as described below:

Lease No.:

LC-028784-C

Legal Description: S/2 Sec 25, T17S-R29E

Containing 320.00 acres, Lea County New Mexico

Formation (S):

Morrow

Bond Coverage:

Nationwide BLM Bond

BLM Bond File No.: NM 2575

Authorized Signature:

/suro Representing Gruy Petroleum Management Co.

Name: Zeno Farris

Title: Manager, Operations Administration

Date: September 29, 2005

Application to Drill

Gruy Petroleum Management Co.
Jackson Federal No. 1
Unit Letter P Section 25
T17S - R29E Eddy County, NM

In response to questions asked under Section II B of Bulletin NTL-6 the following information is provided for your consideration:

1 Location:

1310' FSL & 1310' FEL

2 Elevation above sea level:

GR 3585'

3 Geologic name of surface formation:

Quaternery Alluvium Deposits

4 Drilling tools and associated equipment:

Conventional rotary drilling rig using fluid as a circulating medium for solids removal.

5 Proposed drilling depth: 12500'

6 Estimated tops of geological markers:

Rustler	500'
San Andres	3400
Wolfcamp	8200'
Atoka	10200'
Morrow	10800'

7 Possible mineral bearing formation:

Grayburg/San Andres

Oil

Atoka

Gas

Morrow

Gas

8 Casing program:

Hole Size	Interval	Casing OD	Weight	Thread	Collar	Grade	
 17 1/2"	0-500'	13 3/8"	48#	8-R	ST&C	H-40	
12 1/4"	0-4800'	9 5/8"	40#	8-R	LT&C	J-55/N-80	
7 7/8"	0-12500'	5 1/2"	20#	8-R	LT&C	L-80	

Application to Drill

Gruy Petroleum Management Co. Jackson Federal No. 1 Unit Letter P Section 25 T17S - R29E Eddy County, NM

9 Cementing & Setting Depth:

13 3/8"	Surface	Set 350' to 500' of 13 3/8" H-40 48# ST&C casing to a depth of 25' into the Rustler. Cement with 490 Sx. Of Class "C" cement + additives, circulate cement to surface.
9 5/8"	Intermediate	Set 4800' of 9 5/8" J-55/N-80 40# LT&C casing. Cement with lead 1000 Sx. Of Class POZ/C Cement + additives, with tail 200 Sx. Of Class "C" + additives, circulate cement to surface.
5 1/2"	Production	Set 12500' of 5 1/2" L-80 20# LT&C casing. Cement in two stages, first stage cement with 1020 Sx. of Class POZ/C Cement + additives. Second stage cement with 600 Sx of Class "C". Estimated top of cement 2700'.

10 Pressure control Equipment:

Exhibit "E". A 13 3/8" 5000 PSI working pressure B.O.P. consisting of one set of blind rams and one set of pipe rams and a 5000 # annular type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head below 6000'. A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor. BOP unit will be hydraulically operated. BOP will be nippled up on the 9 5/8" casing and will be operated at least once a day while drilling and the blind rams will be operated when out of hole during trips. No abnormal pressure or temperature is expected while drilling.

11 Proposed Mud Circulating System:

Depth	Mud Wt	Viscosity	Fluid Loss	Type Mud
0 - 500'	8.4 - 8.6	30 - 32	May lose circ.	Fresh water spud mud add paper to control seepage and high viscosity sweeps to clean hole.
500' - 4800'	9.7 - 10.0	28 - 29	May lose circ	Brine water. Add paper as needed to control seepage and add lime to control pH (9-10). Use high viscosity sweeps to clean hole.
4800' - 8300'	8.4 - 9.9	28 - 29	NC	Brine water. Paper for seepage. Lime for PH (9 - 9.5)
8300' - 10000'	8.45 - 8.9	28 - 29	NC	Cut brine. Caustic for pH control.
10000' - 12500'	8.9 - 9.7	29 - 45	NC	XCD Polymer mud system.

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks. In order to run DST's, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs. Mud system monitoring equipment with derrick floor indicators and visual/audio alarms shall be installed and operative prior to drilling into the Wolfcamp formation. This equipment will remain in use until production casing is run and cemented.

Application to Drill

Gruy Petroleum Management Co.
Jackson Federal No. 1
Unit Letter P Section 25
T17S - R29E Eddy County, NM

12 <u>Testing, Logging and Coring Program:</u>

- A. Mud logging program: One-man unit from 8000' to TD
- B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR
- C. No DSTs or cores are planned at this time.

13 Potential Hazards:

No abnormal pressures or temperatures are expected. The area has a potiential H2S hazard. An H2S drilling plan is attached. Adequate flare lines will be installed off the mud / gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used. Estimated BHP 4000 PSI, estimated BHT 175.

14 Anticipated Starting Date and Duration of Operations:

Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved. Drilling expected to take 35 - 45 days. If production casing is run an additional 30 days will be required to

15 Other Facets of Operations:

After running casing, cased hole gamma ray neutron collar logs will be run from total depth over possible pay intervals. The Morrow pay will be perforated and stimulated. The well will be tested and potentialed as a gas well.

Hydrogen Sulfide Drilling Operations Plan

Gruy Petroleum Management Co. Jackson Federal No. 1 Unit Letter P Section 25 T17S - R29E Eddy County, NM

- 1 All Company and Contract personnel admitted on location must be trained by a qualified H2S safety instructor to the following:
 - A. Characteristics of H2S
 - B. Physical effects and hazards
 - C. Proper use of safety equipment and life support systems.
 - D. Principle and operation of H2S detectors, warning system and briefing
 - E. Evacuation procedure, routes and first aid.
 - F. Proper use of 30 minute pressure demand air pack.
- 2 H2S Detection and Alarm Systems
 - A. H2S detectors and audio alarm system to be located at bell nipple, end of flow line (mud pit) and on derrick floor or doghouse.
- 3 Windsock and/or wind streamers
 - A. Windsock at mudpit area should be high enough to be visible.
 - B. Windsock at briefing area should be high enough to be visible.
- 4 Condition Flags and Signs
 - A. Warning sign on access road to location.
 - B. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure and danger. Red flag, danger, H2S present in dangerous concentration. Only emergency
- 5 Well control equipment
 - A. See exhibit "E"
- 6 Communication
 - A. While working under masks chalkboards will be used for communication.
 - B. Hand signals will be used where chalk board is inappropriate.
 - C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.
- 7 Drillstem Testing not anticipated.

Hydrogen Sulfide Drilling Operations Plan

Gruy Petroleum Management Co.
Jackson Federal No. 1
Unit Letter P Section 25
T17S - R29E Eddy County, NM

- 8 Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubular goods and other mechanical equipment.
- 9 If H2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas seperator will be brought into service along with H2S scavengers if

Gruy Petroleum Management Co. Jackson Federal No. 1 Unit Letter P Section 25 T17S - R29E Eddy County, NM

- 1 Existing Roads: Area maps, Exhibit "B" is a reproduction of Lea Co. General Highway Map. Exhibit "C" is a reproduction of a USGS Topographic Map, showing existing roads and proposed roads. All existing roads will be maintained in a condition equal to or better than current conditions. Any new roads will be constructed to BLM specifications.
 - A. Exhibit "A" shows the proposed well site as staked.
 - B. From the intersection of St. Hwy. #82 and General American Road (Co. Rd. #216), go South on General American Road for approx. 1.1 miles. Turn right and go West on E. Blvd. Rd. for approx. 0.2 miles. This location is approx. 500' South on old well location.
- 2 PLANNED ACCESS ROADS: No new access road will be constructed.
- 3 LOCATION OF EXISTING WELLS IN A ONE-MILE RADIUS EXHIBIT "A"

A. Water wells - None known

B. Disposal wells - None known

C. Drilling wells - None known

D. Producing wells - As shown on Exhibit "A"

E. Abandoned wells - As shown on Exhibit "A"

Gruy Petroleum Management Co.
Jackson Federal No. 1
Unit Letter P Section 25
T17S - R29E Eddy County, NM

4 If, on completion this well is a producer Gruy Petroleum Management Co. will furnish maps and/or plats showing on site facilities or off site facilities if needed. This will be accompanied with a Sundry Notice.

5 LOCATION AND TYPE OF WATER SUPPLY:

Water will be purchased locally from a commercial source and trucked over the access roads or piped in flexible lines laid on top of the ground.

6 SOURCE OF CONSTRUCTION MATERIAL:

If possible construction will be obtained from the excavation of drill site, if additional material is needed it will be purchased from a local source and

7 METHODS OF HANDLING WASTE MATERIAL:

- A. Drill cuttings will be disposed of in the reserve pit.
- B. All trash, junk and other waste material will be contained in trash cages or bins to prevent scattering. When the job is completed all contents will be removed and disposed of in a approved sanitary land fill.
- C. Salts remaining after completion of well will be picked up by supplier including broken sacks.
- D. Sewage from living quarters will drain into holding tanks and be cleaned out periodically. A Porta-John will be provided for the rig crews. This equipment will be properly maintained during the drilling operations and removed upon completion of the well.
- E. Remaining drilling fluids will be allowed to evaporate in the reserve pit until the pit is dry enough for breaking out. In the event that drilling fluids do not evaporate in a reasonable time they will be hauled off by transports and be disposed of at a state approved disposal facility. Later pits will be broken out to speed drying. Water produced during testing will be put in reserve pits. Any oil or condensate produced will be stored in test tanks until sold and hauled from the site.

8 ANCILLARY FACILITIES:

A. No camps or airstrips to be constructed.

Gruy Petroleum Management Co.
Jackson Federal No. 1
Unit Letter P Section 25
T17S - R29E Eddy County, NM

9 WELL SITE LAYOUT

- A. Exhibit "D" shows location and rig layout.
- B. This exhibit indicates proposed location of reserve and trash pits; and living facilities.
- C. Mud pits in the active circulating system will be steel pits and the reserve pit is proposed to be unlined, unless subsurface condition encountered during pit construction indicate that lining is needed for lateral containment of fluids.
- D. If needed, the reserve pit is to be lined with PVC or polyethylene line. The pit liner will be 6 mils thick. Pit liner will extend a minimum, 2'00" over the reserve pits dikes where the liner will be anchored down.
- E. The reserve pit will be fenced on three sides with four strands of barbed wire during drilling and completion phases. The fourth side will be fenced after all drilling operations have ceased. If the well is a producer, the reserve pit fence will be torn down. The reserve pit and those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

10 PLANS FOR RESTORATION OF SURFACE

Rehabilitation of the location and reserve pit will start in a timely manner after all drilling operations cease. The type of reclamation will depend on whether the well is a producer or a dry hole.

However, in either event, the reserve pit will be allowed to dry properly, and fluid removed and disposed of in accordance with Article 7.B as previously noted. The pit area will then be leveled and contoured to conform to the original and surrounding area. Drainage systems, if any, will be reshaped to the original configuration with provisions made to alleviate erosion. These may need to be modified in certain circumstances to prevent inundation of the location's pad and surface facilities. After the area has been shaped and contoured, topsoil from the spoil pile will be placed over the disturbed area to the extent possible. Revegetation procedures will comply with BLM standards.

If the well is a dry hole, the pad and road area will be recountered to match the existing terrain. Topsoil will be spread to the extent possible. Revegetation will comply with BLM standards.

Should the well be a producer, the previously noted procedures will apply to those areas which are not required for production facilities.

Gruy Petroleum Management Co. Jackson Federal No. 1 Unit Letter P Section 25 T17S - R29E Eddy County, NM

11 OTHER INFORMATION:

- A. Topography consists of a sloping plane with loose tan sands. Vegetation is mainly yucca, mesquite and shin oak.
- B. The wellsite is on surface owned by The United States Department of the Interior, Bureau of Land Management. The land is used mainly for farming, cattle ranching, recreational use, and oil and gas production.
- C. An Archaeological survey will be conducted on the location and proposed roads, and this report will be filed with the Bureau of Land Management in the Carlsbad BLM office.
- D. There are no known dwellings within 1-1/2 miles of this location.

12 OPERATORS REPRESENTATIVE:

Gruy Petroleum Management Company P.O. Box 14097 Irving, TX 75014 Office Phone: (972) 443-6489

Zeno Farris

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 currently exit; 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 Gruy Petroleum Management Company and/or its contractors/subcontractors and is in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provision of U.S.C. 1001 for the filing of a false statement.

NAME:	ZenoFanis
DATE:	9/29/2005
TITLE:	Manager, Operations Administration

CONDITIONS OF APPROVAL - DRILLING

Operator's Name:

GRUY PETROLEUM MANAGEMENT CO.

Well Name & No.

1 - JACKSON FEDERAL

Location:

1310' FSL & 1310' FEL - SEC 25 - T17S - R29E - EDDY COUNTY

Lease: LC-028784-C

I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second St., Roswell NM 88201, (505) 627-0272 for wells in Chaves and Roosevelt Counties; the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 234-5909 or (505) 361-2822 (After hours) - for wells in Eddy County; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:

- A. Spudding
- B. Cementing casing: 13-3/8 inch 9-5/8 inch 5-1/2 inch
- C. BOP tests
- 2. A Hydrogen Sulfide (H2S) Drilling Plan should be activated prior to drilling into the <u>Queen</u> Formation at approximately <u>2000</u> feet. A copy of the plan shall be posted at the drilling site.
- 3 Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
- 4. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.
- 5. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.
- 6. A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

II. CASING:

- 1. The 13-3/8 inch surface casing shall be set at 350 to 500 feet or 25' in the Rustler Anhydrite or in the case that salt occurs at a shallower depth above the top of the salt, below usable water and cement circulated to the surface. The surface casing shoe shall be set in the anhydrite to ensure adequate sealing. If cement does not circulate to the surface the operator may then use ready-mix cement to fill the remaining annulus. The operator is required to use an excess of 100% cement volume to fill the annulus.
- 2. The minimum required fill of cement behind the <u>9-5/8</u> inch salt protection casing is <u>circulate cement to</u> the surface.
- 3. The minimum required fill of cement behind the <u>5-1/2</u> inch production casing is <u>cement shall extend</u> <u>upward a minimum of 200 feet above the top of the uppermost hydrocarbon bearing interval or to the base of the salt.</u>

III. PRESSURE CONTROL:

- 1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 13-3/8 inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.
- 2. Minimum working pressure of the blowout preventer and related equipment (BOPE) required for drilling the surface and intermediate casing shall be **2000** psi. Minimum working pressure of the blowout preventer and related equipment (BOPE) required for drilling below the **9-5/8** inch casing shall be **5000** psi.
- 3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.
- The tests shall be done by an independent service company.
- The results of the test shall be reported to the appropriate BLM office.
- Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
- Testing must be done in a safe workman-like manner. Hard line connections shall be required.
- BOPE must be tested prior to drilling into the **Wolfcamp** Formation by an independent service company.
- A variance to test the <u>13-3/8" casing and BOP system to 1000 psi</u> using the rig pumps instead of an independent service company is approved.

IV. DRILLING MUD:

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** Formation, and shall be used until production casing is run and cemented. Monitoring equipment shall consist of the following:

- 1. Recording pit level indicator to indicate volume gains and losses.
- 2. Mud measuring device for accurately determining the mud volumes necessary to fill the hole during trips.
- 3. Flow-sensor on the flow line to warn of abnormal mud returns from the well.