M.M. Oil Cons. DIV-Dist. 2 1301 W. Grandharvernie FORM APPROVED OMB NO. 1004-0136 **UNITED STATES** (July 1892) Artesia, NM 9821 Expires: February 28, 1995 DEPARTMENT OF THE INTERIOR 5. LEASE DESIGNATION AND SERIAL NO. BUREAU OF LAND MANAGEMENT NMNM1487 6. IF INDIAN, ALLOTTES OR TRIBE NAME APPLICATION FOR PERMIT TO DRILL OR DEEPEN 1a TYPE OF WORK DRILL DEEPEN 7. UNIT AGREEMENT NAME 1b. TYPE OF WELL OIL GAS SINGLE MULTIPLE 8. FARM OR LEASE NAME, WELL NO. 35050 WELL WELL ZONE ZONE 2. NAME OF OPERATOR FedeLA1 Muskegon 17 State Com No. 2 162683 Gruy Petroleum Management Co. 9. API WELL NO 3. ADDRESS AND TELEPHONE NO. ving TX 75014 972-401-3111
(Report location clearly and in accordance with any State requirements.) 1015. P.O. Box 140907 Irving TX 75014 972-401-3111 Empire; Morrow, South 11. SEC. T.,R.,M., BLOCK AND SURVEY 660' FSL & 660' FEL OR AREA Sec. 17 T17S R29E 14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE 2. COUNTY OR PARISH 13, STATE 7 miles west of Loco Hills Eddy NM 15. DISTANCE FROM PROPOSED 16. NO. OF ACRES IN LEASE 17. NO. OF ACRES ASSIGNED LOCATION TO NEAREST TO THIS WELL PROPERTY OR LEASE LINE, T.O. (Also to nearest drig, unit line, if any) 320 S/2 32018. DISTANCE FROM PROPOSED LOCATION\* 19. PROPOSED DEPTH 20. ROTARY OR CABLE TOOLS TO NEAREST WELL, DRILLING COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. N/A Rotary 11500' 21. ELEVATIONS (Show whether DF, RT, GR, etc.) 22. APPROX. DATE WORK WILL START 3602' GR Roswell Controlled Water Basin 10-15-05 PROPOSED CASING AND CEMENTING PROGRAM SIZE OF HOLE GRADE, SIZE OF CASING WEIGHT PER FOOT SETTING DEPTH QUANTITY OF CEMENT H-40 13 3/8" 17-1/2" 48 # 250 with eas 390 sx circulate J-55 9 5/8" 12-1/4" 40 # 2600' 1200 sx circulate 8-3/4" P-110 5 1/2" 11500' 17# 1620 sx TOC 2700' From the base of the surface pipe through the running of production casing, the well will be equipped with a 5000 - psi BOP system. We are requesting a variance for the 13 3/8" surface casing and BOP testing from Onshore Order No. 2, which states all casing strings below the conductor shall be pressure tested to 0.22 psi per foot or 1500#, whichever is greater, but not to exceed 70% of the manufacturer's stated maximum internal yield. During the running of the surface pipe and the drilling of the intermediate hole we do not anticipate any pressures greater than 1000#, and we are requesting a variance to test the 13 3/8" casing and BOP system to 1000# psi and use rig pumps instead of an independent service company. 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 SIGNED 07-20-05 Mgr. Ops. Admin DATE (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.

\*See Instructions On Reverse Side APPROVAL 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 representations as to any matter within its 5a 17

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY

General requirements and SPECIAL STIPLILATIONS attached

DATE

AUG 1 7 2005

#### State of New Mexico

DISTRICT I 1625 N. PRENCH DR., HOBBS, NM 86240

Energy, Minerals and Natural Resources Department

Form C-102

DISTRICT II 1301 W. GRAND AVENUE, ARTESIA, NM 88210

### OIL CONSERVATION DIVISION 1220 SOUTH ST. FRANCIS DR. Santa Fe, New Mexico 87505

Revised JUNE 10, 2003 Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

1000 Rio Brazos Rd., Aztec, NM 87410 עו דיומדפות

DISTRICT III

DISTRICT IV 1220 S. St. Francis Dr., Santa Fr, Ne 87	WELL LOCATION AND	ACREAGE DEDICATION PLAT	☐ AMENDED REPORT	
API Number	Pool Code	Pool Code Pool Name		
		Empire; Morrow, South		
Property Code		oerty Name 17 STATE COM	Well Number	
ogrid no. 162683		Operator Name GRUY PETROLEUM MANAGEMENT COMPANY		

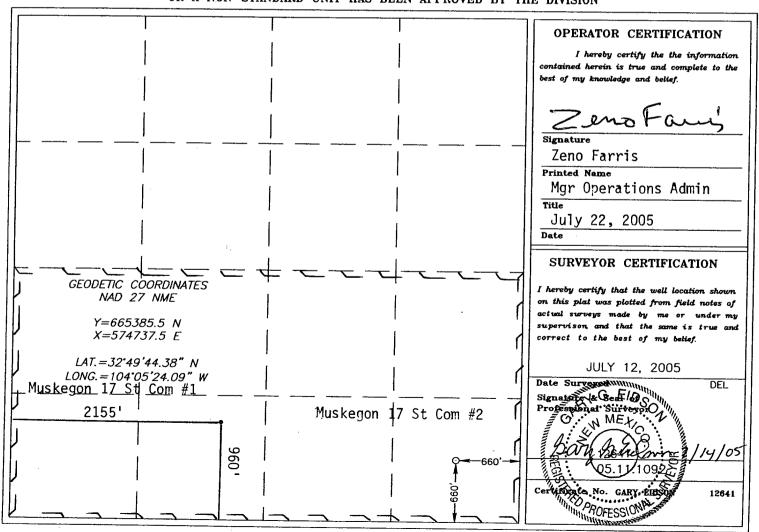
#### Surface Location

P 17 17-S 29-E 660 SOUTH 660 EAST EDD	ı	UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
		Р	17	17-S			660	SOUTH	660	EAST	EDDY

#### Bottom Hole Location If Different From Surface

	UL or lot No.	Section	Townshi	p Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Ì	Dedicated Acres	Joint o	r Infill	Consolidation (	Code Ore	ier No.	L	<u> </u>	<u> </u>	
	320	١	<b>'</b>	С						:

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



# **Application to Drill**

Gruy Petroleum Management Co. Muskegon 17 State Com No. 2 Unit Letter P Section 17 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:

SHL 660' FSL & 660' FEL Sec 17-T17S-R29E Location:

2 Elevation above sea level: 3602'

Geologic name of surface formation:

**Quaternery Alluvium Deposits** 

**Drilling tools and associated equipment:** 

Conventional rotary drilling rig using fluid as a

circulating medium for solids removal.

Proposed drilling depth:

11500'

6 Estimated tops of geological markers:

Rustler	225'
San Andres	2400'
Wolfcamp	7290'
Strawn	9865'
Atoka	10115'
Morrow	10500'

#### 7 Possible mineral bearing formation:

Grayburg/San Andres

Strawn

Gas Atoka Gas

Oil

Morrow Gas

#### 8 Casing program:

Hole Size	Interval	Casing OD	Weight	Thread	Collar	Grade
 17 1/2"	0-250'	13 3/8"	48	8-R	ST&C	H-40
12 1/4"	0-2600'	9 5/8"	40	8-R	LT&C	J-55
8 3/4" _	0-11500'	5 1/2"	17	8-R	LT&C	P-110

### **Application to Drill**

Gruy Petroleum Management Co. Muskegon 17 State Com No. 2 Unit Letter P Section 17 T17S - R29E Eddy County, NM

# 9 Cementing & Setting Depth:

13 3/8"	Surface	Set 250 of 13 3/8" H-40 48# ST&C casing. Cement with 390 Sx. Of Class "C" cement + additives, circulate cement to surface.
9 5/8"	Intermediate	Set 2600' of 9 5/8" J-55 40# LT&C casing Cement in two stages, first stage cement with 1000 Sx. Of Class POZ/C Cement + additives, second stage cement with 200 Sx. Of Class "C" + additives, circulate cement to surface.
5 1/2"	Production	Set 11500' of 5 1/2" P-110 17# 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

#### 11 Proposed Mud Circulating System:

Depth	Mud Wt	Viscosity	Fluid Loss	Type Mud
0 - 250'	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.
250' - 2600'	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.
2600' - 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' - 11500'	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. Muskegon 17 State Com No. 2 Unit Letter P Section 17 T17S - R29E Eddy County, NM

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

- A. Mud logging program: Two man unit from 2600' 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 or H2S gas are expected. 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 <u>35 - 45</u> days. If production casing is run an additional 30 days will be required to complete and construct surface facilities.

#### 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. Muskegon 17 State Com No. 2 Unit Letter P Section 17 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.

Muskegon 17 State Com No. 2

Unit Letter P Section 17

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

#### Surface Use Plan

Gruy Petroleum Management Co. Muskegon 17 State Com No. 2 Unit Letter P Section 17 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 US Hwy. #82 and Co. Rd. #211 (Old Loco), go North on Co. Rd. #211 approx.
     1.2 miles. Turn Right (East) and go approx. 0.3 miles. Turn Right (Southeast) and go approx. 0.1 miles.
     This location is 150' North.
- 2 PLANNED ACCESS ROADS: No new access road will be constructed.
- 3 LOCATION OF EXISTING WELLS IN A ONE-MILE RADIUS EXHIBIT "A"

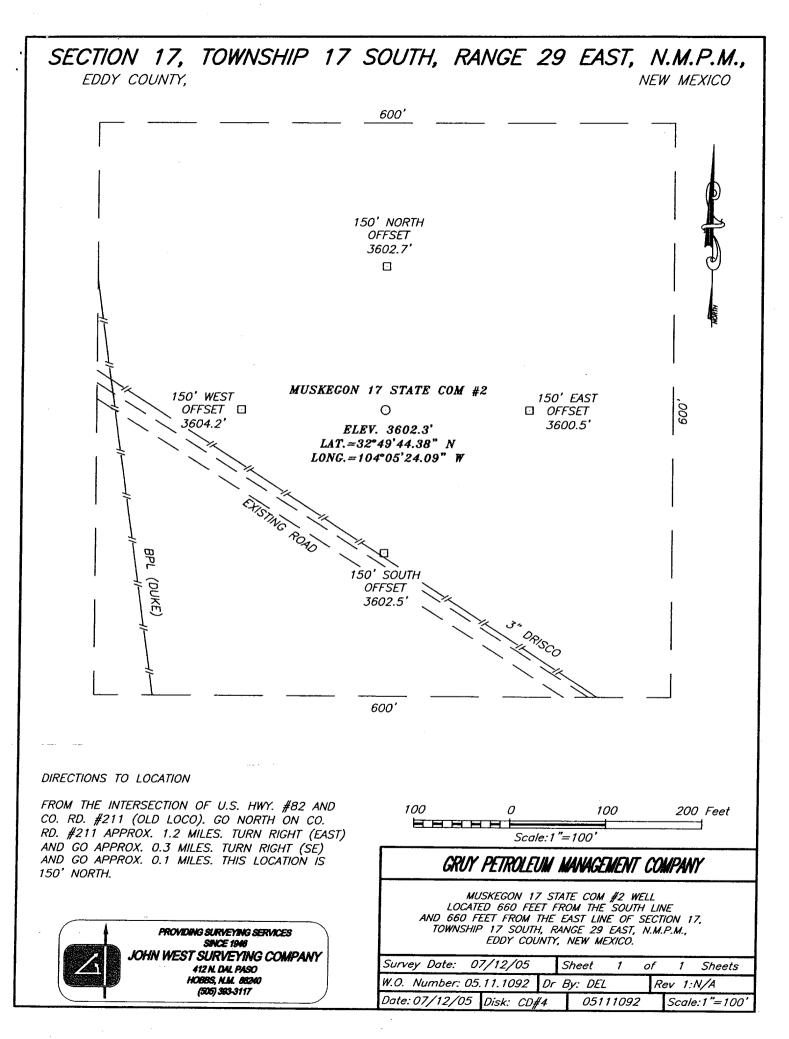
A. Water wells - None known

B. Disposal wells - Mack Energy Muskegon 16 State Com # 1 SWD SE/4SW/4 section 16

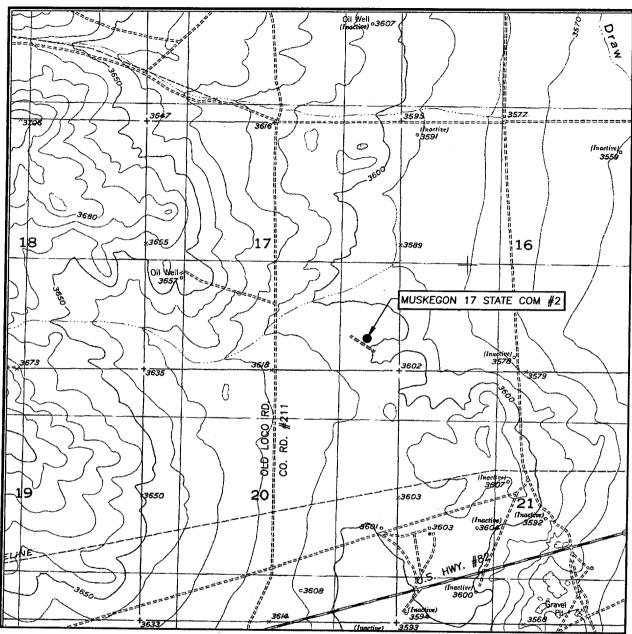
C. Drilling wells - None known

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

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



# LOCATION VERIFICATION MAP

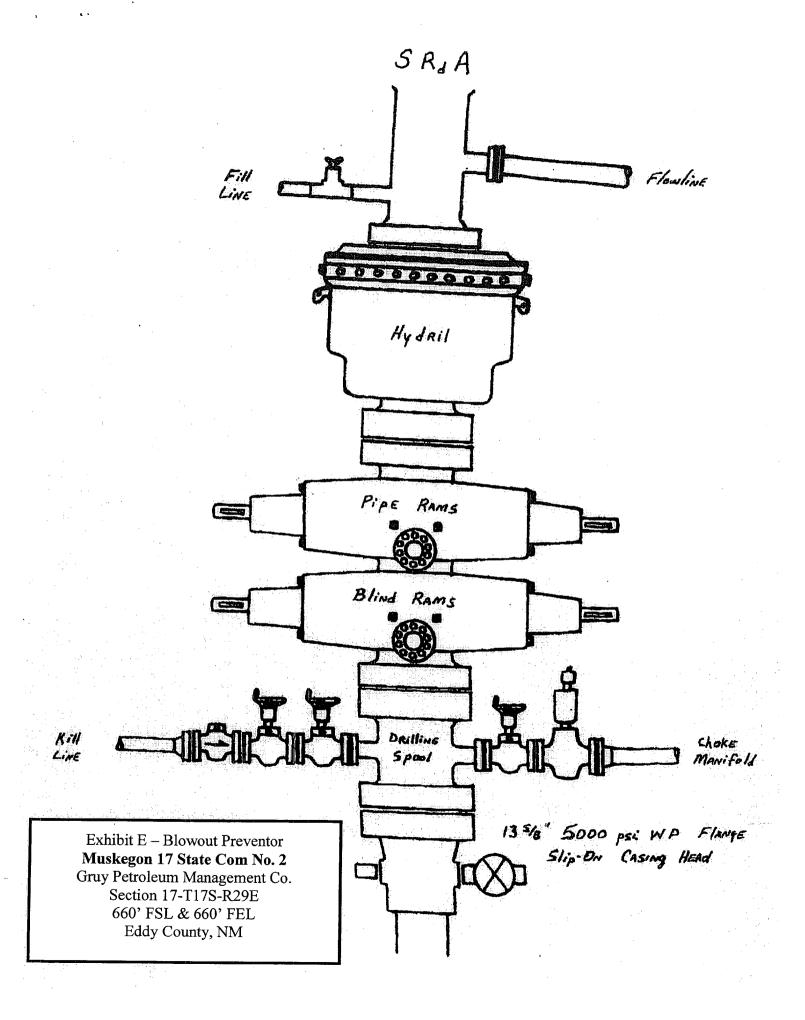


SCALE:-1" = 2000'

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

SEC. 17	TWP. <u>17-S</u> RGE. <u>29-E</u>
SURVEY	N.M.P.M.
COUNTY	EDDY
DESCRIPTION	N <u>660' FSL &amp; 660' FEL</u>
ELEVATION_	3602'
OPERATOR_	GRUY PETROLEUM MANAGEMENT COMPANY
LEASE MUS	SKEGON 17 STATE COM
	POGRAPHIC MAP





# DRILLING OPERATIONS CHOKE MANIFOLD 5M SERVICE

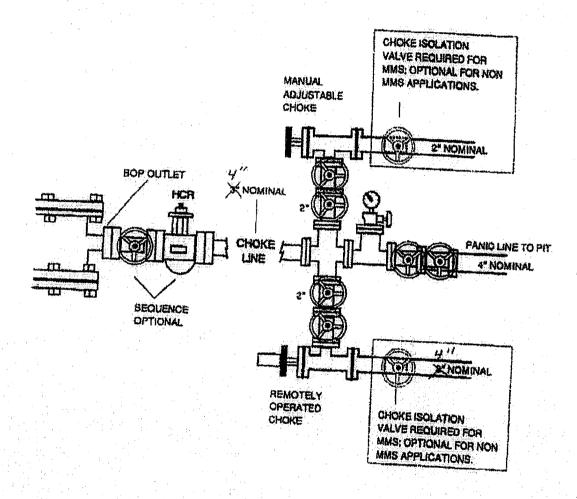


Exhibit E Cont'd – Choke Manifold

Muskegon 17 State Com No. 2

Gruy Petroleum Management Co.

Section 17-T17S-R29E

660' FSL & 660' FEL

Eddy County, NM



**Gruy Petroleum Management Co.**600 East Las Colinas Blvd. • Suite 1100 • Irving, TX 75039 • (972) 401-3111 • Fax (972) 443-6450 Mailing Address: P.O. Box 140907 • Irving, TX 75014-0907

A wholly-owned subsidiary of Magnum Hunter Resources, Inc., a NYSE company MHR

# STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

Bureau of Land Management 2909 West 2<sup>nd</sup> 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.:

NMNM - 1487

Legal Description: S/2 Sec 17, T17S-R29E

Containing 320 acres, Eddy County New Mexico

Formation (S):

Morrow/Pennsylvanian

Bond Coverage:

Nationwide BLM Bond

BLM Bond File No.: NM 2575

Authorized Signature:

Representing Gruy Petroleum Management Co.

Name: Zeno Farris

Title: Manager, Operations Administration

Date: July 22, 2005

# **CONDITIONS OF APPROVAL - DRILLING**

Operator's Name:

**Gruy Petroleum Management Co.** 

Well Name & No. Location:

Muskegon 17 Federal Com #1

Location

660' FSL, 660' FEL, Section 17, T. 17 S., R. 29 E., Eddy County, New Mexico

.....

Lease:

NM-1487

#### **I. DRILLING OPERATIONS REQUIREMENTS:**

- 1. The Bureau of Land Management (BLM) is to be notified at the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County in sufficient time for a representative to witness:
  - A. Well spud
  - B. Cementing casing: <u>13-3/8</u> inch <u>9-5/8</u> inch <u>5-1/2</u> inch
  - C. BOP tests
- 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 <u>13-3/8</u> inch surface casing shall be set at <u>approximately 250 feet and cement circulated to the <u>surface</u>. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.</u>
- 2. The minimum required fill of cement behind the <u>9-5/8</u> inch intermediate casing is <u>to be circulated to the surface</u>.
- 3. The minimum required fill of cement behind the <u>5-1/2</u> inch production casing is <u>to reach at least 500 feet above the top of the uppermost hydrocarbon productive interval.</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.

NOTE: A waiver to test the 13-3/8" casing to 1000# with the rig pumps is granted.

- 2. Minimum working pressure of the blowout preventer and related equipment (BOPE) 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.

#### **IV. DRILLING MUD:**

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

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

7/27/2005 acs