(July 1992) UNITED STATES DEPARTMENT OF THE INTE BUREAU OF LAND MANAGEME APPLICATION FOR PERMIT TO		ia, NM <sup>reverse</sup> side	10	2 OMB NO.	
1b. TYPE OF WELL	SINGLE				
			J	8. FARM OR LEASE NAME	, WELL NO.
2. NAME OF OPERATOR Gruy Petroleum Management Co.					Penn Federal No.2
3. ADDRESS AND TELEPHONE NO.				9. APIWELL NO. 30 - 015 -	24270
P.O. Box 140907 Irving TX 75014 972-401-3111				10. FIELD AND POOL, OR	
4. LOCATION OF WELL (Report location clearly and in accordance with a	ny State requirem			White City; Penn 11. SEC. T. R. M., BLOCK	
		RECEIVE		OR AREA	
2310' FNL & 1330' FEL Section 12-25S-26E		JUL 0 5 2		5000 12	T25S R26E
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 17 miles South of Carlsbad		OCD-ART	ERIA	12. COUNTY OR PARISH Eddy	13. STATE NM
LOCATION TO NEAREST PROPERTY OR LEASE LINE, T.O (Also to nearest drlg. unit line, if any) 18. DISTANCE FROM PROPOSED LOCATION*	16. NO. OF ACR 12		TO THIS WI	ACRES ASSIGNED ELL 640 ROTARY OR CABLE TOOLS	
TO NEAREST WELL, DRILLING COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 21	34'	13000'		Rotary	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 3236 ' GR		Ned Water Besin		22. APPROX. DATE WORK 06-30-05	WILL START*
الا <u>ن الانتهارية والمؤلف المكنية ليشته للمناه الإ</u> لامية المناطق المناطق المناطق المناطق المناطق المناطق الم	- F.a 34 - 179 - 179 - 179 - 179 - 179 - 179 - 179 - 179 - 179 - 179 - 179 - 179 - 179 - 179 - 179 - 179 - 1	MENTING PROGRAM	1. I		
		HT PER FOOT			QUANTITY OF CEMENT
17-1/2" J-55 13 3/8"	54.5 # 40 #		200 320		225 sx circulate
12 1/4" NS-110 9 5/8"   8 3/4" P-110 5 1/2"	17 #		130		1000 sx circulate 1920 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 .22 psi per foot or 1500 # whichever is greater, but not to exceed 70% of the manufactures stated maximum internal yield. During the running of the surface pipe and the drilling of					
the intermediate hole we do not anticipate any pr	essures gr	eater than 1000 #	and are	requesting a vari	ance to test the
13 3/8" casing and BOP system to 1000 # psi, and	d use rig pu	umps instead of an	n indepe	endent service cor	npany.
IN ABOVE SPACE, DESCRIBE PROPOSED PROGRAM: If proposal is to drill or deepen directionally, give pertinent data on subs	If proposal is to unface locations	o deepen, give data on pres and measured and true ver	sent produc rtical depth	tive zone and proposed ne s. Give blowout preventer	ew productive zone. program, if any.
34 SIGNED Zono Fans	TITLE	Mgr. Ops. Admin		DATE	06-06-05
(This space for Federal or State office use) PERMIT No.		APPROVAL [			
Application approval does not warrant or certify that the applicant holds legal or equitable title CONDITIONS OF APPROVAL, IF ANY: APPROVED BY //S/ Joe G. Lara		IELD MANA		DATE	<u>JUL 0 1 2005</u>
•s Title 18 U.S.C. Section 1001, makes it a crime for an United States any false, fictitious or fraudulent state S ا 1 9. ۲	v person know	esentations as to any ma	GENE	<b>NAL SUBJEC</b> RAL REQUIRE AL STIPULATI	TTO MENTS AND



**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.: NM - 14124

Legal Description: All Sec 12, T25S-R26E Containing 640 acres, Eddy County New Mexico

Formation (S): Morrow/Pennsylvanian

Bond Coverage: Nationwide BLM Bond

BLM Bond File No.: NM 2575

Authorized Signature:

eno -ar

Representing Gruy Petroleum Management Co.

Name: Zeno Farris

Title: Manager, Operations Administration

Date: 06/06/05

# **Application to Drill**

Gruy Petroleum Management Co. Marquardt 12 Penn Federal No. 2 Unit Letter G Section 12 T25S - R26E 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: 2310' FNL & 1330' FEL Sec. 1 2 25S 26E
- 2 Elevation above sea level: GR 3236'

3 Geologic name of surface formation: Quaternery Alluvium Deposits

- 4 <u>Drilling tools and associated equipment:</u> Conventional rotary drilling rig using fluid as a circulating medium for solids removal.
- 5 Proposed drilling depth: 13000'

#### 6 Estimated tops of geological markers:

T/Salt	200'	Cisco Canyon	9928
B/Salt	800'	Strawn	10078
Delaware	1500	Atoka	10388
Bone Spring	6168	Morrow	11,158
Wolfcamp	8098	Barnett	11,768

### 7 Possible mineral bearing formation:

Strawn	Gas
Atoka	Gas
Morrow	Gas

### 8 Casing program:

Hole Size	Interval	Casing OD	Weight	Thread	Collar	Grade
17 1/2"	0-200'	13 3/8"	54.5	8-R	ST&C	J-55
12 1/4"	0-3200'	9 5/8"	40	8-R	ST&C	NS-110
7 7/8"	0-13000'	5 1/2"	17	8-R	ST&C	N-80 / S-95

### **Application to Drill**

Gruy Petroleum Management Co. Marquardt 12 Penn Federal No. 2 Unit Letter G Section 12 T25S - R26E Eddy County, NM

#### 9 Cementing & Setting Depth:

	13 3/8"	Surface	Set 200' of 13 3/8" J-55 54.5 ST&C casing. Cement with 225 Sx. Of Class "C" cement + additives, circulate cement to surface.
	9 5/8"	Intermediate	Set 3200' of 9 5/8" NS-110 40# ST&C casing or casing sufficient to reach the base of the reef complex. Cement in two stages, first stage cement with 775 Sx. Of Class POZ/C Cement + additives, second stage cement with 225 Sx. Of Class "C" + additives, circulate cement to surface.
	5 1/2"	Production	Set 13000' of 5 1/2" NP-80 / S-95 17# ST&C casing. Cement in two stages, first stage cement with 870 Sx. of Class POZ/C Cement + additives. Second stage cement with 1050 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 - 200'	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.
200' - 3200'	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.
3200' - 8300'	8.4 - 9.9	28 - 29	NC	Fresh 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' - 13000'	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. Marquardt 12 Penn Federal No. 2 Unit Letter G Section 12 T25S - R26E Eddy County, NM

### 12 Testing, Logging and Coring Program:

- A. Mud logging program: One-man unit from 8000' to TD
- B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR
- C. No DST's, 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 <u>4000</u> PSI, estimated BHT <u>190</u>.

### 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 <u>Strawn / Morrow / Atoka pay will be</u> perforated and stimulated. The well will be tested and potentialed as a gas well.

- 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 blooie 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 personnel admitted to location
- 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

- 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. Marquardt 12 Penn Federal No. 2 Unit Letter G Section 12 T25S - R26E 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 County Road # 720 (Black River Rd.) and County Road # 742 (Forehand Rd.) Go south on Co. Rd. 742 for 4.0 miles. Turn right, west and go 1.0 miles. Turn left SW and gor for 1.5 miles. Turn left SE and go 0.5 miles. Veer to the right and continue on south for 0.9 miles to a proposed road survey. Follow proposed road survey southeast 0.5 to this location.
- 2 PLANNED ACCESS ROADS: 2787' of access road will be constructed.

## 3 LOCATION OF EXISTING WELLS IN A ONE-MILE RADIUS EXHIBIT "A"

Α.	Water wells -	None Know
В.	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"

DISTRICT I 1625 N. FRENCH DR., HOBBS, NM 88240

DISTRICT II 1301 W. GRAND AVENUE, ARTESIA. NM 68210

DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV

#### State of New Mexico

Energy, Minerals and Natural Resources Department

## 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





# LOCATION VERIFICATION MAP



BOND DRAW, N.M.







ORILLING OPERATIONS CHOKE MANIFOLD 5M SERVICE

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