

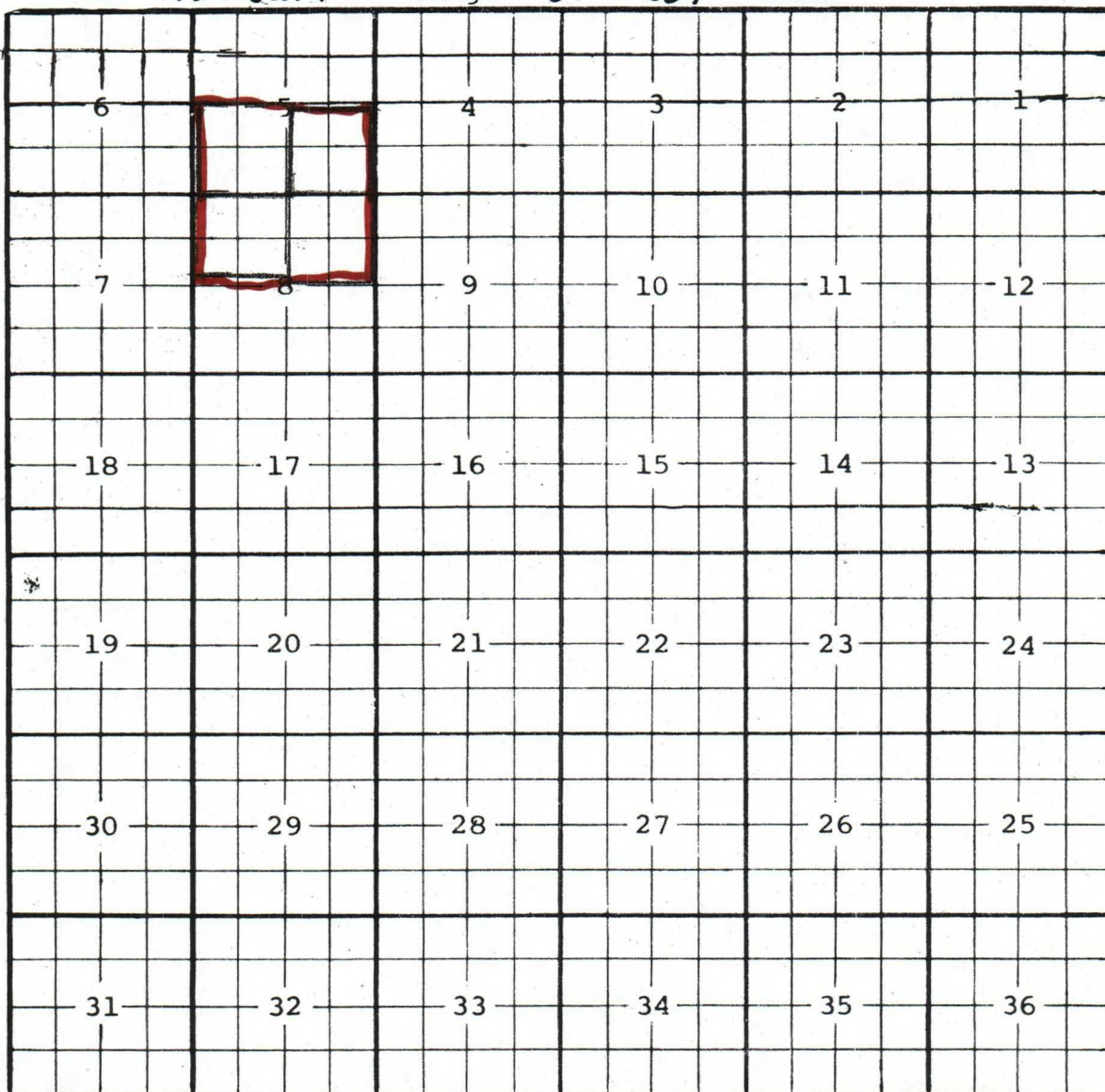
County Eddy

Pool Shugart-Strawn

TOWNSHIP 18 South

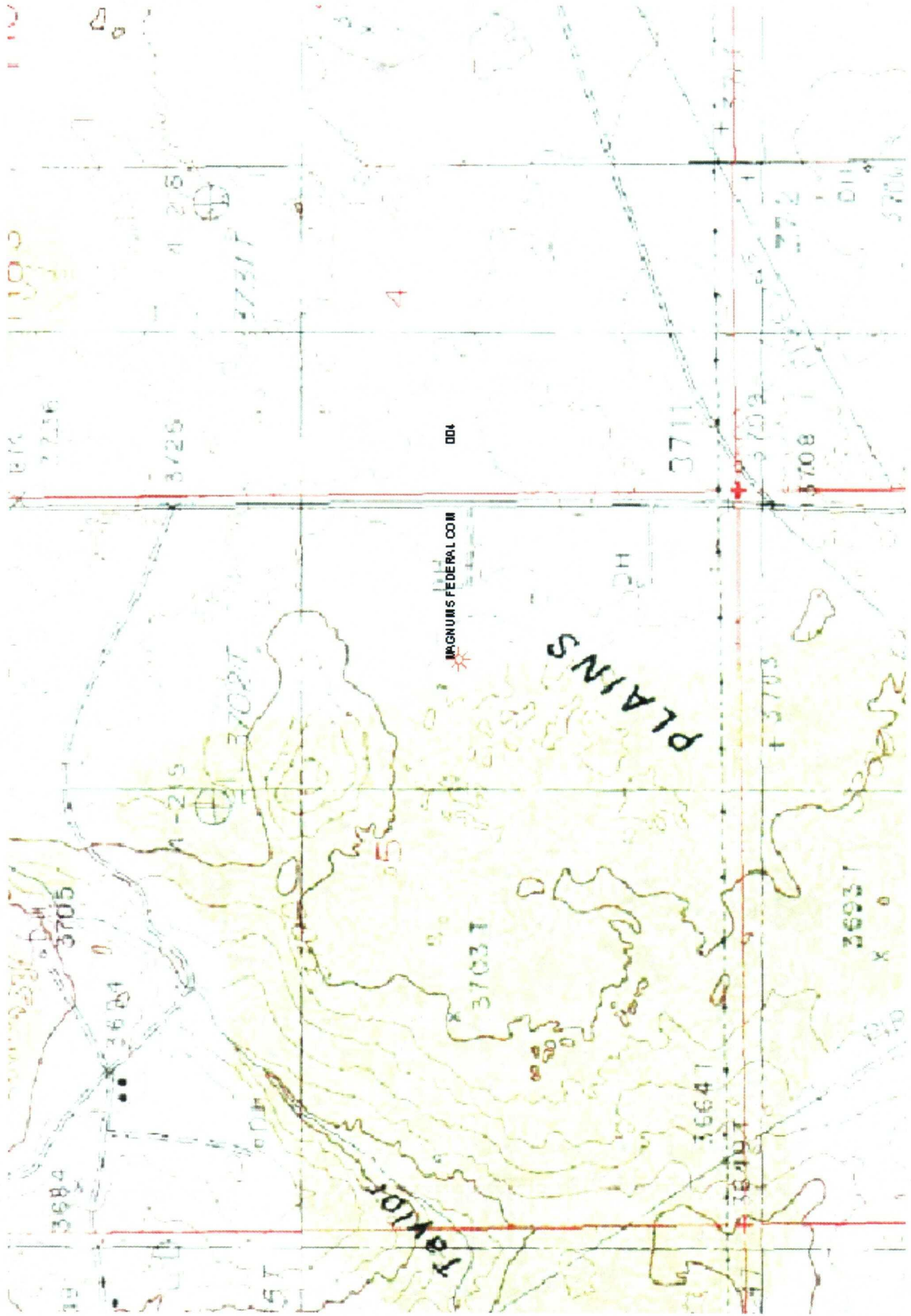
Range 31 East

NMPM



Description: NE 1/4 Sec. 8 (R-11856, 10-28-02) Ext: NW 1/4 Sec. 8 (R-11908, 2-12-03)  
Ext: SE 1/4 Sec. 5 (R-11952, 4-30-03) Ext: SW 1/4 Sec. 5 (R-12002, 8-11-03)

# RBDMS Map





# RBDMS Map



MapNotes

Oil Conservation Division



DrawnBy

6/4/2004 1:37:24 PM



Sec : 05 Twp : 18S Rng : 31E Section Type : NORMAL

4 39.97 Federal owned A	3 39.99 Federal owned A	2 40.01 Federal owned A	1 40.03 Federal owned
E 40.00 Federal owned A A	F 40.00 Federal owned A A	G 40.00 Federal owned A A	H 40.00 Federal owned A
L 40.00 Federal owned A A	K 40.00 Federal owned A	J 40.00 Federal owned A	I 40.00 Federal owned A A A
M 40.00 Federal owned A	N 40.00 Federal owned A A A	O 40.00 Federal owned A A C	P 40.00 Federal owned A A A

7008  
0101  
Oil Cons.  
N.M. DIST. 2  
1301 W. Grand Avenue  
Artesia, NM 88210  
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB NO. 1004-0136  
Expires: February 28, 1995

5. LEASE DESIGNATION AND SERIAL NO.  
NMNM ~~106827~~ 106964

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

NMNM 106827

8. FARM OR LEASE NAME, WELL NO.

Magnum Federal 5 Com No. 4

9. API WELL NO.

30-015- 33116

10. FIELD AND POOL, OR WILDCAT

Turkey Track; Morrow North

11. SEC. T.R.M. BLOCK AND SURVEY

OR AREA

Sec. 5 T18S R31E

12. COUNTY OR PARISH

Eddy

13. STATE

NM

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

1b. TYPE OF WELL

OIL ☐ GAS ☒  
WELL WELL

SINGLE ☐

MULTIPLE ☐

OTHER

ZONE

ZONE

2. NAME OF OPERATOR

Gruy Petroleum Management Co.

3. ADDRESS AND TELEPHONE NO.

P.O. Box 140907 Irving TX 75014 972-401-3111

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

1980' FSL & 1190' FEL

RECEIVED

NOV 25 2003

OCD-ARTESIA

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*

6.2 miles Southeast of Loco Hills

15. DISTANCE FROM PROPOSED\*  
LOCATION TO NEAREST  
PROPERTY OR LEASE LINE, T.O.  
(Also to nearest drig. unit line, if any)

1190'

16. NO. OF ACRES IN LEASE

160

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

320.04

18. DISTANCE FROM PROPOSED LOCATION\*  
TO NEAREST WELL, DRILLING COMPLETED,  
OR APPLIED FOR, ON THIS LEASE, FT.

1713'

19. PROPOSED DEPTH

12500'

20. ROTARY OR CABLE TOOLS

Rotary

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

CAPITAN CONTROLLED WATER BASIN

22. APPROX. DATE WORK WILL START\*

11-30-03

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2" WITNESS	J-55 13 3/8"	54.5 # WITNESS	425' 575'	490 sx circulate
12 1/4"	J-55 9 5/8"	40 #	3200' 4200' (J55)	1200 sx circulate
7 7/8"	N-80/S-95 5 1/2"	17 #	12500'	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 .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 pressures greater than 1000 # and are requesting a variance to test the 13 3/8" casing and BOP system with rig pumps to 1000 # psi.

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED

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 Zeno Farris TITLE Mgr. Ops. Admin DATE 10-28-03

(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:

APPROVED BY /s/ Joe G. Lara TITLE ACTING FIELD MANAGER DATE 21 NOV 2003

\*See Instructions On Reverse Side

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 jurisdiction.

## Application to Drill

Gruy Petroleum Management Co.  
Magnum Federal 5 Com 4  
Unit Letter I Section 5  
T18S - R31E 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: 1980' FSL & 1190' FEL Sec. 5 18S 29E

2 Elevation above sea level: GR 3711'

3 Geologic name of surface formation: Quaternary Aeolian 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:

T/Salt	250'	Wolfcamp	8700'
B/Salt	800'	Cisco Canyon	9700'
Yates	1050'	Strawn	9900'
Queen	1975'	Atoka	10450'
Grayburg	2350'	Morrow	10650'
San Andres	2815'	Mississippian	11400'

7 Possible mineral bearing formation:

Strawn	Oil
Atoka	Gas
Morrow	Gas

8 Casing program:

Hole Size	Interval	Casing OD	Weight	Thread	Collar	Grade
17 1/2"	0-425' 575'	13 3/8"	54.5	8-R	ST&C	J-55
12 1/4"	0-3200' 4200'	9 5/8"	40	8-R	ST&C	J-55
7 7/8"	0-7000' 755'	5 1/2"	17	8-R	ST&C	N-80
7 7/8"	7000'-12500'	5 1/2"	17	8-R		P-110

## Application to Drill

Gruy Petroleum Management Co.  
Magnum Federal 5 Com 4  
Unit Letter I Section 5  
T18S - R31E Eddy County, NM

### 9 Cementing & Setting Depth:

13 3/8"	Surface	Set <sup>575'</sup> <del>425'</del> of 13 3/8" J-55 54.5# ST&C casing. Cement with 490 Sx. Of Class "C" cement + additives, circulate cement to surface.
9 5/8"	Intermediate	Set <sup>4200'</sup> <del>3200'</del> of 9 5/8" J-55 40# ST&C casing. Cement in two stages, first stage cement with 795 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 12500' of 5 1/2" NP-80 / P-110 17# ST&C casing. Cement with 1620 Sx. of Class POZ/C Cement + additives. 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 nipped 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

### 11 Proposed Mud Circulating System:

Depth	Mud Wt	Viscosity	Fluid Loss	Type Mud
0 - <sup>575'</sup> <del>425'</del>	8.4 - 8.6	32 - 34	May lose circ.	Fresh water spud mud add paper to control seepage and high viscosity sweeps to clean hole.
<sup>575' - 4200'</sup> <del>400' - 3200'</del>	9.7 - 10	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.
<sup>555'</sup> <sup>4200'</sup> <del>3200'</del> - 8300'	8.4 - 9.9	28 - 29	NC	Fresh water. Paper for seepage. Lime for pH (9 - 9.5)
8300' - 10000'	8.4 - 8.9	28 - 29	NC	Cut brine. Caustic for pH control.
10000' - 12500'	8.9 - 9.7	32 - 34	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.  
Magnum Federal 5 Com 4  
Unit Letter I Section 5  
T18S - R31E 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 H<sub>2</sub>S 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 3000 PSI, estimated BHT 190

### **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 25 - 30 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 / Atoka/Strawn pay will be perforated and stimulated. The well will be tested and potentialized as a gas well.



## Surface Use Plan

Gruy Petroleum Management Co.  
Magnum Federal 5 Com 4  
Unit Letter I Section 5  
T18S - R31E 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 State road # 83 and County road # 222 go South 2.1 miles. Turn and go West 0.2 miles on caliche road. Porposed location is 250' North.
- 2 PLANNED ACCESS ROADS: There is 88' feet of new access road planned.
- 3 LOCATION OF EXISTING WELLS IN A ONE-MILE RADIUS EXHIBIT "A"
  - A. Water wells - None known
  - B. Disposal wells - ~~None known~~ Eastland Grayburg No. 3
  - C. Drilling wells - None known
  - D. Producing wells - As shown on Exhibit "A"
  - E. Abandoned wells - As shown on Exhibit "A"

## **Surface Use Plan**

Gruy Petroleum Management Co.  
Magnum Federal 5 Com 4  
Unit Letter I      Section 5  
T18S - R31E      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 transported over the access route as shown on Exhibit "C".

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 holes with a minimum depth of 10'. These holes will be covered during drilling and will be back filled upon completion. 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.

## **Surface Use Plan**

Gruy Petroleum Management Co.  
Magnum Federal 5 Com 4  
Unit Letter I Section 5  
T18S - R31E 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 recontoured 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.



## Surface Use Plan

Gruy Petroleum Management Co.  
Magnum Federal 5 Com 4  
Unit Letter I Section 5  
T18S - R31E Eddy County, NM

### 11 OTHER INFORMATION:

- A. Topography consists of a 2% slope to the south, on the south side of a low sandy rise with re-worked red sandy paleosols soils. Vegetation is mainly native grasses, yucca, and an occasional mesquite and sandsage..
- B. The wellsite is on Federal owned surface. The surface is leased to Williams & Son Cattle Co. P.O. Box 30 Maljamar, NM 88264. They will notified of our intention to drill prior to any activity. The land is used mainly for cattle ranching and oil and gas production.
- C. An Archaeological survey has been conducted of the location and proposed roads, then 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 mile 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 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 Gruy Petroleum Management Company contractors/subcontractors is in the 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: Zeno Farris

DATE: 10/28/03

TITLE: Manager, Operations Administration



## **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., an American Stock Exchange company*

### **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 91308

Legal Description: E/2 Sec 5, T18S-R31E  
Containing 320.00 acres, Eddy County New Mexico

Formation (S): Strawn - Atoka - Morrow

Bond Coverage: Nationwide BLM Bond

BLM Bond File No.: NM 2575

Authorized Signature: Zeno Farris  
Representing Gruy Petroleum Management Co.

Name: Zeno Farris

Title: Manager, Operations Administration

Date: 10/28/03

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

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102  
Revised February 10, 1994  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

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

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

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

DISTRICT IV  
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
		Turkey Track; Morrow North
Property Code	Property Name	Well Number
	MAGNUM 5 FEDERAL COM.	4
OGRID No. 162683	Operator Name	Elevation
	GRUY PETROLEUM MANAGEMENT CO.	3711'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	5	18-S	31-E		1980	SOUTH	1190	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 or Infill	Consolidation Code	Order No.
320.04	Y	C	

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

<p>LOT 4</p> <p>39.97 Ac.</p> <p>LOT 3</p> <p>39.99 Ac.</p> <p>LOT 2</p> <p>40.01 Ac.</p> <p>LOT 1</p> <p>40.03 Ac.</p> <p>1650'</p> <p>1713'</p> <p>Magnum 5 Fed Com 1 Morrow</p> <p>3704.5'</p> <p>3702.4'</p> <p>700'</p> <p>190'</p> <p>3708.9'</p> <p>3708.6'</p> <p>1980'</p> <p>GEODETIC COORDINATES NAD 1927 NME Y = 645784.0 N X = 637331.5 E LAT. - 32°46'28.40"N LONG. - 103°53'11.49"W</p> <p>Magnum 5 Fed Com 4 Morrow</p>	<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Zeno Farris</i></p> <p>Signature</p> <p>Zeno Farris</p> <p>Printed Name</p> <p>Mgr. Operations Admin.</p> <p>Title</p> <p>October 29, 2003</p> <p>Date</p> <p><b>SURVEYOR CERTIFICATION</b></p> <p>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.</p> <p>OCTOBER 23, 2003</p> <p>Date Surveyed</p> <p>Signature <i>GARY EIDSON</i></p> <p>Professional Surveyor</p> <p>NEW MEXICO</p> <p>10/28/03</p> <p>03.11.201</p> <p>Certificate No. GARY EIDSON 12641</p>
---	---



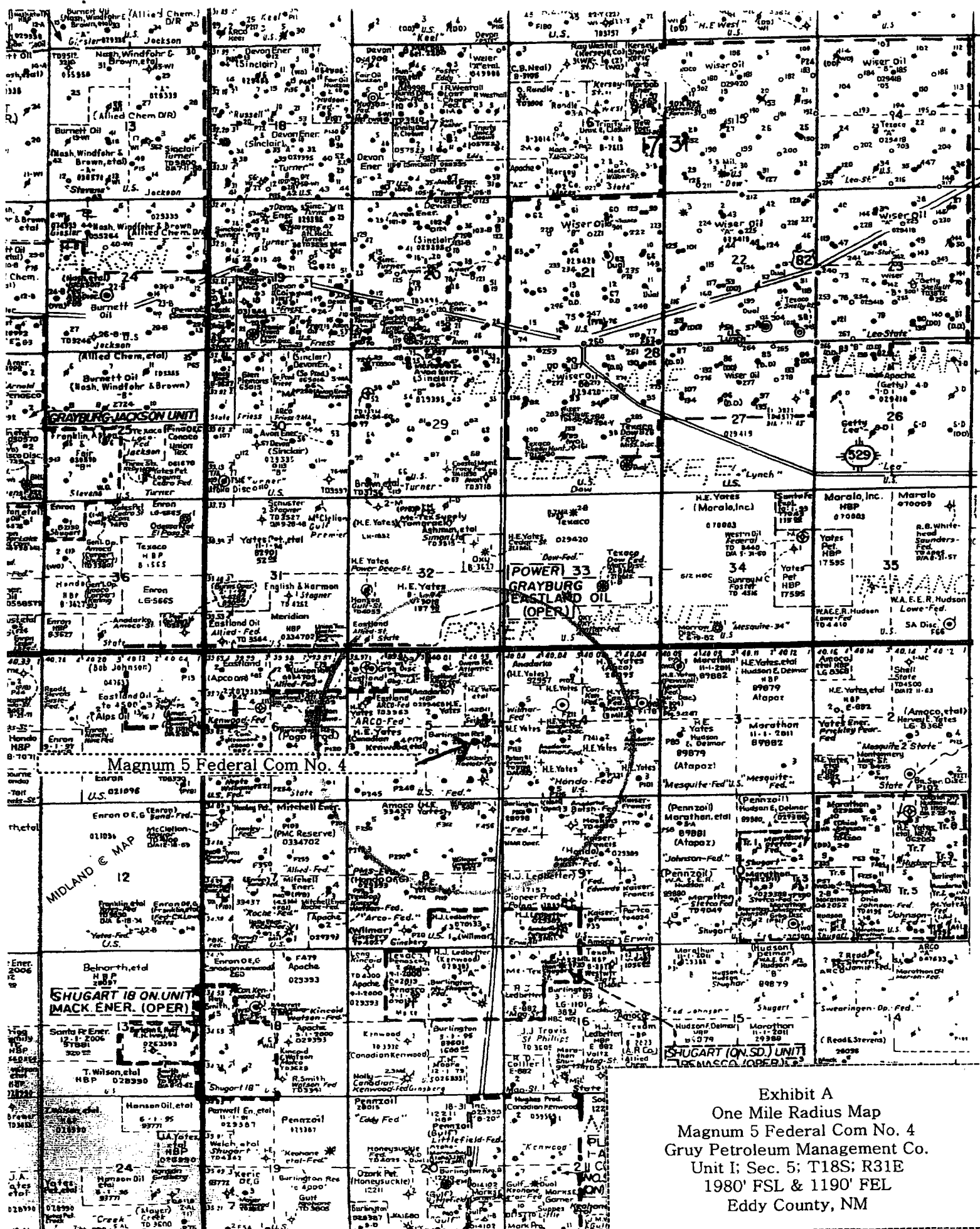
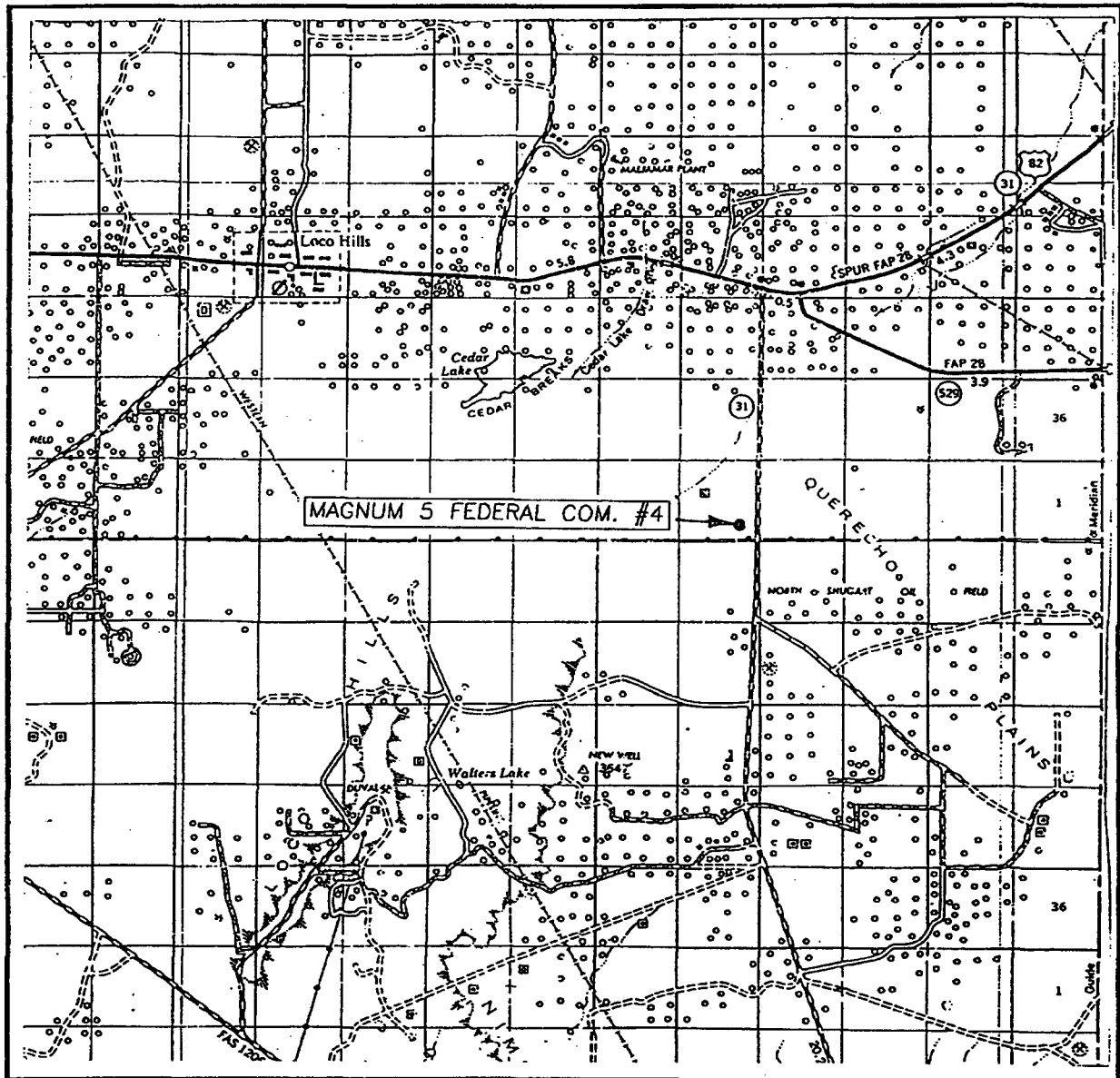


Exhibit A  
One Mile Radius Map  
Magnum 5 Federal Com No. 4  
Gruy Petroleum Management Co.  
Unit I; Sec. 5; T18S; R31E  
1980' FSL & 1190' FEL  
Eddy County, NM

# VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 5 TWP. 18-S RGE. 31-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 1980' FSL & 1190' FEL

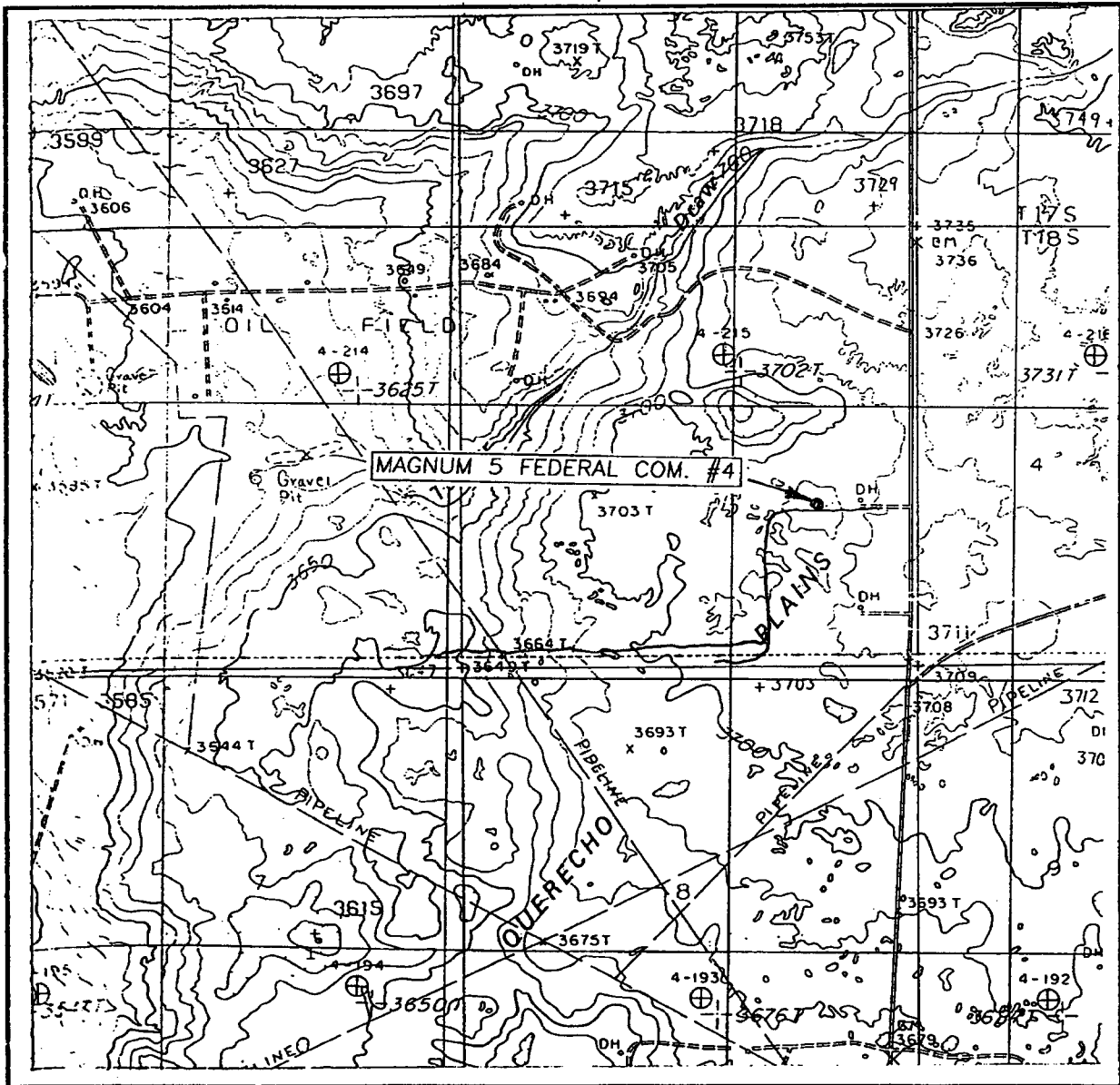
ELEVATION 3711'

OPERATOR GRUY PETROLEUM

LEASE MAGNUM 5 FEDERAL COM.

**JOHN WEST SURVEYING**  
**HOBBS, NEW MEXICO**  
**(505) 393-3117**

Exhibit "B"

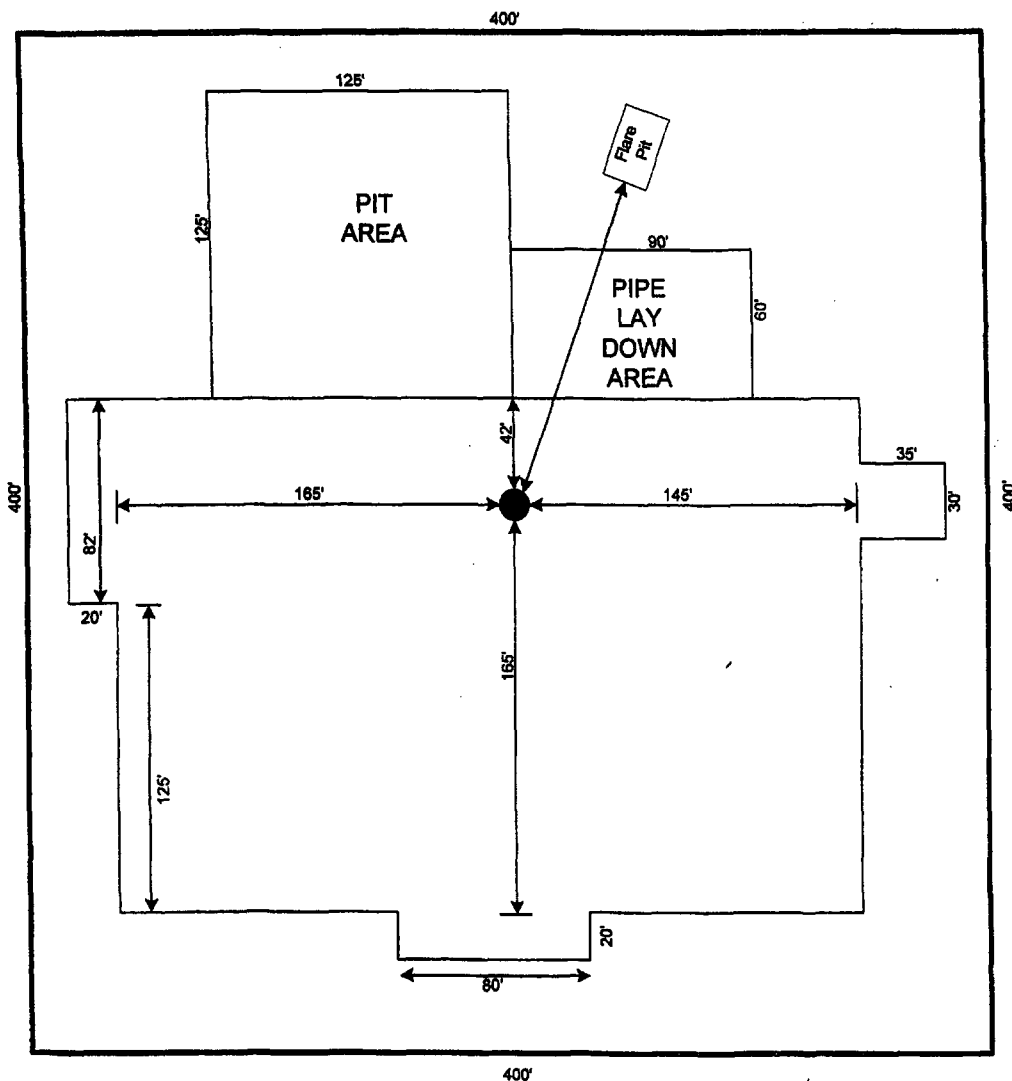


CONTOUR INTERVAL: 10'  
LOCO HILLS, N.M.

Exhibit "C"

JOHN WEST SURVEYING  
HOBBS, NEW MEXICO  
(505) 393-3117





**RIG # 80**

**GRUY PETROLEUM  
MANAGEMENT COMPANY  
IRVING TEXAS**

**SCALE 1"=60'**

Exhibit D  
Rig Layout Plan  
Magnum 5 Federal Com No. 4  
Gruy Petroleum Management Co.  
Unit I; Sec. 5; T18S; R31E  
1980' FSL & 1190' FEL  
Eddy County, NM

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**SUNDRY NOTICES AND REPORTS ON WELLS**

**Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.**

FORM APPROVED  
OMB No. 1004-0135  
Expires July 31, 1996

**SUBMIT IN TRIPLICATE - Other Instructions on reverse side**

RECEIVED

JAN 26 2004

OCD-ARTESIA

1. Type of Well  
☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator  
Gruy Petroleum Management Co.

3a. Address  
P. O. Box 140907 Irving, TX 75014-0907

3b. Phone No. (include area code)  
972-401-3111

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
1980' FSL & 1190' FEL; Unit I, Sec. 5, T18S, R31E

5. Lease Serial No.  
NMNM 106964

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.  
NMNM 106827

8. Well Name and No.  
Magnum 5 Federal Com No. 4

9. API Well No.  
30-015-33116

10. Field and Pool, or Exploratory Area  
Turkey Track, Morrow North

11. County or Parish, State  
Eddy Co. NM

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <u>Set surface and intermediate casing</u>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

01-03-04 Spud 17-1/8" hole @ 7 AM CST.

01-04-03 Ran 14 jts 13-3/8" casing to 605'. Cemented lead 400 sx Premium Plus + 4% Gel + 2% CaCl + 1/4# Flocele per sx. Cemented tail 150 sx Premium Plus cement + 2% CaCl. Circulated 130 sx to surface. WOC 18.5 hrs.

01-11-04 Ran 97 jts 9-5/8" casing to 4210'. Cemented lead 1250 sx Interfill "C" + 1/4# Flocele per sx. Cemented tail 250 sx Premium Plus + 1% CaCl + 1/4# Flocele per sx. Circulated 232 sx cement. WOC 18 hrs.

14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

Natalie Krueger

Signature

*Natalie Krueger*

Title

Production Assistant

Date

January 21, 2004

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice 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.

Office

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 jurisdiction.

(Instructions on reverse)

# GRUY Petroleum Management Co.

Magnum Hunter Production, Inc.

## Well History

January 3, 2004 Thru January 11, 2004

### OPERATED

#### SHUGART

GRUY PETROLEUM MANAGEMENT CO

77204 MAGNUM FEDERAL 5 COM 4

EDDY, NM

1900'FSL 990'FEL Sec 5 T18S R31E

W.I. Pct BCP 50.00 %

W.I. Pct ACP 50.00 %

Morrow / 12,500'

01/03/2004

Depth 61

Progress 0

AFE: 23681

Present Operation: Preparing to Spud

Location staked by John West Surveying on 10/23/2003 - 1980' FSL & 1,190' FEL of Sec. 5 T-18-S R-31-E in Eddy County, New Mexico. B&H Construction built location, pits & road from 11/25/2003 to 12/8/2003. Abbott Brothers set 20" conductor pipe at 38' FGL & cemented with 3 3/4 yds. ready mix - dug rat & mouse holes on 12/9/2003. Akome, Inc. plastic lined & fenced reserve pit on 12/11/2003 & JWS put water in the reserve pit to hold down the plastic on 12/11/2003. MIRU Patterson-UTI Rig # 75 on 1/2/2004. Welded flow nipple onto conductor pipe - mixed spud mud - preparing to spud well.

01/04/2004

Depth 605

Progress 605

AFE: 23681

Present Operation: Welding on Wellhead

Air out Pumps Drill from 61' to 419' (Spud a 17 1/2" hole at 7:00 AM (CST) 1/3/04) Rig Service Drill from 419' to 448' Wireline Survey @ 396' = .75o Drill from 429' to 605' TD (Reached TD of 17 1/2" hole at 5:00 PM (CST) 1/3/2004) Circ and drop Totco TOH. LD Bit, Bit Sub, Reamer and Shock Sub. WLS at 605' = 1.0 o RU Csg Crew and Tools. Run 14 jts of 13 3/8" Csg ( See Csg Detail ) Circ and RD Csg Crew & RU Howco Circ w/ Rig Pumps while Howco repaired computer Hall. cemented 13 3/8" csg. (Lead) 400 sx Prem. Plus Cement + 4% Gel + 2% CaCl + 1/4# Flocele per sx, (Tail) 150 sx Prem. Plus Cement + 2% CaCl - plug down & bumped with 350# at 1:30 AM (CST) 1/4/2004 - circulated 130 sx cement to surface - Don Cleghorn w/ the BLM notified. RD Howco and WOC

01/05/2004

Depth 1,060

Progress 455

AFE: 23681

Present Operation: Drlg

Cut off 13 3/8" Csg and weld on 13 5/8" 3000# Braden Head and Test to 500# NU BOP and choke manifold Test BOP, Choke manifold, wellhead & 13 3/8" csg to 1000#. BLM notified. Did not witness Pick up Bit #2 and BHA. TIH Drill cement, Float and shoe ( Back on formation at 19:00 ) Drill from 605' to 1060' ( Motor = 186 RPM - Rotary = 40 RPM Weight = 25k )

01/06/2004

Depth 2,120

Progress 1,060

AFE: 23681

Present Operation: Drlg

WLS @ 1026' = 1/4 deg; drill f/1060' to 1582'; WLS @ 1503' = 3/4 deg; drill f/1582' to 2120'; WLS @ 2040' = 1/2 deg.

01/07/2004

Depth 2,820

Progress 700

AFE: 23681

Present Operation: Drlg

1/21/04

MAGNUM FEDERAL 5 COM 4

Drill from 2120' to 2182' ( Motor = 100 RPM - Rotary = 40 RPM Weight = 40k ) Service Rig Drill  
 from 2182' to 2497' ( Motor = 100 RPM - Rotary = 40 RPM Weight = 40k ) WLS @ 2418' = 3/40 Drill  
 from 2497' to 2820' ( Motor = 100 RPM - Rotary = 40 RPM Weight = 40k )

01/08/2004                      Depth                      3,345  
    Progress                      525  
 AFE:                      23681                      Present Operation:    Drlg

Drill from 2820' to 2945' ( Motor = 100 RPM - Rotary = 40 RPM Weight = 40k ) WLS @ 2776' = 1/40  
 Drill from 2945' to 3003' ( Motor = 100 RPM - Rotary = 40 RPM Weight = 40k ) Service Rig Drill  
 from 3003' to 3222' ( Motor = 100 RPM - Rotary = 40 RPM Weight = 40k ) WLS @ 2776' = 1.00 Drill  
 from 3222' to 3345' ( Motor = 100 RPM - Rotary = 40 RPM Weight = 40k )

01/09/2004                      Depth                      3,759  
    Progress                      414  
 AFE:                      23681                      Present Operation:    Drlg

Drill from 3345' to 3443' ( Motor = 100 RPM - Rotary = 40 RPM Weight = 40k ) Rig Service Drill  
 from 3443' to 3504' ( Motor = 100 RPM - Rotary = 40 RPM Weight = 40k ) Drill from 3504' to 3601'  
 ( Motor = 64 RPM - Rotary = 75 RPM Weight = 45k ) #1 Pmp Bearing Out WLS @ 3522' = 3/40 Drill  
 from 3601' to 3759' ( Motor = 64 RPM - Rotary = 75 RPM Weight = 45k ) #1 Pmp Bearing Out

01/10/2004                      Depth                      4,192  
    Progress                      433  
 AFE:                      23681                      Present Operation:    Drlg

Drill from 3759' to 3885' ( Motor = 64 RPM - Rotary = 75 RPM Weight = 45k ) #1 Pmp Bearing Out  
 Rig Service Drill from 3885' to 3979' ( Motor = 64 RPM - Rotary = 75 RPM Weight = 45k ) #1 Pmp  
 Bearing Out WLS @ 3900' = 1/20 Drill from 3979' to 4048' ( Motor = 64 RPM - Rotary = 75 RPM  
 Weight = 45k ) #1 Pmp Bearing Out Drill from 4048' to 4192' ( Motor = 100 RPM - Rotary = 40 RPM  
 Weight = 45k ) #1 Pmp Repaired

01/11/2004                      Depth                      4,210  
    Progress                      18  
 AFE:                      23681                      Present Operation:    Testing BOPs

Drill from 4,193' to 4,210' TD (motor = 100 RPM - rotary = 40 RPM - 40K to 42K bit wt.) - Reached TD  
 of the 12 1/4" hole @ 6:15 AM (CST) 1/10/04 Pump 30 Bbl. viscous sweep & circulate Drop Totco @ 4,210' =  
 3/40 & trip out with DP. Lay Down 13 jts of DP & 17 DC's RU casing crew & ran 97 Jts. 9 5/8" casing [4,216.67']  
 (See Casing Detail) set at 4,210' KB RU Halliburton Cement Head Circulate csg capacity Halliburton cemented 9  
 5/8" csg. (Lead) 1250 sx Interfill "C" + 1/4# Flocele per sx, followed by (Tail) 250 sx Premium Plus Cement + 1%  
 CaCl + 1/4# Flocele per sx - plug down & bumped with 1,400# at 08:20 PM (CST) 1/10/04 - circulated 232 sx  
 cement - BLM was notified - didn't witness job ND & PU BOP - set 9 5/8" casing slips in 150,000# - cut off 9 5/8"  
 casing - installed a 13 5/8" 3M X 11" 5M "B" Section Spool & tested same to 2,000# - OK - NU BOP's & choke  
 manifold - testing BOP's, choke manifold & associated equipment to 5,000# - BLM was notified - not witnessing  
 test

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Oil Cons.  
N.M. DIV-Dist. 2  
1301 W. Grand Avenue  
Artesia, NM 88210

FORM APPROVED  
OMB No. 1004-0135  
Expires July 31, 1996

**SUNDRY NOTICES AND REPORTS ON WELLS**

*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE - Other instructions on reverse side**

1. Type of Well  
☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator  
Gruy Petroleum Management Co.

3a. Address  
P. O. Box 140907 Irving, TX 75014-0907

3b. Phone No. (include area code)  
972-401-3111

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
1980' FSL & 1190' FEL; Unit I, Sec. 5, T18S, R31E

5. Lease Serial No.  
NMNM 106964

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.  
NMNM 106827

8. Well Name and No.  
Magnum 5 Federal Com No. 4

9. API Well No.  
30-015-33116

10. Field and Pool, or Exploratory Area  
Turkey Track, Morrow North

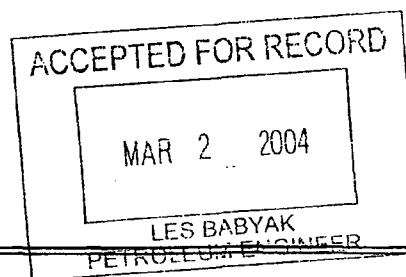
11. County or Parish, State  
Eddy Co. NM

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Set production casing
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

02-15-04 Ran 5-1/2" casing to 11950.' Cemented 1st stage with lead 300 sx Interfill "H" + 0.2% HR-7 + 5# Gilsonite + 1/4# Flocele.  
Cemented tail 590 sx Super H + 1.0# Salt + 0.4% CFR-3 + 0.5% LAP-1 + 0.25# D-Air 3000 + 5# Gilsonite + 1/4# Flocele + 0.25% HR-7. Bumped with 1900#. Circulated trace of cement only.  
Cemented 2nd stage lead 510 sx Interfill "C" + 1/4# Flocele, tail 100 sx Premium Neat Cement. Bumped with 2900#. No cement circulated. TOC 3710'.  
Released Patterson-UTI Rig #75 @ 11pm to go to the Mescalero 20 Federal No. 1.



14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

Natalie Krueger

Signature

Title

Production Assistant

Date

February 24, 2004

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice 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.

Office

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 jurisdiction.

(Instructions on reverse)



# Gruy Petroleum Management Co.

Magnum Hunter Production, Inc.

## Well History

January 13, 2004 Thru February 16, 2004

### OPERATED

#### SHUGART

##### GRUY PETROLEUM MANAGEMENT CO

77204 MAGNUM FEDERAL 5 COM 4

EDDY, NM

1900'FSL 990'FEL Sec 5 T18S R31E

W.I. Pct BCP 50.00 %

W.I. Pct ACP 50.00 %

Morrow / 12,500'

01/13/2004 Depth 5,060  
Progress 521  
AFE: 23681 Present Operation: Drlg

Drill from 4,539' to 4,616' (156 RPM motor - 40 RPM rotary - 30K to 35K bit wt.) Service rig Drill from 4,616' to 4,647' (156 RPM motor - 40 RPM rotary - 30K to 35K bit wt.) Teledrift @ 4,560' = 1/2o Rig repair on weight indicator Drill from 4,647' to 4,932' (156 RPM motor - 40 RPM rotary - 40K bit wt.) Teledrift @ 4,885' = 1/2o Drill from 4,932' to 5,060' (156 RPM motor - 40 RPM rotary - 40K bit wt.)

01/14/2004 Depth 5,531  
Progress 471  
AFE: 23681 Present Operation: Drlg

Drill from 5,060' to 5,122' (156 RPM motor - 40 RPM rotary - 40K bit wt.) Teledrift @ 5,075' = 1o Drill from 5,122' to 5,280' (156 RPM motor - 40 RPM rotary - 40K bit wt.) Service rig Drill from 5,280' to 5,312' (156 RPM motor - 40 RPM rotary - 40K bit wt.) Teledrift @ 5,265' = 1 1/2o Drill from 5,312' to 5,501' (156 RPM motor - 40 RPM rotary - 30K bit wt.) Teledrift @ 5,454' = 3o+ - WLS @ 5,414' = 3 3/4o Drill from 5,501' to 5,531' (163 RPM motor - 50 RPM rotary - 15K to 17K bit wt.)

01/15/2004 Depth 5,693  
Progress 162  
AFE: 23681 Present Operation: Drlg

Drill from 5,531' to 5,540' (163 RPM motor - 50 RPM rotary - 17K to 20K bit wt.) Drop Totco @ 5,478' = 4 1/2o & trip out to change up BHA - LD IBS, tri-collar, BHR, 3o Teledrift Sub, Bit Stabilizer Sub & Bit # 3 8 3/4" HTC HR-MS44C 3-15's serial # 5044847 in @ 4,210' out @ 5,540' cut 1,330' in 59 1/2 hrs. condition T3 B4. 1/16" out of gauge PU & TIH with Bit # 4, new BHA & DC's - test motor - OK - TIH with DP to 5,476' Ream & wash 64' from 5,476' to 5,540' & service rig Drill from 5,540' to 5,557' (160 RPM motor - 40 RPM rotary - 17K bit wt.) - Teledrift @ 5,514' = 3 3/4o Drill from 5,557' to 5,588' (160 RPM motor - 40 RPM rotary - 17K bit wt.) - Teledrift @ 5,545' = 4 3/4o Drill from 5,588' to 5,620' (160 RPM motor - 40 RPM rotary - 14K bit wt.) - Teledrift @ 5,577' = 2 3/4o Drill from 5,620' to 5,652' (160 RPM motor - 40 RPM rotary - 14K bit wt.) - Teledrift @ 5,609' = 2 3/4o Drill from 5,652' to 5,683' (160 RPM motor - 40 RPM rotary - 14K bit wt.) - Teledrift @ 5,640' = 4 3/4o Drill from 5,683' to 5,693' (160 RPM motor - 40 RPM rotary - 14K bit wt.)

01/16/2004 Depth 5,910  
Progress 217  
AFE: 23681 Present Operation: Drlg

Drill from 5,693' to 5,714' (160 RPM motor - 40 RPM rotary - 14K bit wt.) Teledrift @ 5,671' = 4 3/4o - WLS @ 5,663' = 4o Service rig Drill from 5,714' to 5,746' (160 RPM motor - 50 RPM rotary - 16K bit wt.) - Teledrift @ 5,703' = 3 3/4o Drill from 5,746' to 5,777' (160 RPM motor - 50 RPM rotary - 18K bit wt.) - Teledrift @ 5,734' = 2 3/4o Drill from 5,777' to 5,809' (160 RPM motor - 50 RPM rotary - 18K bit wt.) - Teledrift @ 5,766' = 3 3/4o Drill

Tuesday, 24 February, 2004

MAGNUM FEDERAL 5 COM 4

from 5,809' to 5,841' (162 RPM motor - 50 RPM rotary - 17K bit wt.) - Teledrift @ 5,798' = 3 3/4o Drill from 5,841' to 5,872' (162 RPM motor - 50 RPM rotary - 17K bit wt.) - Teledrift @ 5,829' = 3 3/4o Drill from 5,872' to 5,904' (162 RPM motor - 50 RPM rotary - 17K bit wt.) - Teledrift @ 5,861' = 4 3/4o Drill from 5,904' to 5,910' (162 RPM motor - 50 RPM rotary - 15K bit wt.)

01/17/2004

Depth 6,070

Progress 160

AFE: 23681

Present Operation: Drlg

Drill from 5,910' to 5,936' (162 RPM motor - 50 RPM rotary - 15K bit wt.) - Teledrift @ 5,896' = 4 3/4o Service rig Drill from 5,936' to 5,965' (162 RPM motor - 50 RPM rotary - 15K bit wt.) - Teledrift @ 5,924' = 3 3/4o Drill from 5,965' to 5,999' (162 RPM motor - 50 RPM rotary - 17K bit wt.) - Teledrift @ 5,956' = 4 3/4o Drill from 5,999' to 6,031' (162 RPM motor - 50 RPM rotary - 17K bit wt.) - Teledrift @ 5,988' = 4 3/4o Drill from 6,031' to 6,062' (162 RPM motor - 50 RPM rotary - 17K bit wt.) - Teledrift @ 6,019' = 4 3/4o Drill from 6,062' to 6,070' (162 RPM motor - 50 RPM rotary - 17K bit wt.)

01/18/2004

Depth 6,213

Progress 143

AFE: 23681

Present Operation: Drlg

Drill from 6,070' to 6,084' (162 RPM motor - 50 RPM rotary - 17K bit wt.) - Teledrift @ 6,041' = 4 3/4o Drop Totco @ 6,011' = 4 1/2o & trip out to change up BHA - LD motor & Bit # 4 8 3/4" HTC HR-MS44C 3-15's serial # 5044850 in @ 5,540' out @ 6,084' cut 544' in 59 hrs. condition = T2 B3 1/16" out of gauge PU & TIH with Bit # 5, new motor, BHR, BHA & DC's - test motor - OK TIH with DP to 6,016' - no problems Ream & wash 68' from 6,016' to 6,084' Drill from 6,084' to 6,129' (162 RPM motor - 50 RPM rotary - 20K bit wt.) - Teledrift @ 6,082' = 4 3/4o Drill from 6,129' to 6,161' (162 RPM motor - 50 RPM rotary - 20K bit wt.) - Teledrift @ 6,114' = 3 3/4o Drill from 6,161' to 6,192' (162 RPM motor - 50 RPM rotary - 20K bit wt.) - Teledrift @ 6,145' = 3 3/4o Drill from 6,192' to 6,213' (156 RPM motor - 50 RPM rotary - 23K bit wt.)

01/19/2004

Depth 6,509

Progress 296

AFE: 23681

Present Operation: Drlg

Drill from 6,213' to 6,224' (156 RPM motor - 50 RPM rotary - 23K bit wt.) - Teledrift @ 6,177' = 3 3/4o Drill from 6,224' to 6,256' (160 RPM motor - 50 RPM rotary - 26K bit wt.) - Teledrift @ 6,209' = 3 3/4o Drill from 6,256' to 6,287' (160 RPM motor - 50 RPM rotary - 28K bit wt.) - Teledrift @ 6,240' = 3 3/4o Service rig Drill from 6,287' to 6,319' (160 RPM motor - 40 RPM rotary - 29K bit wt.) - Teledrift @ 6,272' = 2 3/4o Drill from 6,319' to 6,351' (156 RPM motor - 40 RPM rotary - 28K bit wt.) - Teledrift @ 6,304' = 3 3/4o Drill from 6,351' to 6,383' (156 RPM motor - 40 RPM rotary - 28K bit wt.) - Teledrift @ 6,336' = 3 3/4o Drill from 6,383' to 6,414' (156 RPM motor - 40 RPM rotary - 28K bit wt.) - Teledrift @ 6,367' = 3 3/4o Drill from 6,414' to 6,446' (156 RPM motor - 40 RPM rotary - 28K bit wt.) - Teledrift @ 6,399' = 3 3/4o Drill from 6,446' to 6,477' (156 RPM motor - 40 RPM rotary - 28K bit wt.) - Teledrift @ 6,430' = 3 3/4o Drill from 6,477' to 6,509' (156 RPM motor - 40 RPM rotary - 28K bit wt.) - Teledrift @ 6,463' = 3 3/4o NOTE: Experiencing some motor vibration

01/20/2004

Depth 6,762

Progress 253

AFE: 23681

Present Operation: Drlg

Drill from 6,509' to 6,540' (156 RPM motor - 40 RPM rotary - 28K bit wt.) - Teledrift @ 6,493' = 4 3/4o Drill from 6,540' to 6,572' (149 RPM motor - 40 RPM rotary - 28K bit wt.) - Teledrift @ 6,525' = 4 3/4o Service rig Drill from 6,572' to 6,604' (149 RPM motor - 40 RPM rotary - 32K bit wt.) - Teledrift @ 6,557' = 4 3/4o Drill from 6,604' to 6,635' (149 RPM motor - 40 RPM rotary - 32K bit wt.) - Teledrift @ 6,588' = 4 3/4o Drill from 6,635' to 6,667' (149 RPM motor - 40 RPM rotary - 32K bit wt.) - Teledrift @ 6,620' = 4 3/4o Drill from 6,667' to 6,699' (149 RPM motor - 40 RPM rotary - 32K bit wt.) - Teledrift @ 6,652' = 3 3/4o Drill from 6,699' to 6,730' (149 RPM motor - 40 RPM rotary - 32K bit wt.) - Teledrift @ 6,683' = 3 3/4o Drill from 6,730' to 6,762' (149 RPM motor - 40 RPM rotary - 32K bit wt.) - Teledrift @ 6,715' = 4 3/4o NOTE: Experiencing some motor vibration early in the day - adding weight to the bit & slowing down the motor RPM's seems to help

01/21/2004 Depth 7,018  
Progress 256  
AFE: 23681 Present Operation: Drlg

Drill from 6,762' to 6,793' (149 RPM motor - 40 RPM rotary - 32K bit wt.) - Teledrift @ 6,746' = 3 3/4o Service rig  
Drill from 6,793' to 6,825' (149 RPM motor - 40 RPM rotary - 32K bit wt.) - Teledrift @ 6,778' = 3 3/4o Drill from  
6,825' to 6,856' (149 RPM motor - 40 RPM rotary - 32K bit wt.) - Teledrift @ 6,809' = 3 3/4o Drill from 6,856' to  
6,888' (149 RPM motor - 40 RPM rotary - 35K bit wt.) - Teledrift @ 6,841' = 3 3/4o Drill from 6,888' to 6,920'  
(149 RPM motor - 40 RPM rotary - 36K bit wt.) - Teledrift @ 6,873' = 2 3/4o Drill from 6,920' to 6,951' (149 RPM  
motor - 40 RPM rotary - 36K bit wt.) - Teledrift @ 6,904' = 3 3/4o Drill from 6,951' to 6,983' (149 RPM motor - 40  
RPM rotary - 38K bit wt.) - Teledrift @ 6,936' = 3 3/4o Drill from 6,983' to 7,018' (149 RPM motor - 40 RPM  
rotary - 38K bit wt.) - Teledrift @ 6,968' = 3 3/4o

01/22/2004 Depth 7,141  
Progress 123  
AFE: 23681 Present Operation: LD Fish & Fishing Tools

Drill from 7,018' to 7,046' (149 RPM motor - 40 RPM rotary - 38K bit wt.) - Teledrift @ 6,999' = 3  
3/4o Service rig Drill from 7,046' to 7,078' (149 RPM motor - 40 RPM rotary - 38K bit wt.) - Teledrift @ 7,031' = 2  
3/4o Drill from 7,078' to 7,109' (149 RPM motor - 40 RPM rotary - 38K bit wt.) - Teledrift @ 7,062' = 2 3/4o Drill  
from 7,109' to 7,141' (149 RPM motor - 40 RPM rotary - 38K bit wt.) - pressure spiked once & started having  
rotary torque - Teledrift @ 7,094' = 3 3/4o Drop Totco @ 7,054' = 3 1/2o & trip out for bit, checked IBS & BHR  
for gauge - both OK - LD IBS, BHR, Teledrift Sub, motor & Bit # 5 8 3/4" HTC HR-MS44C 3-15's serial #  
5045680 in @ 6,084' out @ 7,141' cut 1,057' in 86 hrs. cond. = T 6 - missing one  
shank with cone attached - in hole Wait on magnet TIH with 8" OD magnet with cut lip guide, DC's & DP  
to 7,118' Circulate & wash down from 7,118' to 7,141' & work magnet POOH (chaining out) - recovered  
entire fish of shank with cone attached - LD magnet & bit sub - bit condition = T 6 B 8 1/2" out of  
gauge

01/23/2004 Depth 7,405  
Progress 264  
AFE: 23681 Present Operation: Drlg

PU & TIH with Bit # 6, new motor, BHR, Teledrift Sub & IBS on DC's - test motor - OK Cut drilling line  
Service rig Continue TIH with 4 1/2" DP to 7,028' Ream & wash 113' from 7,028' to 7,141' Drill from  
7,141' to 7,173' (149 RPM motor - 40 RPM rotary - 28K bit wt.) - Teledrift @ 7,126' = 2 3/4o Drill  
from 7,173' to 7,205' (149 RPM motor - 40 RPM rotary - 28K bit wt.) - Teledrift @ 7,158' = 2 3/4o  
Drill from 7,205' to 7,236' (149 RPM motor - 40 RPM rotary - 28K bit wt.) - Teledrift @ 7,189' = 2  
3/4o Drill from 7,236' to 7,299' (149 RPM motor - 40 RPM rotary - 28K bit wt.) - Teledrift @ 7,252' =  
2 3/4o Drill from 7,299' to 7,363' (149 RPM motor - 40 RPM rotary - 28K bit wt.) - Teledrift @ 7,316'  
= 2 3/4o Drill from 7,363' to 7,405' (149 RPM motor - 40 RPM rotary - 28K bit wt.)

01/24/2004 Depth 7,825  
Progress 420  
AFE: 23681 Present Operation: Drlg

Drill from 7,405' to 7,457' (149 RPM motor - 40 RPM rotary - 33K bit wt.) - Teledrift @ 7,410' = 2  
3/4o Service rig Drill from 7,457' to 7,552' (149 RPM motor - 40 RPM rotary - 33K bit wt.) - Teledrift  
@ 7,502' = 2 3/4o Drill from 7,552' to 7,647' (149 RPM motor - 40 RPM rotary - 33K bit wt.) -  
Teledrift @ 7,600' = 2 3/4o Drill from 7,647' to 7,774' (149 RPM motor - 40 RPM rotary - 33K bit wt.) -  
Teledrift @ 7,727' = 2 3/4o Drill from 7,774' to 7,825' (149 RPM motor - 40 RPM rotary - 33K bit  
wt.)

01/25/2004 Depth 8,151  
Progress 326  
AFE: 23681 Present Operation: Drlg

Drill from 7,825' to 7,900' (149 RPM motor - 40 RPM rotary - 36K bit wt.) - Teledrift @ 7,853' = 3  
3/4o Service rig Drill from 7,900' to 7,995' (149 RPM motor - 40 RPM rotary - 36K bit wt.) - Teledrift  
@ 7,948' = 2 3/4o Drill from 7,995' to 8,090' (149 RPM motor - 40 RPM rotary - 36K bit wt.) -

Teledrift @ 8,043' = 2 3/4o Drill from 8,090' to 8,151' (149 RPM motor - 40 RPM rotary - 36K to 38K bit wt.)

01/26/2004

Depth 8,469  
Progress 318

AFE: 23681

Present Operation: Drlg

Drill from 8,151' to 8,185' (149 RPM motor - 40 RPM rotary - 40K bit wt.) - Teledrift @ 8,138' = 1 3/4o Service rig Drill from 8,185' to 8,311' (149 RPM motor - 40 RPM rotary - 40K bit wt.) - Teledrift @ 8,264' = 1 3/4o Drill from 8,311' to 8,437' (149 RPM motor - 40 RPM rotary - 40K bit wt.) - Teledrift @ 8,390' = 1 3/4o Drill from 8,437' to 8,469' (149 RPM motor - 40 RPM rotary - 40K bit wt.)

01/27/2004

Depth 8,813  
Progress 344

AFE: 23681

Present Operation: Drilling

Drill from 8,469' to 8,533' (149 RPM motor - 40 RPM rotary - 40K bit wt.) - Teledrift @ 8,486' = 2 3/4o Service rig Drill from 8,533' to 8,596' (149 RPM motor - 40 RPM rotary - 40K bit wt.) - Teledrift @ 8,549' = 1 3/4o Drill from 8,596' to 8,723' (149 RPM motor - 40 RPM rotary - 40K bit wt.) - Teledrift @ 8,676' = 3 3/4o Drill from 8,723' to 8,786' (149 RPM motor - 40 RPM rotary - 36K bit wt.) - Teledrift @ 8,739' = 2 3/4o Drill from 8,786' to 8,813' (149 RPM motor - 40 RPM rotary - 36K bit wt.)  
Note: Started adding brine water to mud system at 8,600' & brought MW up to 8.9 #/gal. at 8,660'

01/28/2004

Depth 8,987  
Progress 174

AFE: 23681

Present Operation: Drlg

Drill from 8,813' to 8,849' (149 RPM motor - 40 RPM rotary - 36K bit wt.) - Teledrift @ 8,802' = 1 3/4o Drop Totco @ 8,763' = 1 3/4o & trip out for bit - checked IBS & BHR for gauge - LD BHR, motor & Bit # 6 8 3/4" HTC HR-MS44C 3-16's serial # 5045679 in @ 7,141' out @ 8,849' cut 1,708' in 110 1/4 hrs. condition T6 B6 1/8" out of gauge Service rig TIH with Bit # 7, new motor, new BHR & remainder of BHA & DC's - test motor - OK TIH with 4 1/2" DP to 8,736' Ream & wash 113' from 8,736' to 8,849' Drill from 8,849' to 8,976' (149 RPM motor - 40 RPM rotary - 33K bit wt.) - Teledrift @ 8,929' = 2 3/4o Drill from 8,976' to 8,987' (149 RPM motor - 40 RPM rotary - 36K bit wt.) BGG = 2 units - trip gas = 35 units - max. gas = 20 units - Lag = 71 mins. - no shows

01/29/2004

Depth 9,444  
Progress 457

AFE: 23681

Present Operation: Drlg

Drill from 8,987' to 9,071' (149 RPM motor - 40 RPM rotary - 36K bit wt.) - Teledrift @ 9,024' = 2 3/4o Service rig Drill from 9,071' to 9,166' (149 RPM motor - 40 RPM rotary - 36K bit wt.) - Teledrift @ 9,115' = 2 3/4o Drill from 9,166' to 9,324' (149 RPM motor - 40 RPM rotary - 36K bit wt.) - Teledrift @ 9,277' = 3 3/4o Drill from 9,324' to 9,387' (149 RPM motor - 40 RPM rotary - 32K bit wt.) - Teledrift @ 9,340' = 2 3/4o Drill from 9,387' to 9,442' (149 RPM motor - 40 RPM rotary - 32K bit wt.) - Teledrift @ 9,403' = 2 3/4o Drill from 9,442' to 9,444' (149 RPM motor - 40 RPM rotary - 34K bit wt.)

01/30/2004

Depth 9,606  
Progress 162

AFE: 23681

Present Operation: Drlg

Drill from 9,444' to 9,514' (149 RPM motor - 40 RPM rotary - 34K bit wt.) - Teledrift @ 9,467' = 2 3/4o Service rig Drill from 9,514' to 9,541' (149 RPM motor - 40 RPM rotary - 36K bit wt.) - drilling rate slowed down to 4' per hr. - tried various weights up to 50,000# - no improvement in drilling rate - no torque - ran Teledrift @ 9,499' = 2 3/4o Drop Totco @ 9,459' = 2o & trip out for bit - checked IBS & BHR for gauge - both OK - LD motor & Bit # 7 8 3/4" HTC HR-S44CH 3-16's serial # 5039997 in @ 8,849' out @ 9,541' cut 692' in 40 1/4 hrs. condition T3 B3 in gauge - motor checked OK TIH with Bit # 8, new motor & remainder of BHA & DC's - test motor - OK TIH with 4 1/2" DP to 9,496' Ream & wash 45' from 9,496' to 9,541' Drill from 9,541' to 9,606'

(149 RPM motor - 40 RPM rotary - 32K bit wt.) - Teledrift @ 9,563' = 2 3/4o BGG = 4 units - trip gas = 28 units  
 - max. gas = 128 units - Lag = 68 mins. - no shows

01/31/2004 Depth 10,045  
 Progress 439  
 AFE: 23681 Present Operation: Drlg

Drill from 9,606' to 9,737' (149 RPM motor - 40 RPM rotary - 34K bit wt.) - Teledrift @ 9,690' = 2 3/4o Service rig Drill from 9,737' to 9,865' (149 RPM motor - 40 RPM rotary - 34K bit wt.) - Teledrift @ 9,818' = 2 3/4o Drill from 9,865' to 10,025' (149 RPM motor - 40 RPM rotary - 36K bit wt.) - Teledrift @ 9,978' = 3 3/4o Drill from 10,025' to 10,045' (149 RPM motor - 40 RPM rotary - 36K bit wt.)

02/01/2004 Depth 10,395  
 Progress 350  
 AFE: 23681 Present Operation: Drlg

Drill from 10,045' to 10,185' (149 RPM motor - 40 RPM rotary - 36K bit wt.) Teledrift @ 10,138' = 3 3/4o Drill from 10,185' to 10,217' (149 RPM motor - 40 RPM rotary - 36K bit wt.) Service rig Drill from 10,217' to 10,279' (149 RPM motor - 40 RPM rotary - 34 to 36K bit wt.) Install rotating head rubber at 10,279' Drill from 10,279' to 10,375' (149 RPM motor - 40 RPM rotary - 34 to 36K bit wt.) Teledrift @ 10,320' = 3 3/4o Drill from 10,375' to 10,395' (149 RPM motor - 40 RPM rotary - 34 to 36K bit wt.)

02/02/2004 Depth 10,655  
 Progress 260  
 AFE: 23681 Present Operation: Drlg

Drill from 10,395' to 10,439' (149 RPM motor - 40 RPM rotary - 36K bit wt.) - returned to the steel pits & started mud up @ 10,400' Service rig Drill from 10,439' to 10,567' (149 RPM motor - 40 RPM rotary - 36K bit wt.) Teledrift @ 10,520' = 3 3/4o Drill from 10,567' to 10,655' (149 RPM motor - 40 RPM rotary - 36K bit wt.)

02/03/2004 Depth 10,976  
 Progress 321  
 AFE: 23681 Present Operation: Drlg

Drill from 10,655' to 10,727' (149 RPM motor - 40 RPM rotary - 36K bit wt.) Service rig Drill from 10,727' to 10,820' (149 RPM motor - 40 RPM rotary - 36K bit wt.) Teledrift @ 10,773' = 5 3/4o Drill from 10,820' to 10,917' (149 RPM motor - 40 RPM rotary - 34K bit wt.) Teledrift @ 10,870' = 5 3/4o Drill from 10,917' to 10,976' (149 RPM motor - 40 RPM rotary - 34K bit wt.)

02/04/2004 Depth 11,050  
 Progress 74  
 AFE: 23681 Present Operation: Working Stuck Logging Tools

Drill from 10,976' to 11,012' (149 RPM motor - 40 RPM rotary - 34K bit wt.) - 1' to 2' gas flare Service rig Drill from 11,012' to 11,050' (149 RPM motor - 40 RPM rotary - 34K bit wt.) - 1' to 2' gas flare Teledrift @ 11,002' = 3 3/4o Circulate samples for mud logger Short trip - 10 stands out & trip in hole - no problems - no drag - no fill Circulate for open hole logs - 10' to 12' gas flare on bottoms up - then 1' to 2' gas flare Slug DP, drop Totco @ 10,988' = 4o & trip out to run open hole logs - checked IBS for gauge - OK - LD Teledrift Sub, BHR, motor & Bit # 8 RU Halliburton & TIH with open hole logging tools - Logger's TD = 11,046' - logged repeat section from 11,046' to 10,730' - TIH to 11,046' - started logging main pass & stuck bottom of logging tools at 10,875' - working stuck logging tools to as high as 8,000# pull - weak point in rope socket is 9,500# - have called Weatherford for a fisherman to cut & strip for logging tools (Spectral Density Dual Spaced Neutron Log & Dual Laterolog Micro Guard Log - 148.14' total tool length) BGG = 255 units - conn. gas = 0 units - max. gas (short trip) = 2,495 units - Lag = 79 mins. No shows

02/05/2004 Depth 11,050  
 Progress 0

Tuesday, 24 February, 2004

MAGNUM FEDERAL 5 COM 4



AFE: 23681 Present Operation: Chaining OOH with Fish

Worked stuck Halliburton Logging Tools at 10,875' leaving 7,500# pulled on stuck tools while waiting on Weatherford fishing tools (Billy Ables - Fisherman) - no success in freeing up stuck tools Cut & strip electric wire line - PU & make up fishing tools - RU Halliburton for cut & strip operations Trip in hole with fishing tools - cut & strip operations to 10,099' - had to pump down DP twice due to gas causing flow of mud out DP Installed rotating head rubber & pick up & TIH with 21 jts. DP to tag top of fish at 10,748' (DP tally) Latched onto fish with over shot & pulled up hole 93' with fish & Halliburton Logging wire line also coming up hole, confirming that we have fish Pulled out of rope socket with 10,000# & Halliburton spooled up their wire line - full recovery Circulate out gas - 10' to 30' gas flare immediately - dieing down to 1' to 3' flare after 2 1/2 hrs. POOH (chaining out) with fish - no problems - no drag

02/06/2004 Depth 11,128  
Progress 78

AFE: 23681 Present Operation: Drlg

POOH (chaining out) with fish - no problems - no drag - recovered entire fish of logging tools Break out & lay down logging tools & fishing tools - function test BOP - OK TIH with Bit # 9, new motor, BHA, DC's & 7 stands DP (used in fishing operations) - test motor - OK Cut 120' of drilling line Service rig POOH LD 21 jts. DP used in fishing operations Continued TIH with DP to 10,929' Wash & ream 121' from 10,929' to 11,050' - no problems - no fill - 10' to 30' gas flare Drill from 11,050' to 11,128' (149 RPM motor - 40 RPM rotary - 36K bit wt.) - no gas flare

02/07/2004 Depth 11,360  
Progress 232

AFE: 23681 Present Operation: Drlg

Drill from 11,128' to 11,139' (149 RPM motor - 40 RPM rotary - 36K bit wt.) Teledrift @ 11,092' = 3 3/4o Drill from 11,139' to 11,171' (149 RPM motor - 40 RPM rotary - 36K to 40K bit wt.) Service rig Drill from 11,171' to 11,267' (149 RPM motor - 40 RPM rotary - 36K to 40K bit wt.) Teledrift @ 11,220' = 4 3/4o Rig repair on pump Drill from 11,267' to 11,360' (149 RPM motor - 40 RPM rotary - 38K bit wt.) BGG = 31 units - conn. gas = 0 units - max. gas = 46 units - Lag = 81 mins. - no shows

02/08/2004 Depth 11,557  
Progress 197

AFE: 23681 Present Operation: Drlg

Drill from 11,360' to 11,394' (149 RPM motor - 40 RPM rotary - 38K bit wt.) Teledrift @ 11,347' = 4 3/4o Service rig Drill from 11,394' to 11,522' (149 RPM motor - 40 RPM rotary - 38K bit wt.) Teledrift @ 11,475' = 3 3/4o Drill from 11,522' to 11,557' (149 RPM motor - 40 RPM rotary - 38K bit wt.)

02/09/2004 Depth 11,737  
Progress 180

AFE: 23681 Present Operation: Preparing to Trip for Bit

Drill from 11,557' to 11,586' (149 RPM motor - 40 RPM rotary - 40K to 42K bit wt.) Service rig Drill from 11,586' to 11,649' (136 RPM motor - 40 RPM rotary - 40K to 42K bit wt.) Teledrift @ 11,602' = 3 3/4o Drill from 11,649' to 11,737' (136 RPM motor - 40 RPM rotary - 42K to 44K bit wt.) - drilling rate has slowed down after drilling break & bit won't drill

02/10/2004 Depth 11,841  
Progress 104

AFE: 23681 Present Operation: Drlg

Mix slug, slug DP, drop Totco @ 11,657' = 4o & trip out for bit - checked IBS & BHR for gauge - OK - LD X-O sub, Teledrift Sub, motor & Bit # 9 8 3/4" HTC HR-MS44C serial # 5045804 3-18's in @ 11,050' out @ 11,737' cut 687' in 79 3/4 hrs. condition = T3 B4 1/16" out of gauge - bad motor Service rig PU & TIH with Bit # 10, new motor, BHA & DC's - test motor - OK Continue TIH with 4 1/2" DP to 11,684' Ream & wash 53' from 11,684' to 11,737' Drill from 11,737' to 11,841' (136 RPM

motor - 40 RPM rotary - 42K bit wt.)

02/11/2004

Depth 11,904  
Progress 603

AFE: 23681

Present Operation: Drlg

Drill from 11,841' to 11,862' (136 RPM motor - 40 RPM rotary - 42K bit wt.) Service rig Drill from 11,862' to 11,887' (136 RPM motor - 40 RPM rotary - 42K bit wt.) - lost 200# pump pressure - checked both pumps & valves - no leaks found - pumped soft line - no pressure increase POOH chaining out looking for hole or crack - nothing found - LD IBS, BHR, motor (possible bad motor) & Bit # 10 8 3/4" HTC Rerun HR-S38CH 3-20's serial # 5042260 in @ 11,737' out @ 11,887' cut 150' in 17 1/4 hrs. condition = T3 B3 in gauge TIH with Bit # 11, bit sub & DC's Cut drilling line Continue TIH with 4 1/2" DP to 11,815' Ream & wash 72' from 11,815' to 11,887' Drill from 11,887' to 11,904' BGG = 41 units - trip gas = 53 units - max. gas = 61 units - Lag = 90 mins. - no shows

02/12/2004

Depth 11,950  
Progress 46

AFE: 23681

Present Operation: RU to Run OH Logs

Drill from 11,904' to 11,929' Service rig Drill from 11,929' to 11,950' TD - reached TD of 8 3/4" hole at 9:15 PM (CST) 2/11/2004 Circulate for open hole logs Slug DP, drop Totco @ 11,950' = 2o & POOH for open hole logs (chained out the 1st 20 stands) - 15,000# drag on 7th stand out - pull wear bushing - preparing to RU Halliburton to run open hole logs

02/13/2004

Depth 11,950  
Progress 0

AFE: 23681

Present Operation: Fishing Stuck Logging Tools

RU Halliburton & TIH with open hole logging tools - Logger's TD = 11,942' - stuck logging tools on bottom - worked stuck logging tools to a maximum safe pull of 7,500# - no success Service rig Wait on Weatherford fishing tools from Hobbs, NM & fisherman (Terry Browning) from Odessa, TX - roads slick with ice & snow Cut & strip electric wire line - PU & make up fishing tools - RU Halliburton for cut & strip operations Trip in hole with fishing tools - cut & strip operations to 11,063' - installed rotating head rubber & pick up & TIH with 24 jts. DP to tag top of fish at 11,804' (DP tally) - latched onto fish with overshot & pulled up hole 70' with fish & Halliburton Logging wire line also coming up hole, confirming that we have the fish (took 6,000# to 8,000# to pull fish free) - fish consists of Dual Laterolog - Micro Guard Log Tools & Spectral Density Dual Spaced Neutron Log Tools - total length of fish = 137.84'

02/14/2004

Depth 11,950  
Progress 0

AFE: 23681

Present Operation: CIRC at 11,950' TD

Pulled out of rope socket with 9,500# & Halliburton spooled up their wire line - full recovery POOH (chaining out) with fish - no problems - no drag - recovered entire fish of logging tools Break out & lay down logging tools & fishing tools TIH with bit, bit sub, DC's & DP to 7,008' Circulate at 7,008' Run Davis Fluid Caliper at 7,008' Continue TIH to 11,900' Wash 50' to bottom - (slight bridge 10' off bottom) & circulate at 11,950' TD

02/15/2004

Depth 11,950  
Progress 0

AFE: 23681

Present Operation: Running 5-1/2" Casing

Circulate at 11,950' TD Run Davis Fluid Caliper at 11,950' TD RU lay down machine - slug DP - POOH LD DP & DC's RU casing crew & running 5 1/2" casing

02/16/2004

Depth 11,950  
Progress 0

AFE: 23681

Present Operation: Released Rig

Running 5 1/2" casing (See Casing Detail) RU Halliburton & circulate to clear casing & bottoms up

Tuesday, 24 February, 2004

MAGNUM FEDERAL 5 COM 4

Hall. Cmt. 1st stage (Lead) 300 sx Interfill "H" + 0.2% HR-7 + 5# Gilsonite + 1/4# Flocele - then (Tail) 590 sx Super "H" + 1.0# Salt + 0.4% CFR-3 + 0.5% LAP-1 + .25# D-AIR 3000 + 5# Gilsonite + 1/4# Flocele & .25% HR-7 - plug down & bumped with 1,900# at 10:45 AM (CST) 2/15/04 - floats held OK Dropped bomb & opened DV Tool with 700# at 11:15 AM (CST) 2/15/04 - circulated through DV Tool - circulated a trace of cement, gilsonite, & flocele to pit from 1st stage Halliburton cemented 2nd stage (Lead) 510 sx Interfill "C" + 1/4# Flocele, (Tail) 100 sx Premium Neat Cement - plug down & closed DV Tool with 2,900# at 5:47 PM (CST) 2/15/04 - held OK - cement didn't circulate - cal. TOC to be at 3,710' - BLM was notified, didn't witness job - RD Halliburton ND & PU BOP - set 5 1/2" casing slips in 190,000# - cut off 5 1/2" casing - LD BOP - installed a 11" 5,000# X 7 1/16" 5,000# tubing head & tested head to 5,000# - OK - jetted & cleaned steel pits - Released Patterson-UTI Rig # 75 @ 11:00 PM (CST) 2/15/04 to go to the Mescalero "20" Fed. # 1 - Pro Wireline ran temperature survey after 10 hrs. - TOC @ 2,460' (GL) on 2nd stage RD Rig

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Oil Cons.  
N.M. DIV-Dist. 2  
1301 W. Grand Avenue  
Artesia, NM 88210

FORM APPROVED  
OMB No. 1004-0135  
Expires July 31, 1996

**SUNDRY NOTICES AND REPORTS ON WELLS**

**Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.**

**SUBMIT IN TRIPLICATE - Other instructions on reverse side**

1. Type of Well  
☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator  
Gruy Petroleum Management Co.

3a. Address  
P. O. Box 140907 Irving, TX 75014-0907

3b. Phone No. (include area code)  
972-401-3111

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
1980' FSL & 1190' FEL; Unit I, Sec. 5, T18S, R31E

5. Lease Serial No.  
NMNM 106964

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.  
~~NMNM 106827~~

8. Well Name and No.  
Magnum 5 Federal ~~Co~~ No. 4

9. API Well No.  
30-015-33116

10. Field and Pool, or Exploratory Area  
Shugart; Strawn North

11. County or Parish, State  
Eddy Co. NM

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Amended C-102
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Attached, please find an amended C-102. We inadvertently sent in the old C-102 with our 3160-4. Please forgive us for imposing this inconvenience on you.

14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

Natalie Krueger

Signature

Title

Production Assistant

Date

May 4, 2004

ACCEPTED FOR RECORD THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

(GRIG SCD) DAVID R. GLASS  
MAY 11 2004

Title

Date

Conditions of approval, if any, are attached. Approval of this notice 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.

Office

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 jurisdiction.

(Instructions on reverse)

## DISTRICT II

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

## OIL CONSERVATION DIVISION

**P.O. Box 2088**

**Santa Fe, New Mexico 87504-2088**

### DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

## DISTRICT IV

P.O. BOX 2088, SANTA FE, N.M. 87504-2088

## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number		Pool Code	Pool Name
			Shugart; Strawn North
Property Code	Property Name		Well Number
	MAGNUM 5 FEDERAL COM.		4
OGHD No. 162683	Operator Name		Elevation
	GRUY PETROLEUM MANAGEMENT CO.		3711'

### Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	5	18-S	31-E		1980	SOUTH	1190	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 160	Joint or Infill Y	Consolidation Code C	Order No.						

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

LOT 4	LOT 3	LOT 2	LOT 1
39.97 Ac.	39.99 Ac.	40.01 Ac.	40.03 Ac.
<div style="border: 1px solid black; padding: 10px; margin: 0 auto; width: 80%;"> <p><b>RECEIVED</b></p> <p>MAY 13 2004</p> <p>OCB-ARTESIA</p> </div>		<p>Magnum 5 Fed Com 1 Morrow</p>	
<p>GEODETIC COORDINATES NAD 1927 NME Y = 645784.0 N X = 637331.5 E LAT. - 32°46'28.40"N LONG. - 103°53'11.49"W</p>		<p>Magnum 5 Fed Com 4</p>	
<p>Magnum Federal 5 Com 2</p>		<p>1650'</p> <p>3704.5'</p> <p>3702.4'</p> <p>700'</p> <p>190'</p> <p>3708.9'</p> <p>3708.6'</p> <p>1980'</p> <p>940'</p> <p>710'</p> <p>660'</p> <p>660'</p>	

### OPERATOR CERTIFICATION

*I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.*

Zeno Farris

Signature Zeno Farris

Printed Name Mgr. Operations Admin.

Title May 3, 2004

Date

### SURVEYOR CERTIFICATION

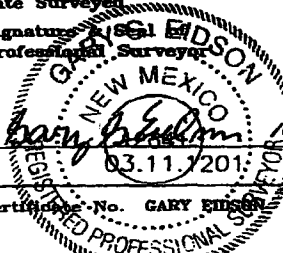
*I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.*

OCTOBER 23, 2003

Date Surveyed LA

Signature GARY EIDSON

Professional Surveyor



Certification No. GARY EIDSON 12641

Magnum Federal 5 Com 3



CMD : ONGARD 06/04/04 13:20:12  
OG6IWCN INQUIRE WELL COMPLETIONS OGOMES -TPQ7

API Well No : 30 15 33116 Eff Date : 04-04-2004 WC Status :  
Pool Idn : 97239 SHUGART; STRAWN  
OGRID Idn : 162683 GRUY PETROLEUM MANAGEMENT CO.  
Prop Idn : 26601 MAGNUM 5 FEDERAL COM

Well No : 004  
GL Elevation: 3711

U/L Sec Township Range North/South East/West Prop/Act (P/A)  
-----  
B.H. Locn : I 5 18S 31E FTG 1980 F S FTG 1190 F E P  
Lot Identifier:  
Dedicated Acre:  
Lease Type : F  
Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :

M0025: Enter PF keys to scroll  
PF01 HELP PF02 PF03 EXIT PF04 GOTO PF05 PF06  
PF07 PF08 PF09 PF10 NEXT-WC PF11 HISTORY PF12 NXTREC

CMD : ONGARD 06/04/04 14:54:36  
OG6IWCN INQUIRE WELL COMPLETIONS OGOMES -TPQ7

API Well No : 30 15 31312 Eff Date : 11-07-2000 WC Status : A  
Pool Idn : 85305 SHUGART;MORROW, NORTH (GAS)  
OGRID Idn : 162683 GRUY PETROLEUM MANAGEMENT CO.  
Prop Idn : 26601 MAGNUM 5 FEDERAL COM

Well No : 001  
GL Elevation: 3702

U/L Sec Township Range North/South East/West Prop/Act (P/A)  
-----  
B.H. Locn : G 5 18S 31E FTG 1650 F N FTG 1650 F E P  
Lot Identifier:  
Dedicated Acre: 320.04  
Lease Type : F  
Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :

M0025: Enter PF keys to scroll  
PF01 HELP PF02 PF03 EXIT PF04 GOTO PF05 PF06  
PF07 PF08 PF09 PF10 NEXT-WC PF11 HISTORY PF12 NXTREC

OGOMES -TPQ7  
Page No : 1

Page No : 1

Well No : 001

### Simultaneous Dedication:

Dedicated Land:

S	Base U/L	Sec	Twp	Rng	Acreage	L/W	Ownership	Lot Idn
G	5	18S	31E		40.00	N	FD	
H	5	18S	31E		40.00	N	FD	
I	5	18S	31E		40.00	N	FD	
J	5	18S	31E		40.00	N	FD	
O	5	18S	31E		40.00	N	FD	
P	5	18S	31E		40.00	N	FD	
A	1	5	18S	31E	40.03	N	FD	
B	2	5	18S	31E	40.01	N	FD	

PF06 CONFIRM

PF12 RECONF

CMD : ONGARD 06/04/04 14:54:49  
 OG6IPRD INQUIRE PRODUCTION BY POOL/WELL OGOMES -TPQ7  
 Page No: 1

OGRID Identifier : 162683 GRUY PETROLEUM MANAGEMENT CO.  
 Pool Identifier : 85305 SHUGART;MORROW, NORTH (GAS)

API Well No : 30 15 31312 Report Period - From : 01 2003 To : 04 2004

API Well No	Property Name	Prodn. Days MM/YY Prod	Production Volumes Gas Oil Water	Well Stat
30 15 31312	MAGNUM 5 FEDERAL COM	01 03 31	46869 652 11189	P
30 15 31312	MAGNUM 5 FEDERAL COM	02 03 28	41049 521 11325	P
30 15 31312	MAGNUM 5 FEDERAL COM	03 03 31	44622 498 12426	P
30 15 31312	MAGNUM 5 FEDERAL COM	04 03 30	37630 459 12170	P
30 15 31312	MAGNUM 5 FEDERAL COM	05 03 31	23467 294 8692	P
30 15 31312	MAGNUM 5 FEDERAL COM	06 03 30	20546 206 4138	P
30 15 31312	MAGNUM 5 FEDERAL COM	07 03 30	17433 201 5905	P

Reporting Period Total (Gas, Oil) : -----

M0025: Enter PF keys to scroll

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM  
 PF07 BKWD PF08 FWD PF09 PF10 NXTPool PF11 NXTOGD PF12

CMD :  
OG6IPRD INQUIRE PRODUCTION BY POOL/WELL

06/04/04 14:54:51  
OGOMES -TPQ7  
Page No: 2

OGRID Identifier : 162683 GRUY PETROLEUM MANAGEMENT CO.  
Pool Identifier : 85305 SHUGART;MORROW, NORTH (GAS)

API Well No : 30 15 31312 Report Period - From : 01 2003 To : 04 2004

API Well No	Property Name	Prodn. Days MM/YY Prod	Production Volumes Gas Oil Water	Well Stat
30 15 31312	MAGNUM 5 FEDERAL COM	08 03 31	14095	157 4960 P
30 15 31312	MAGNUM 5 FEDERAL COM	09 03 30	14440	163 6476 P
30 15 31312	MAGNUM 5 FEDERAL COM	10 03 31	14017	101 6182 P
30 15 31312	MAGNUM 5 FEDERAL COM	11 03 30	22133	202 10158 P
30 15 31312	MAGNUM 5 FEDERAL COM	12 03 28	19172	228 9453 P
30 15 31312	MAGNUM 5 FEDERAL COM	01 04 31	20211	213 11150 P
30 15 31312	MAGNUM 5 FEDERAL COM	02 04 29	23955	183 11758 P
Reporting Period Total (Gas, Oil) :		382479	4293	135696

E0049: User may continue scrolling.

PF01 HELP PF02 PF03 EXIT PF04 GOTO PF05 PF06 CONFIRM  
PF07 BKWD PF08 FWD PF09 PF10 NXTPool PF11 NXTOGD PF12



CMD : ONGARD 06/04/04 14:54:53  
 OG6IPRD INQUIRE PRODUCTION BY POOL/WELL OGOMES -TPQ7  
 Page No: 3

OGRID Identifier : 162683 GRUY PETROLEUM MANAGEMENT CO.

Pool Identifier : 85305 SHUGART;MORROW, NORTH (GAS)

API Well No : 30 15 31312 Report Period - From : 01 2003 To : 04 2004

API Well No	Property Name	Prodn. Days MM/YY Prod	Production Volumes Gas Oil Water Stat
30 15 31312	MAGNUM 5 FEDERAL COM	03 04 31	22840 215 9714 P

Reporting Period Total (Gas, Oil) : 382479 4293 135696

E0049: User may continue scrolling.

PF01 HELP PF02 PF03 EXIT PF04 GOTO PF05 PF06 CONFIRM  
 PF07 BKWD PF08 FWD PF09 PF10 NXTPPOOL PF11 NXTOGD PF12

CMD : ONGARD 06/04/04 14:54:58  
OG6IWCMD INQUIRE WELL COMPLETIONS OGOMES -TPQ7

API Well No : 30 15 31312 Eff Date : 11-07-2000 WC Status : P  
Pool Idn : 86500 TURKEY TRACK;MORROW, NORTH (GAS)  
OGRID Idn : 162683 GRUY PETROLEUM MANAGEMENT CO.  
Prop Idn : 26601 MAGNUM 5 FEDERAL COM

Well No : 001  
GL Elevation: 3702

U/L Sec Township Range North/South East/West Prop/Act (P/A)  
-----  
B.H. Locn : G 5 18S 31E FTG 1650 F N FTG 1650 F E P  
Lot Identifier:  
Dedicated Acre:  
Lease Type : F  
Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :

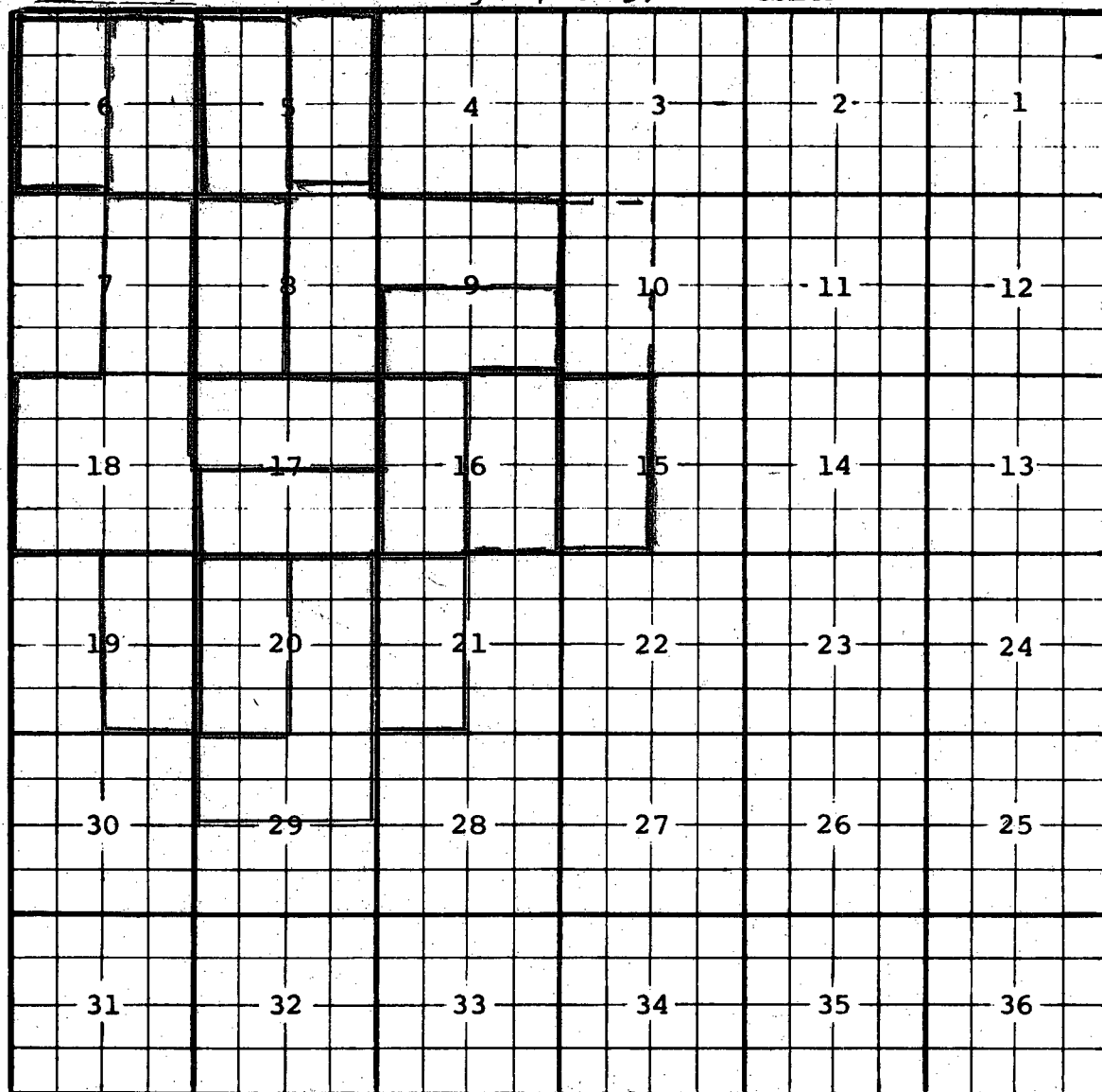
PF01 HELP PF02 PF03 EXIT PF04 GOTO PF05 PF06  
PF07 PF08 PF09 PF10 NEXT-WC PF11 HISTORY PF12 NXTREC

County Eddy Pool North Shugart-Morrow Gas

TOWNSHIP 18 South

Range 31 East

NMPM



Description:  $\frac{E}{2}$  Sec 20,  $\frac{N}{2}$  Sec 29 (R-5609, 1-1-78)

Ext:  $\frac{E}{2}$  Sec 19,  $\frac{W}{2}$  Sec 20 (R-5729, 6-1-78)

Ext:  $\frac{W}{2}$  Sec 21 (R-5838, 11-1-78) Ext:  $\frac{W}{2}$  Sec 16 (R-6169, 11-1-79)

Ext:  $\frac{S}{2}$  Sec 17 (R-6368, 7-1-80) Ext:  $\frac{E}{2}$  Sec 7, All Sec 18 (R-6698, 6-2-81)

Ext:  $\frac{S}{2}$  Sec 9 (R-8945, 5-31-89) Ext:  $\frac{E}{2}$  Sec 16 (R-9326, 11-1-90)

Ext:  $\frac{N}{2}$  Sec 17 (R-9418, 2-1-91) Ext:  $\frac{W}{2}$  Sec 8 (R-11411, 7-10-00)

Ext:  $\frac{W}{2}$  Sec 5 (R-11444, 8-31-00) Ext:  $\frac{E}{2}$  Sec 6 (R-11534, 2-8-01)

Ext:  $\frac{E}{2}$  Sec 5 (R-11583, 5-7-01) Ext:  $\frac{E}{2}$  Sec 8,  $\frac{N}{2}$  Sec 9 (R-11678, 10-23-01)

Ext:  $\frac{W}{2}$  Sec 6 (R-11691, 11-28-01) Ext:  $\frac{W}{2}$  Sec 15 (R-12102, 2-10-04)

CMD : ONGARD 06/04/04 13:19:33  
 OG6IWCM INQUIRE WELL COMPLETIONS OGOMES -TPQ7

API Well No : 30 15 32651 Eff Date : 05-01-2003 WC Status : A  
 Pool Idn : 97239 SHUGART; STRAWN  
 OGRID Idn : 162683 GRUY PETROLEUM MANAGEMENT CO.  
 Prop Idn : 26601 MAGNUM 5 FEDERAL COM

Well No : 003  
 GL Elevation: 3736

U/L Sec Township Range North/South East/West Prop/Act (P/A)  
 -----  
 B.H. Locn : P 5 18S 31E FTG 660 F S FTG 710 F E P  
 Lot Identifier:  
 Dedicated Acre: 160.00  
 Lease Type : F  
 Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :

E6317: No more recs. for this api well no.  
 PF01 HELP PF02 PF03 EXIT PF04 GOTO PF05 PF06  
 PF07 PF08 PF09 PF10 NEXT-WC PF11 HISTORY PF12 NXTREC

CMD : ONGARD  
 OG6ACRE C102-DEDICATE ACREAGE

06/04/04 13:19:37  
 OGOMES -TPQ7  
 Page No : 1

API Well No : 30 15 32651 Eff Date : 01-10-2003  
 Pool Idn : 97239 SHUGART; STRAWN  
 Prop Idn : 26601 MAGNUM 5 FEDERAL COM  
 Spacing Unit : 57125 OCD Order :  
 Sect/Twp/Rng : 5 18S 31E Acreage : 160.00 Revised C102? (Y/N) :  
 Dedicated Land:

S	Base U/L	Sec	Twp	Rng	Acreage	L/W	Ownership	Lot	Idn
I	5	5	18S	31E	40.00	N	FD		
J	5	5	18S	31E	40.00	N	FD		
O	5	5	18S	31E	40.00	N	FD		
P	5	5	18S	31E	40.00	N	FD		

E0005: Enter data to modify or PF keys to scroll  
 PF01 HELP PF02 PF03 EXIT PF04 GOTO PF05 PF06 CONFIRM  
 PF07 BKWD PF08 FWD PF09 PF10 LAND PF11 NXTSEC PF12 RECONF

CMD : ONGARD 06/04/04 13:19:46  
 OG6IPRD INQUIRE PRODUCTION BY POOL/WELL OGOMES -TPQ7  
 Page No: 1

OGRID Identifier : 162683 GRUY PETROLEUM MANAGEMENT CO.

Pool Identifier : 97239 SHUGART; STRAWN

API Well No : 30 15 32651 Report Period - From : 01 2003 To : 04 2004

API Well No	Property Name	Prodn. Days MM/YY Prod	Production Volumes Gas Oil Water	Well Stat
30 15 32651	MAGNUM 5 FEDERAL COM	05 03 27	56852 10505 168	F
30 15 32651	MAGNUM 5 FEDERAL COM	06 03 30	48317 10724	F
30 15 32651	MAGNUM 5 FEDERAL COM	07 03 31	45557 9295	F
30 15 32651	MAGNUM 5 FEDERAL COM	08 03 31	44255 8699	F
30 15 32651	MAGNUM 5 FEDERAL COM	09 03 30	43927 7939	F
30 15 32651	MAGNUM 5 FEDERAL COM	10 03 31	45371 6247	F
30 15 32651	MAGNUM 5 FEDERAL COM	11 03 30	44906 6085	F

Reporting Period Total (Gas, Oil) :

M0025: Enter PF keys to scroll

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM  
 PF07 BKWD PF08 FWD PF09 PF10 NXTPool PF11 NXTOGD PF12

CMD :  
OG6IPRD INQUIRE PRODUCTION BY POOL/WELL

06/04/04 13:19:49  
OGOMES -TPQ7  
Page No: 2

OGRID Identifier : 162683 GRUY PETROLEUM MANAGEMENT CO.

Pool Identifier : 97239 SHUGART; STRAWN

API Well No : 30 15 32651 Report Period - From : 01 2003 To : 04 2004

API Well No	Property Name	Prodn. Days		Production Volumes			Well Stat
		MM/YY	Prod	Gas	Oil	Water	
30	15 32651 MAGNUM 5 FEDERAL COM	12 03	28	41860	5263		F
30	15 32651 MAGNUM 5 FEDERAL COM	01 04	31	46541	6153		F
30	15 32651 MAGNUM 5 FEDERAL COM	02 04	29	41048	4664		F
30	15 32651 MAGNUM 5 FEDERAL COM	03 04	31	45398	4700		F

Reporting Period Total (Gas, Oil) : 504032 80274 194

E0049: User may continue scrolling.

PF01 HELP PF02 PF03 EXIT PF04 GOTO PF05 PF06 CONFIRM  
PF07 BKWD PF08 FWD PF09 PF10 NXTPPOOL PF11 NXTOGD PF12

CMD : ONGARD 06/04/04 13:18:54  
 OG6IWCW INQUIRE WELL COMPLETIONS OGOMES -TPQ7

API Well No : 30 15 31570 Eff Date : 01-10-2003 WC Status : A  
 Pool Idn : 97239 SHUGART; STRAWN  
 OGRID Idn : 162683 GRUY PETROLEUM MANAGEMENT CO.  
 Prop Idn : 26601 MAGNUM 5 FEDERAL COM

Well No : 002  
 GL Elevation: 3707

U/L	Sec	Township	Range	North/South	East/West	Prop/Act (P/A)
B.H. Locn	: 0	5	18S	31E	FTG 660 F S FTG 1650 F E	P
Lot Identifier:						
Dedicated Acre:	160.00					
Lease Type	: F					
Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :						

E6317: No more recs. for this api well no.  
 PF01 HELP PF02 PF03 EXIT PF04 GOTO PF05 PF06  
 PF07 PF08 PF09 PF10 NEXT-WC PF11 HISTORY PF12 NXTREC



CMD :  
OG6ACRE  
ONGARD  
C102-DEDICATE ACREAGE  
06/04/04 13:19:00  
OGOMES -TPQ7  
Page No : 1

API Well No : 30 15 31570 Eff Date : 01-10-2003  
Pool Idn : 97239 SHUGART; STRAWN  
Prop Idn : 26601 MAGNUM 5 FEDERAL COM  
Spacing Unit : 57125 OCD Order :  
Sect/Twp/Rng : 5 18S 31E Acreage : 160.00  
Dedicated Land: Simultaneous Dedication:  
Revised C102? (Y/N) :

Well No : 002

S	Base	U/L	Sec	Twp	Rng	Acreage	L/W	Ownership	Lot	Idn
I	5	18S	31E	40.00	N	FD				
J	5	18S	31E	40.00	N	FD				
O	5	18S	31E	40.00	N	FD				
P	5	18S	31E	40.00	N	FD				

E0005: Enter data to modify or PF keys to scroll

PF01 HELP	PF02	PF03 EXIT	PF04 GoTo	PF05	PF06 CONFIRM
PF07 BKWD	PF08 FWD	PF09	PF10 LAND	PF11 NXTSEC	PF12 RECONF

CMD :  
OG6IPRD INQUIRE PRODUCTION BY POOL/Well

06/04/04 13:19:09  
OGOMES -TPQ7  
Page No: 1

OGRID Identifier : 162683 GRUY PETROLEUM MANAGEMENT CO.

Pool Identifier : 97239 SHUGART; STRAWN

API Well No : 30 15 31570 Report Period - From : 01 2003 To : 04 2004

API Well No	Property Name	Prodn. Days MM/YY Prod	Production Volumes Gas Oil Water	Well Stat
30 15 31570	MAGNUM 5 FEDERAL	01 03 31	16899 4730	F
30 15 31570	MAGNUM 5 FEDERAL	02 03 28	80702 22202	F
30 15 31570	MAGNUM 5 FEDERAL	03 03 31	86619 18594	F
30 15 31570	MAGNUM 5 FEDERAL	04 03 30	81005 17392	F
30 15 31570	MAGNUM 5 FEDERAL	05 03 27	67918 11532	F
30 15 31570	MAGNUM 5 FEDERAL	06 03 30	77138 11264	F
30 15 31570	MAGNUM 5 FEDERAL	07 03 31	73651 9408	F

Reporting Period Total (Gas, Oil) :

M0025: Enter PF keys to scroll

PF01 HELP PF02 PF03 EXIT PF04 GOTO PF05 PF06 CONFIRM  
PF07 BKWD PF08 FWD PF09 PF10 NXTPool PF11 NXTOGD PF12

CMD : ONGARD  
 OG6IPRD INQUIRE PRODUCTION BY POOL/Well

06/04/04 13:19:12  
 OGOMES -TPQ7  
 Page No: 2

OGRID Identifier : 162683 GRUY PETROLEUM MANAGEMENT CO.

Pool Identifier : 97239 SHUGART; STRAWN

API Well No : 30 15 31570 Report Period - From : 01 2003 To : 04 2004

API Well No	Property Name	Prodn. Days MM/YY Prod	Production Volumes Gas Oil Water	Well Stat
30 15 31570	MAGNUM 5 FEDERAL COM	08 03 31	66734 8872	13 F
30 15 31570	MAGNUM 5 FEDERAL COM	09 03 30	62978 8012	31 F
30 15 31570	MAGNUM 5 FEDERAL COM	10 03 31	65309 8307	15 F
30 15 31570	MAGNUM 5 FEDERAL COM	11 03 30	63630 9081	5 F
30 15 31570	MAGNUM 5 FEDERAL COM	12 03 30	59375 7321	4 F
30 15 31570	MAGNUM 5 FEDERAL COM	01 04 31	59281 7874	20 F
30 15 31570	MAGNUM 5 FEDERAL COM	02 04 29	54304 6871	F
Reporting Period Total (Gas, Oil) :		968165	156961	298

E0049: User may continue scrolling.

PF01 HELP PF02 PF03 EXIT PF04 GOTO PF05 PF06 CONFIRM  
 PF07 BKWD PF08 FWD PF09 PF10 NXTPool PF11 NXTOGD PF12

CMD :  
OG6IPRD INQUIRE PRODUCTION BY POOL/Well

06/04/04 13:19:14  
OGOMES -TPQ7  
Page No: 3

OGRID Identifier : 162683 GRUY PETROLEUM MANAGEMENT CO.

Pool Identifier : 97239 SHUGART; STRAWN

API Well No : 30 15 31570 Report Period - From : 01 2003 To : 04 2004

API Well No		Property Name	Prodn. Days	Production Volumes		Well
			MM/YY Prod	Gas	Oil	Water Stat
30	15	31570 MAGNUM 5 FEDERAL COM	03 04 31	52622	5501	19 F

Reporting Period Total (Gas, Oil) : 968165 156961 298

E0049: User may continue scrolling.

PF01 HELP PF02 PF03 EXIT PF04 GOTO PF05 PF06 CONFIRM  
PF07 BKWD PF08 FWD PF09 PF10 NXTPool PF11 NXTOGD PF12

**STATE OF NEW MEXICO  
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:**

**CASE NO. 12940  
ORDER NO. R-11856**

**APPLICATION OF MEWBOURNE OIL COMPANY FOR POOL CREATION  
AND SPECIAL POOL RULES, EDDY COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This case came on for hearing at 8:15 a.m. on October 10, 2002, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 28th day of October, 2002, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner,

**FINDS THAT:**

(1) Due public notice has been given, and the Division has jurisdiction of this case and its subject matter.

(2) The applicant, Mewbourne Oil Company ("Mewbourne"), seeks the creation of a new pool for production of oil from the Strawn formation comprising the NE/4 of Section 8, Township 18 South, Range 31 East, NMPM, Eddy County, New Mexico.

(3) Mewbourne further seeks to establish special pool rules for the proposed Strawn pool, including provisions for:

- (a) 160-acre spacing and proration units and designated well location requirements such that wells shall be located no closer than 660 feet to the outer boundary of the spacing unit nor closer than 330 feet to any quarter-quarter section line or subdivision inner boundary;

- (b) a gas-oil ratio ("GOR") limitation of 4,000 cubic feet of gas per barrel of oil; and
- (c) a special depth bracket allowable of 1,120 barrels of oil per day.

(4) Gruy Petroleum Management Company, Harvey E. Yates Company, Oxy USA WTP L.P., and Oxy USA, Inc. appeared at the hearing through legal counsel.

(5) Division records show that the proposed Strawn pool is located approximately 2.5 miles east-southeast of the Cedar Lake-Strawn Pool, which comprises all of Section 2, Township 18 South, Range 30 East, NMPM; approximately 2.5 miles southeast of the North Cedar Lake-Strawn Pool, which comprises the S/2 of Section 25 and the E/2 of Section 26, Township 17 South, Range 30 East, NMPM; and approximately 3 miles southeast of the Cedar Lake Reef-Strawn Pool, which comprise the NW/4 of Section 25, Township 17 South, Range 30 East, NMPM, Eddy County, New Mexico.

(6) The Cedar Lake-Strawn, North Cedar Lake-Strawn and Cedar Lake Reef-Strawn Pools are currently classified as oil pools. The rules governing each of these pools are summarized as follows:

<u>Pool</u>	<u>Spacing</u>	<u>Well Setback</u>	<u>GOR Limitation</u>
Cedar Lake-Strawn	160 acres	660'-Outer Boundary 330'-Interior Boundaries	4,000:1
North Cedar Lake-Strawn	40 acres	330'-Outer Boundary	2,000:1
Cedar Lake Reef-Strawn	160 acres	660'-Outer Boundary 330'-Interior Boundaries	4,000:1

(7) In June/July, 2001, Mewbourne drilled its Fren "8" Federal Com Well No. 2 (API No. 30-015-31794) at a standard gas well location 1170 feet from the North line and 750 feet from the East line (Unit A) of Section 8, Township 18 South, Range 31 East, NMPM, to test the North Shugart-Morrow Gas Pool. The well was drilled to a total depth of 11,935 feet and was completed in the Morrow formation through perforations from 11,686 feet to 11,846 feet. In September, 2002 the Morrow interval was abandoned and the well was plugged back and completed in the Strawn formation through the perforated interval from 10,692 feet to 10,884 feet.

(8) In June/July, 2002, Mewbourne drilled its Fren "8" Federal Com Well No. 3 (API No. 30-015-32313) at an unorthodox gas well location 2276 feet from the North line and 1471 feet from the East line (Unit G) of Section 8, to test the Atoka formation. The well was drilled to a total depth of approximately 11,342 feet. In August, 2002 the well was completed in the Strawn formation through the perforated interval from 10,462 feet to 10,942 feet.

(9) The applicant presented geologic and engineering evidence that demonstrate that:

- (a) the Fren "8" Federal Com Wells No. 2 and 3 are producing from a thick carbonate buildup in the Strawn interval that averages approximately 505 feet thick. This carbonate buildup appears to be limited to a small area that is contained within Section 8 and a portion of Section 5;
- (b) this carbonate section is separate and distinct from the carbonate sections present within the Cedar Lake-Strawn, North Cedar Lake-Strawn, and Cedar Lake Reef-Strawn Pools;
- (c) the porosity within the Fren "8" Federal Com Well No. 2 appears to be better than the porosity found within the EOG Resources, Inc. Oak Lake "25" Federal Well No. 1, located in Unit D of Section 25, Township 17 South, Range 30 East, NMPM, being the discovery well for the Cedar Lake Reef-Strawn Pool; and
- (d) bottomhole pressure data provides additional evidence to demonstrate separation between Mewbourne's wells in Section 8 and the other Strawn producing wells located in the Cedar Lake-Strawn, North Cedar Lake-Strawn and Cedar Lake Reef-Strawn Pools.

(10) The geologic evidence presented by Mewbourne demonstrates that the Fren "8" Federal Com Wells No. 2 and 3 have discovered a new common source of supply in the Strawn formation.

(11) A new pool for the production of oil from the Strawn formation should be created and designated the Shugart-Strawn Pool.

(12) The Shugart-Strawn Pool should initially comprise the NE/4 of Section 8, Township 18 South, Range 31 East, NMPM.

(13) Preliminary engineering data demonstrate that the Shugart-Strawn Pool exhibits similar reservoir characteristics to those found within the Cedar Lake-Strawn and Cedar Lake Reef-Strawn Pools.

(14) The preliminary engineering data further demonstrate that:

- (a) the Shugart-Strawn Pool appears to be a volatile oil reservoir;
- (b) the estimated ultimate oil recovery from the Shugart-Strawn Pool, based upon a recovery factor of 30%, will be approximately 739,000 barrels of oil;
- (c) the Fren "8" Federal Com Well No. 2 is currently capable of producing at a rate greater than 1,350 barrels of oil per day. The Fren "8" Federal Com Well No. 3 is currently capable of producing at a rate of approximately 200-300 barrels of oil per day;
- (d) wells in the Shugart-Strawn Pool should be capable of draining an area in excess of 40-acres; and
- (e) during the period from September 12-October 7, 2002, Mewbourne conducted a production test on the Fren "8" Federal Com Well No. 2. The results of the test demonstrate that the well initially produced at a GOR of approximately 2,250:1. During the test period, the well was produced at oil rates ranging from approximately 300-1,350 BOPD. The GOR during the test period remained relatively stable at approximately 3,000:1



(15) Gruy Petroleum Management Company and Harvey E. Yates Company both voiced concern at the hearing over the proposed 4000:1 gas-oil ratio limitation; however, neither party presented any geologic or engineering evidence.

(16) No other offset operator or interest owner appeared at the hearing in opposition to the application.

(17) The engineering evidence currently available demonstrates that approval of Mewbourne's request for 160-acre spacing, a limiting GOR of 4000:1, and a special depth bracket allowable of 1,120 barrels of oil per day for the Shugart-Strawn Pool will not result in the excessive waste of reservoir energy, will not reduce the ultimate recovery of oil from this Strawn reservoir, and will not violate correlative rights.

(18) The special pool rules for the Shugart-Strawn Pool established by this order should remain in effect for a temporary period of eighteen months in order to allow the operators in the pool the opportunity to obtain additional engineering data to support the permanent adoption of these rules.

(19) This case should be reopened at an examiner hearing in March, 2004, at which time the operators in the Shugart-Strawn Pool should appear to show cause why the temporary special pool rules established by this order should not be rescinded.

**IT IS THEREFORE ORDERED THAT:**

(1) Pursuant to the application of Mewbourne Oil Company, a new pool for the production of oil from the Strawn formation is hereby created and designated the Shugart-Strawn Pool, with vertical limits comprising the Strawn formation and horizontal limits comprising the NE/4 of Section 8, Township 18 South, Range 31 East, NMPM, Eddy County, New Mexico.

(2) "*Temporary Special Pool Rules for the Shugart-Strawn Pool*" are hereby established as follows:

**TEMPORARY SPECIAL POOL RULES  
FOR THE  
SHUGART-STRAWN POOL**

**RULE 1.** Each well completed in or recompleted in the Shugart-Strawn Pool, or in the Strawn formation within one mile thereof and not nearer to or within the limits of another designated Strawn pool, shall be spaced, drilled, operated, and produced in accordance with the special rules hereinafter set forth.

**RULE 2.** Each well completed or recompleted in the Shugart-Strawn Pool shall be located on a unit containing 160 acres, more or less, which consists of a single governmental quarter section.

**RULE 3.** The Director may grant an exception to the requirements of Rule 2 in accordance with the procedure set forth by Division Rule No. 104.D.(2).

**RULE 4.** Each well shall be located no closer than 660 feet to the outer boundary of the spacing unit, nor closer than 330 feet to any quarter-quarter section line or subdivision inner boundary.

**RULE 5.** The Director may grant an exception to the requirements of Rule 4 in accordance with the procedure set forth by Division Rule No. 104.F.

**RULE 6.** The allowable for a standard 160-acre proration unit shall be 1,120 barrels of oil per day. In the event there is more than one well on a 160-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion. The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable as the acreage in such non-standard unit bears to 160 acres.

**RULE 7.** The limiting gas-oil ratio shall be 4,000 cubic feet of gas per barrel of oil.

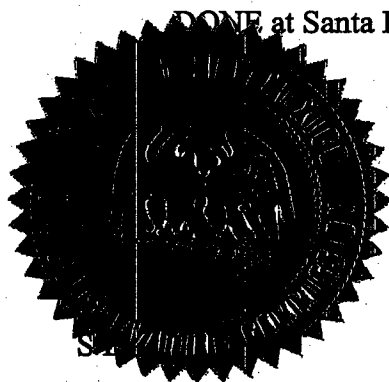
**IT IS FURTHER ORDERED THAT:**

(3) The location of all wells presently drilling to, or completed in, the Shugart-Strawn Pool, or in the Strawn formation within one mile thereof, are hereby approved. The operator of any well having an unorthodox location shall notify the Division's Artesia District Office, in writing, of the name and location of the well within 30 days from the date of this order.

(4) Existing wells in the Shugart-Strawn Pool shall have dedicated thereto 160 acres in accordance with the foregoing pool rules; or, existing wells may have non-standard spacing and proration units established by the Division and dedicated thereto. Failure to file new Form C-102 with the Division dedicating 160 acres to a well, or to obtain a non-standard unit approved by the Division within 60 days from the date of this order, shall subject the well to cancellation of allowable until a non-standard unit has been approved.

(5) This case shall be reopened at an examiner hearing in March, 2004, at which time the operators in the Shugart-Strawn Pool shall appear and present evidence to show cause why the temporary special pool rules established by this order should not be rescinded.

(6) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.



DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

*Lori Wrotenberg*  
LORI WROTENBERY  
Director

**STATE OF NEW MEXICO  
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:**

**CASE NO. 12940 (Reopened)  
ORDER NO. R-11856-A**

**APPLICATION OF MEWBOURNE OIL COMPANY TO REOPEN CASE NO.  
12940 TO AMEND AND MAKE PERMANENT THE SPECIAL RULES AND  
REGULATIONS FOR THE SHUGART-STRAWN POOL, AND FOR A  
DISCOVERY ALLOWABLE, EDDY COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This case came on for hearing at 8:15 a.m. on November 20, 2003, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 12<sup>th</sup> day of March, 2004, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner,

**FINDS THAT:**

(1) Due public notice has been given, and the Division has jurisdiction of this case and its subject matter.

(2) By Order No. R-11856 entered in Case No. 12940 on October 28, 2002, the Division, upon the application of Mewbourne Oil Company, created the Shugart-Strawn Pool, the vertical limits of which comprise the Strawn interval of the Pennsylvanian formation, and the horizontal limits of which initially comprised the NE/4 of Section 8, Township 18 South, Range 31 East, NMPM, Eddy County, New Mexico.

(3) Order No. R-11856 also established the "*Temporary Special Pool Rules for the Shugart-Strawn Pool*," which provide for:

(a) 160-acre spacing and proration units;

- (b) designated well location requirements such that a well shall be located no closer than 660 feet to the outer boundary of the spacing unit, nor closer than 330 feet to any quarter-quarter section line or subdivision inner boundary;
  - (c) a special depth bracket allowable of 1,120 barrels of oil per day;
  - (d) a limiting gas-oil ratio (GOR) of 4,000 cubic feet of gas per barrel of oil; and
  - (e) a casinghead gas limit of 4.48 MMCF of gas per day.
- (4) The applicant, Mewbourne Oil Company ("Mewbourne") seeks:
- (a) to amend the special pool rules for the Shugart-Strawn Pool by increasing the pool oil allowable from 1,120 to 1,350 barrels of oil per day;
  - (b) to amend the special pool rules for the Shugart-Strawn Pool by increasing the gas-oil ratio limitation from 4,000 to 10,000 cubic feet of gas per barrel of oil; and
  - (c) to make permanent the *"Temporary Special Pool Rules for the Shugart-Strawn Pool."*

(5) Pursuant to Division Rule No. 509.A, Mewbourne also seeks the assignment of a discovery allowable to its Fren "8" Federal Com Well No. 3 (API No. 30-015-32313) located 2276 feet from the North line and 1471 feet from the East line (Unit G) of Section 8, Township 18 South, Range 31 East, NMPM, in the amount of 52,310 barrels of oil. The proposed discovery allowable was determined by multiplying five barrels of oil times the depth to the top perforation in the well (10,462 feet.) In accordance with Rule No. 509.A, Mewbourne proposes to produce this discovery allowable over a two-year (730-day) period at a rate of approximately 71.6 barrels per day.

(6) Gruy Petroleum Management Company ("Gruy"), Harvey E. Yates Company ("Heyco") and Pecos Production Company ("Pecos"), all operators and/or interest owners in the Shugart-Strawn Pool, appeared at the hearing in opposition to the application.

(7) Marbob Energy Corporation ("Marbob"), a working interest owner in the Shugart-Strawn Pool, supports the application of Mewbourne in this case. The position of Marbob is evidenced by a letter from Marbob to Mewbourne dated September 9, 2003, and presented as evidence as Mewbourne's Exhibit No. 5.

(8) The Shugart-Strawn Pool currently comprises the N/2 of Section 8 and the S/2 of Section 5, Township 18 South, Range 31 East, NMPM.

(9) There are currently seven (7) wells completed in and producing from the Shugart-Strawn Pool, described as follows:

<u>Operator</u>	<u>Well Name &amp; Number</u>	<u>API Number</u>	<u>Well Location</u>
Mewbourne	Fren "8" Fed Com No. 2	30-015-31794	Unit A, Section 8
Mewbourne	Fren "8" Fed Com No. 3	30-015-32313	Unit G, Section 8
Mewbourne	Fren "8" Fed Com No. 5	30-015-32349	Unit C, Section 8
Mewbourne	Fren "8" Fed Com No. 6	30-015-32980	Unit B, Section 8
Heyco	Parker Deep "5" Fed Com No. 3	30-015-32555	Unit N, Section 5
Gruy	Magnum "5" Fed Com No. 2	30-015-31570	Unit O, Section 5
Gruy	Magnum "5" Fed Com No. 3	30-015-32651	Unit P, Section 5

(10) The seven producing wells are dedicated to four standard 160-acre proration units in the Shugart-Strawn Pool, described as follows: (i) the Mewbourne Fren "8" Federal Com Wells No. 2, 3 and 6 are dedicated to the NE/4 of Section 8; (ii) the Mewbourne Fren "8" Federal Com Well No. 5 is dedicated to the NW/4 of Section 8; (iii) the Gruy Magnum "5" Federal Com Wells No. 2 and 3 are dedicated to the SE/4 of Section 5; and (iv) the Heyco Parker Deep "5" Federal Com Well No. 3 is dedicated to the SW/4 of Section 5.

(11) Production data from the Shugart-Strawn Pool shows that:

- (a) Mewbourne's wells within the NE/4 of Section 8 are currently capable of producing at a combined rate in excess of 2,200 barrels of oil and 11.0 MMCF of gas per day;

- (b) Mewbourne's well within the NW/4 of Section 8 is currently capable of producing at a rate of approximately 233 barrels of oil and 1.16 MMCF of gas per day;
- (c) Gruy's wells within the SE/4 of Section 5 are currently capable of producing at a combined rate of approximately 475 barrels of oil and 3.7 MMCF of gas per day; and
- (d) Heyco's well within the SW/4 of Section 5 is currently capable of producing at a rate of approximately 23 barrels of oil and 83 MCF of gas per day.

(12) Mewbourne seeks an increase in the oil allowable and GOR for the Shugart-Strawn Pool due to the fact that its wells within the NE/4 of Section 8 are currently capable of producing in excess of the present oil allowable, and also due to the fact that the oil production from these wells is further restricted by the current 4,000:1 GOR.

(13) Mewbourne presented geologic evidence that demonstrates that:

- (a) the discovery well for the Shugart-Strawn Pool is the Mewbourne Fren "8" Federal Com Well No. 3. This well was completed in August 2002 in the Strawn interval from 10,462 feet to 10,942 feet. The well initially produced at a rate of 267 barrels of oil and 937 MCF of gas per day;
- (b) based upon subsurface well data, this Strawn structure appears to be fairly limited in size encompassing a portion of the N/2 of Section 8 and a portion of the S/2 of Section 5;
- (c) the maximum porosity development appears to occur within the center of this structure which is located within the NE/4 of Section 8; and
- (d) the largest portion of this Strawn reservoir is located on Mewbourne's acreage in Section 8.

(14) Mewbourne presented engineering evidence that demonstrates that:

- (a) PVT reservoir analysis shows the Shugart-Strawn Pool to be a solution gas-drive volatile oil reservoir. The initial reservoir pressure was approximately 5,849 psi, with a bubble point pressure of 4,583 psi;
- (b) volatile oil reservoirs are characterized by high initial gas-oil ratios (compared to black oil reservoirs) and generally higher oil gravities. As production from the reservoir progresses and the reservoir pressure is depleted to below the bubble point pressure, extensive free gas is evolved, and the reservoir's free gas saturation increases;
- (c) there is no evidence to suggest the presence of a gas cap within the reservoir;
- (d) the gravity of the oil produced from the Shugart-Strawn Pool is approximately 50 degrees API;
- (e) all wells in the reservoir are in pressure communication, and there is competition for reserves among the wells;
- (f) the initial GOR for the seven wells producing from the Shugart-Strawn pool ranged from 2,700-5,100 SCF/Bbl. The current GOR for these seven wells ranges from 3,500-9,000 SCF/Bbl;
- (g) there are several Strawn reservoirs in this area located in close proximity to the Shugart-Strawn Pool. An analysis of these reservoirs shows that they are also volatile oil reservoirs. The producing characteristics of these reservoirs are similar, and generally show that:
  - (i) the initial GOR of these pools range from 2,000-7,000 SCF/Bbl. The current GOR of these pools range from 6,000-11,000 SCF/Bbl; and



- (ii) the producing GOR increases over time and has no detrimental effects on the oil production or ultimate recovery of oil;
- (h) the spacing, oil allowable and GOR limitation vary within these analogous Strawn pools. Generally within these analogous Strawn pools, the GOR limitation is 4,000 SCF/Bbl or less, the oil allowable ranges from 560 BOPD to 1120 BOPD in pools spaced on 160 acres, and 320 BOPD to 365 BOPD in pools spaced on 40 acres (1,280 BOPD to 1,460 BOPD 160-acre equivalent); and
- (i) production data from the Fren "8" Federal Com Wells No. 2 and 6 show that producing the wells at higher oil rates does not result in a higher producing GOR.

(15) During 2003, Mewbourne's proration unit comprising the NE/4 of Section 8 became overproduced in the Shugart-Strawn Pool. According to Mewbourne's testimony, the production from the Fren "8" Federal Com Wells No. 2 and 3 was restricted subsequent to the discovery of this overproduction, and as of December, 2003, this proration unit will be back in balance.

(16) Mewbourne contends that its geologic and engineering evidence demonstrates that approval of a 10,000:1 gas-oil ratio limitation and a special depth bracket allowable of 1,350 barrels of oil per day for the Shugart-Strawn Pool will not result in the waste of reservoir energy, will not reduce the ultimate recovery of oil from the reservoir, and will not violate correlative rights.

(17) Gruy, Heyco and Pecos (collectively "Opposition") presented geologic and engineering evidence to support their position that approval of the application will result in the waste of reservoir energy and the violation of correlative rights.

(18) Opposition presented geologic evidence that demonstrates that:

- (a) utilizing well control and 2-D seismic data, structure and isopach maps of this Strawn structure have been constructed;

- (b) the isopach map of this Strawn structure is generally in agreement with the isopach map presented by Mewbourne; however, due to the incorporation of 2-D seismic data into this analysis, the Strawn structure, as mapped by Opposition, has been extended further north into the NE/4 of Section 5;
- (c) in order to facilitate the calculation of original oil in place ("OOIP") underlying each of the proration units in the pool, a porosity feet map was constructed utilizing well log data; and
- (d) based upon its geologic interpretation of this Strawn reservoir, an additional two wells will be drilled by Pecos and Gruy, located respectively in the NW/4 of Section 9 and the SE/4 of Section 5. In addition to these two new wells, an additional well will be drilled by Mewbourne within the NW/4 of Section 8.

(19) Opposition presented engineering evidence that demonstrates that:

- (a) utilizing volumetric and material balance methodologies, it has calculated the OOIP for the Shugart-Strawn Pool. The results, which are in close agreement, show that the OOIP within the Shugart-Strawn Pool is approximately 7.15 million barrels of oil;
- (b) utilizing volumetric calculations derived from its porosity feet map, it has calculated the OOIP for each of the existing proration units within the pool. This data show that the NE/4 of Section 8 originally contained 4.132 million barrels of oil or 57.8% of the OOIP in the pool, the NW/4 of Section 8 originally contained 460,728 barrels of oil or 6.5% of the OOIP for the pool, the SE/4 of Section 5 originally contained 1.66 million barrels of oil or 23.3% of the OOIP for the pool, and the SW/4 of Section 5 originally contained 94,930 barrels of oil or 1.3% of the OOIP for the pool;

- (c) at its current restricted rate of production (due to overproduction), Mewbourne currently produces approximately 51.7% and 47.4% of the total oil and gas production, respectively, from the pool. If its application is approved, Mewbourne will be allowed to produce at a rate equal to 64% and 73% of the total oil and gas production, respectively, from the pool;
- (d) there appears to be a correlation between the depth a given well is perforated and its producing GOR. The data show that wells perforated higher within this Strawn structure generally produce at a higher GOR. These data suggest that there may be a gas cap forming in the reservoir;
- (e) the GOR of the wells perforated higher within this Strawn structure appear to increase at a faster rate than the GOR of wells perforated lower within this Strawn structure. This may also be indicative of a gas cap forming in the reservoir;
- (f) during the period from May, 2003 through November, 2003 the GOR for the entire Shugart-Strawn Pool has remained relatively flat at approximately 6,000 SCF/Bbl;
- (g) if a gas cap is forming in the reservoir, it will be located at a structurally high position. Geologic data show that the structural high in the reservoir occurs within the NE/4 of Section 8; and
- (h) production data from the NE/4 of Section 8 show that when the oil production from the Fren "8" Federal Com Wells No. 2 and 3 was curtailed due to overproduction, the GOR decreased from approximately 6,000 to 5,000 SCF/Bbl. This reduction in GOR may indicate that the reservoir is rate sensitive.

(20) Opposition testified that it would not be opposed to increasing the GOR limitation for the Shugart-Strawn Pool to 6,000:1; however, it remains opposed to increasing the pool oil allowable, assigning a discovery allowable to the Fren "8" Federal Com Well No. 3, and increasing the GOR to 10,000:1.

(21) Both Mewbourne and the Opposition are in agreement that the Shugart-Strawn Pool should be developed on 160-acre spacing. The technical evidence presented by both parties demonstrates that 160-acre spacing is appropriate for the Shugart-Strawn Pool, and that this well spacing should be adopted on a permanent basis.

(22) Division records show that the Mewbourne Fren "8" Federal Com Well No. 3 was completed in the Strawn formation in August, 2002, and first produced from this interval on August 21, 2002. The Mewbourne Fren "8" Federal Com Well No. 2 was completed in the Strawn formation in September, 2002, and first produced from this interval on September 14, 2002.

(23) The Mewbourne Fren "8" Federal Com Well No. 3 should be designated the discovery well for the Shugart-Strawn Pool.

(24) Although the Mewbourne Fren "8" Federal Com Well No. 3 was completed in the Shugart-Strawn Pool approximately fifteen months prior to Mewbourne's filing for a discovery allowable, Division Rule No. 509 places no time limit on seeking, or approving, a discovery allowable.

(25) Mewbourne's Fren "8" Federal Com Well No. 3 should be assigned a discovery allowable in the amount of 52,310 barrels of oil. In accordance with Rule No. 509.A, Mewbourne should be authorized to produce this discovery allowable over a two year (730-day) period at a rate of approximately 71.6 barrels per day.

(26) With regards to Mewbourne's request to increase the oil allowable from 1,120 to 1,350 barrels of oil per day, the evidence presented by both parties demonstrates that:

- (a) increasing the oil allowable to 1,350 barrels per day will likely not result in excessive dissipation of reservoir energy or reduced recovery of oil from the Shugart-Strawn Pool;

- (b) the only proration unit in the pool that would benefit from an increased oil allowable is Mewbourne's acreage in the NE/4 of Section 8. Given Mewbourne's capacity to produce substantial volumes of oil from its wells located in the NE/4 of Section 8, it is likely that this spacing unit will remain capable of top allowable oil production for some time;
- (c) Gruy and Heyco's wells located within Section 5 are on a steep oil production decline;
- (d) As Gruy's production declines within the SE/4 of Section 5, it will be less capable of competing with Mewbourne for oil reserves in the pool. Increasing the oil allowable will only serve to aggravate this situation; and
- (e) Mewbourne did not present sufficient evidence to demonstrate that its correlative rights will be impaired if the pool oil allowable is not increased from 1,120 to 1,350 barrels of oil per day.

(27) Mewbourne's request to increase the pool oil allowable from 1,120 to 1,350 barrels of oil per day will not protect the correlative rights of operators in the Shugart-Strawn Pool, and should therefore be denied.

(28) With regards to Mewbourne's request to increase the GOR limitation for the Shugart-Strawn Pool to 10,000:1, the evidence presented by both parties demonstrates that:

- (a) the Shugart-Strawn Pool is a solution gas drive volatile oil reservoir. The GOR within these types of reservoirs naturally increases over time;
- (b) the average producing GOR for the seven wells in the Shugart-Strawn Pool is currently 6,800 SCF/Bbl. While the GOR for each of the seven producing wells appears to be increasing, the rate of increase varies from well to well;

- (c) there is preliminary engineering data to show that a gas cap may be forming in the reservoir;
- (d) the Shugart-Strawn Pool is a unique reservoir capable of high rates of oil production. There are no other Strawn pools in this area that have exhibited similar producing characteristics; therefore, comparisons between the Shugart-Strawn Pool and other Strawn reservoirs in this area may not be valid; and
- (e) the current engineering evidence shows that an increase in the GOR for the Shugart-Strawn Pool is necessary in order to efficiently produce the reservoir; however, Mewbourne's request to increase the GOR to 10,000 SCF/Bbl appears to be excessive and without sufficient justification.

(29) A gas-oil ratio limitation of 7,000 SCF/Bbl appears to be more in line with current production data from the Shugart-Strawn Pool.

(30) Increasing the GOR for the Shugart-Strawn Pool to 7,000 SCF/Bbl will provide Mewbourne additional producing capability within the NE/4 of Section 8, will serve as a reasonable GOR limitation during the period of time in which additional development will occur in this reservoir, and will otherwise prevent waste and protect correlative rights.

**IT IS THEREFORE ORDERED THAT:**

(1) The portion of Mewbourne Oil Company's application to amend the "*Special Pool Rules for the Shugart-Strawn Pool*," as established by Division Order No. R-11856, to increase the pool oil allowable from 1,120 to 1,350 barrels of oil per day is hereby denied.

(2) The portion of Mewbourne Oil Company's application seeking to amend the "*Special Pool Rules for the Shugart-Strawn Pool*," as established by Division Order No. R-11856, to increase the gas-oil ratio limitation from 4,000 to 10,000 cubic feet of gas per barrel of oil is hereby approved in part. The limiting gas-oil ratio is hereby increased to 7,000 standard cubic feet of gas per barrel of oil.

**Case No. 12940 (Reopened).**

**Order No. R-11856-A**

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(3) The portion of Mewbourne's application for the assignment of a discovery allowable to its Fren "8" Federal Com Well No. 3 (API No. 30-015-32313) located 2276 feet from the North line and 1471 feet from the East line (Unit G) of Section 8, Township 18 South, Range 31 East, NMPM, in the amount of 52,310 barrels of oil in the Shugart-Strawn Pool is hereby approved. In accordance with Rule No. 509.A, Mewbourne shall be authorized to produce this discovery allowable over a two-year (730-day) period at a rate of approximately 71.6 barrels per day. The resulting oil allowable for the NE/4 of Section 8 shall be set at 1,191.6 barrels per day for a two-year period commencing April 1, 2004. The oil allowable assigned to the NE/4 of Section 8 may be produced by any well on the unit in any proportion.

(4) The "*Temporary Special Pool Rules for the Shugart-Strawn Pool*", as established by Division Order No. R-11856, are hereby made permanent; provided however, Rule No. (7) is hereby amended to read in its entirety as follows:

"Rule 7. The limiting gas-oil ratio shall be 7,000 cubic feet of gas per barrel of oil."

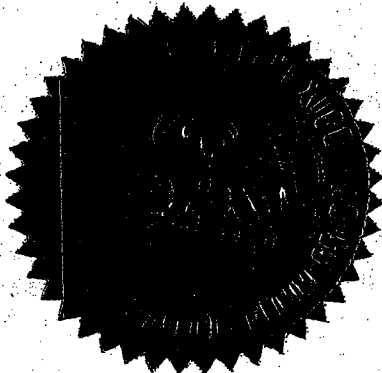
(5) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

*Lori Wrotenbery*

LORI WROTENBERY  
Director



SEAL

*See Also Orders No.  
R-11856  
R-11856-A*

**STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:**

**CASE NO. 12940 (Reopened)  
ORDER NO. R-11856-B**

**APPLICATION OF THE DIVISION TO REOPEN CASE NO. 12940 TO AMEND AND  
MAKE PERMANENT THE SPECIAL RULES AND REGULATIONS FOR THE  
SHUGART-STRAWN POOL, EDDY COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This case came on for hearing at 8:15 a.m. on March 18, 2004, at Santa Fe, New Mexico, before Examiner William V. Jones.

NOW, on this 29th day of April, 2004, the Division Director, having considered the record and the recommendations of the Examiner,

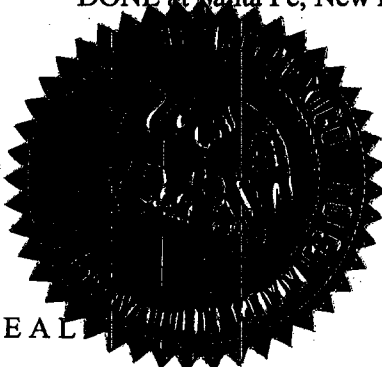
**FINDS THAT:**

- 1) Division Order No. R-11856-A, issued in Case No. 12940 (Reopened), on March 12, 2004, addressed the issue of permanent special pool rules for the Shugart-Strawn Pool.
- 2) Since the reason for reopening this case at this time has been addressed by Division Order No. R-11856-A, this case should be dismissed.

**IT IS THEREFORE ORDERED THAT:**


Case No. 12940 (Reopened) be dismissed.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.



SEAL

**STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION**

  
JOANNA PRUKOP  
Cabinet Secretary/Acting Director