



George F. Pritchard  
Project Manager / Geologist

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2006 MAR 27 PM 12 27

March 22, 2006

Request for Administrative Approval of  
Unorthodox Oil Well Location and  
Simultaneous Dedication

Mr. Mark E. Fesmire  
c/o Mr. Michael E. Stogner  
New Mexico Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

*9-15-2006 (9:21am)*  
*Talked w/ George Pritchard*  
*who called to check on the*  
*status of his & recently filled*  
*NSL application (3-27/06).*  
*Stogner*

Dear Mr. Fesmire:

Chevron respectfully requests administrative approval of an unorthodox oil well location for the following well:

**V.M. Henderson #23**  
330' FNL & 2500' FWL, C N/2 N/2 of  
Section 30, T21S, R37E, Unit Letter C  
Lea County, New Mexico

The proposed well will be an infill producer in the Penrose Skelly, Grayburg Pool [Pool Code 50350], which is an oil pool spaced on 40 acres. This well is a continuation to our recent infill drilling in the same Pool during 2004 and 2005. Chevron's technical analysis of the reservoir still supports the contention that typical Grayburg wells cannot drain 40 acres.

The NE/4 NW/4 of Section 30 will be simultaneously dedicated in the Penrose Skelly, Grayburg Pool to the proposed well and to both the V. M. Henderson #6 [30-025-06912] and the V.M. Henderson #19 [30-025-37181]. The V.M. Henderson #23 will be completed as a Penrose Skelly, Grayburg producer. Chevron also requests approval for simultaneous dedication.

This application is based on geological and engineering analysis. The analysis and justification for this request is attached as Exhibit 1, along with other supporting documentation. There are eight wells that have produced the Grayburg formation in the E/2 NW/4 and the W/2 NE/4 of Section 30. The proposed well will be located in a 20 acre location approximate north center of those wells. Based on drainage calculations, Chevron believes that drilling the infill well will recover reserves that would not be recovered by existing Grayburg producers.

March 22, 2006

Page 2

A land plat highlighting the proposed well's location is attached as Exhibit 2. The N/2 of Section 30 is covered by two fee leases which have common royalty and working interest ownerships. For that reason and the proposed location of the infill well, there are no adversely affected interest owners and no one has been notified of this application. If you have any questions concerning this application or need additional information, please contact me by phone at (281) 561-4918 or by email at [gpritchard@chevron.com](mailto:gpritchard@chevron.com). If I am not available, you can also reach Michael Gelbs by phone at (281) 561-7939 or by email at [mike.gelbs@chevron.com](mailto:mike.gelbs@chevron.com). Thank you for consideration of this matter.

Sincerely,

A handwritten signature in black ink, reading "George F. Pritchard". The signature is written in a cursive, flowing style.

George F. Pritchard  
Project Manager / Geologist

Attachments

cc: NMOCD District 1 – Hobbs, NM  
Michael Gelbs  
George Pritchard  
Well File

## NOTIFICATION LIST

Application of Chevron U.S.A. Inc. for Administrative Approval of an Unorthodox Oil Well Location and Simultaneous Dedication:

**V.M. Henderson #23**

330' FNL & 2500' FWL

Section 30, T21S, R37E, Unit Letter C

Lea County, New Mexico

**Offset Operators, Working Interest Owners, N/2 Section 30:**

1. Chevron U.S.A. Inc. Operator/100% WI  
11111 S. Wilcrest  
Houston, TX 77099

ABOVE THIS LINE FOR DIVISION USE ONLY

**NEW MEXICO OIL CONSERVATION DIVISION**  
 - Engineering Bureau -  
 1220 South St. Francis Drive, Santa Fe, NM 87505



**ADMINISTRATIVE APPLICATION CHECKLIST**

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

**Application Acronyms:**

- [NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]**  
**[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]**  
**[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]**  
**[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]**  
**[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]**  
**[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]**

- [1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]  
 [A] Location - Spacing Unit - Simultaneous Dedication  
 NSL  NSP  SD
- Check One Only for [B] or [C]  
 [B] Commingling - Storage - Measurement  
 DHC  CTB  PLC  PC  OLS  OLM
- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
 WFX  PMX  SWD  IPI  EOR  PPR
- [D] Other: Specify \_\_\_\_\_
- [2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or  Does Not Apply  
 [A]  Working, Royalty or Overriding Royalty Interest Owners  
 [B]  Offset Operators, Leaseholders or Surface Owner  
 [C]  Application is One Which Requires Published Legal Notice  
 [D]  Notification and/or Concurrent Approval by BLM or SLO  
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office  
 [E]  For all of the above, Proof of Notification or Publication is Attached, and/or,  
 [F]  Waivers are Attached
- [3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

**Note: Statement must be completed by an individual with managerial and/or supervisory capacity.**

George F. Pritchard		Project Manager / Geologist	3/22/2006
Print or Type Name	Signature	Title	Date
		gpritchard@chevron.com	
		e-mail Address	

**EXHIBIT 1**

**ENGINEERING AND GEOLOGICAL JUSTIFICATION**

Application of Chevron U.S.A. Inc. for Administrative Approval of an Unorthodox Oil Well Location and Simultaneous Dedication:

**V.M. Henderson #23**  
330' FNL & 2500' FWL  
Section 30, T21S, R37E, Unit Letter C  
Lea County, New Mexico

**PRIMARY OBJECTIVE: GRAYBURG**

**SUPPORTING DATA:**

1. Chevron U.S.A. Inc. (Chevron) is the operator of the proposed V.M. Henderson #23 well (Exhibit 3). The proposed total depth is 4300' in the top of the San Andres formation.
2. The completion will be in the Penrose Skelly, Grayburg Oil Pool and the proposed location encroaches toward the following wells (Exhibit 4).

Operator	Well	API #	Location	Formation	Cum Prod		Current Prod		Status
					MBO	MMCF	BOPD	MCFPD	
Chevron	Henderson #4	3002506910	30-C	Grayburg	24	85	--	--	inactive Pre-1970; Yates
Chevron	Henderson #5	3002506911	30-B	Grayburg	26	354	9	248	active Pre-1970, recmpl 1/2004
Chevron	Henderson #6	3002506912	30-C	Grayburg	5	43	10	249	active April 2005
Chevron	Henderson #7	3002506913	30-F	Grayburg	11	82	--	--	inactive Pre-1970; Drnkrd
Chevron	Henderson #9	3002506915	30-G	Grayburg	14	21	--	--	inactive Pre-1970
Chevron	Henderson #18	3002537110	30-F	Grayburg	1	0	58	343	active 11/2005
Chevron	Henderson #19	3002537181	30-C	Grayburg	1	0	30	472	active 12/2005
Chevron	Henderson #20	3002537412	30-F	Grayburg	1	0	20	277	active 12/2005
Chevron	Henderson #21	3002537370	30-G	Grayburg	1	0	24	478	active 12/2005

3. The proposed V.M. Henderson #23 unorthodox Grayburg location is based primarily on drainage considerations:

a. Grayburg Reservoir

The Grayburg is a series of alternating subtidal and supratidal dolomites with the subtidal rock having porosity and hydrocarbons while the supratidal rock is tight. The Grayburg depositional environments varied rapidly so that many porous and tight intervals are not continuous from well to well on 40-acre spacing. Tight dolomite and/or anhydrite intervals within the Grayburg create vertical and horizontal flow barriers between different zones of porosity. Additionally, average porosity of the Grayburg is less than 10%, and the average permeability is less than 1 millidarcy. For all of these reasons, Grayburg wells are not usually capable of draining a 40-acre proration unit.

The reservoir was also analyzed by mapping the Hydrocarbon Pore Volume (HCPV) (Exhibit 5). HCPV is the product of feet of net pay (h) times average porosity ( $\phi$ ) time oil saturation ( $S_o$ ). The attached map is the arithmetic product of grids interpreted from those values. The values were obtained as follows:

1. Net pay was read from either modern neutron-density logs or estimated from a map developed from gross pay times net-to-gross ratio (Exhibit 4).
2. Average porosity was calculated from modern well logs using a minimum of 6% crossplot porosity and a maximum of 20%.
3. Oil saturation was calculated from a fractional flow curve using representative water cut values.

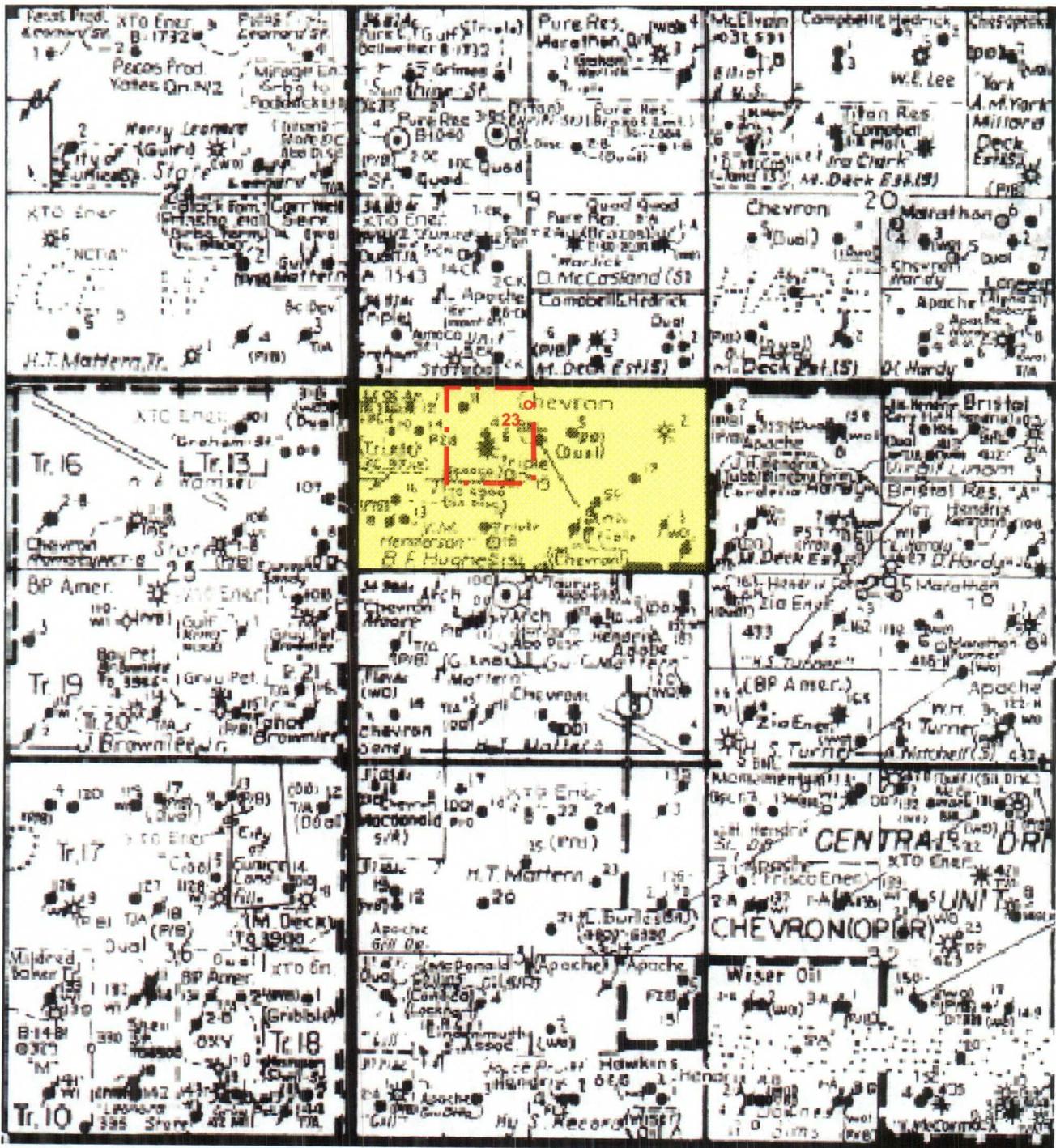
The following table provides drainage areas calculated from the HCPV map and reserves of the offsetting wells.

Operator	Well	API #	Location	Formation	Drainage Acres	EUR	
						MBO	MMCF
Chevron	Henderson #4	3002506910	30-C	Grayburg	4	24	85
Chevron	Henderson #5	3002506911	30-B	Grayburg	8	42	1166
Chevron	Henderson #6	3002506912	30-C	Grayburg	12	77	677
Chevron	Henderson #7	3002506913	30-F	Grayburg	2	11	82
Chevron	Henderson #9	3002506915	30-G	Grayburg	3	14	21
Chevron	Henderson #17	3002536742	30-A	Grayburg	5	24	1036
Chevron	Henderson #18	3002537110	30-F	Grayburg	17	89	300
Chevron	Henderson #19	3002537181	30-C	Grayburg	17	89	300
Chevron	Henderson #20	3002537412	30-F	Grayburg	18	89	300
Chevron	Henderson #21	3002537370	30-G	Grayburg	21	89	300

As seen above, the average location drainage area of the offsetting wells is approximately 15 acres, and additional reserves can be recovered by drilling the proposed infill well at an approximate equidistant location from the existing offsetting producers. Reserves for the proposed location were calculated using the HCPV map, a 15 acre drainage area, and a 15% recovery factor. The results are as follows:

Operator	Well	Location	HCPV	Drainage Acres	EUR	
					MBO	MMCF
Chevron	Henderson #23	30-C	7.4	15	78	610

4. The N/2 of Section 30 is covered by two fee leases which have common royalty and working interest ownerships. Chevron is the operator and 100% working interest owner of the Grayburg wells toward which the proposed well will encroach. Therefore, there are no offset interest owners or adversely affected parties to notify of this application.
5. The proposed V.M. Henderson #23 will share a 40-acre proration unit and will be simultaneously dedicated with both the V. M. Henderson #6 [30-025-06912] and the V. M. Henderson 19 [30-025-37181] as a Penrose Skelly, Grayburg producers in Section 30, Unit Letter C.
6. Approval of this application will allow for the recovery of oil and gas reserves which would not otherwise be recovered.



**Chevron USA Inc.**



V. M. Henderson #19  
 1300 FNL & 2280 FWL, Unit C  
 V. M. Henderson #23 (proposed)  
 330 FNL, 1310 FEL, Unit A  
 Section 30, T21S-R37E  
 Lea County, New Mexico

 Eunice King Lease

 40 Acre Proration Unit

Scale: 1"=2000' Approx.

State of New Mexico

Energy, Minerals and Natural Resources Department

DISTRICT I

1825 N. FRENCH DR., HOBBS, NM 88240

Form C-102

Revised October 12, 2005

DISTRICT II

1301 W. GRAND AVENUE, ARTESIA, NM 88210

OIL CONSERVATION DIVISION

Submit to Appropriate District Office

1220 SOUTH ST. FRANCIS DR.

State Lease - 4 Copies

Santa Fe, New Mexico 87505

Fee Lease - 3 Copies

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV

1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

AMENDED REPORT

API Number		Pool Code	Pool Name
Property Code	Property Name V.M. HENDERSON		Well Number 23
OGRID No.	Operator Name CHEVRON U.S.A. INC.		Elevation 3500'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	30	21-S	37-E		330	NORTH	2500	WEST	LEA

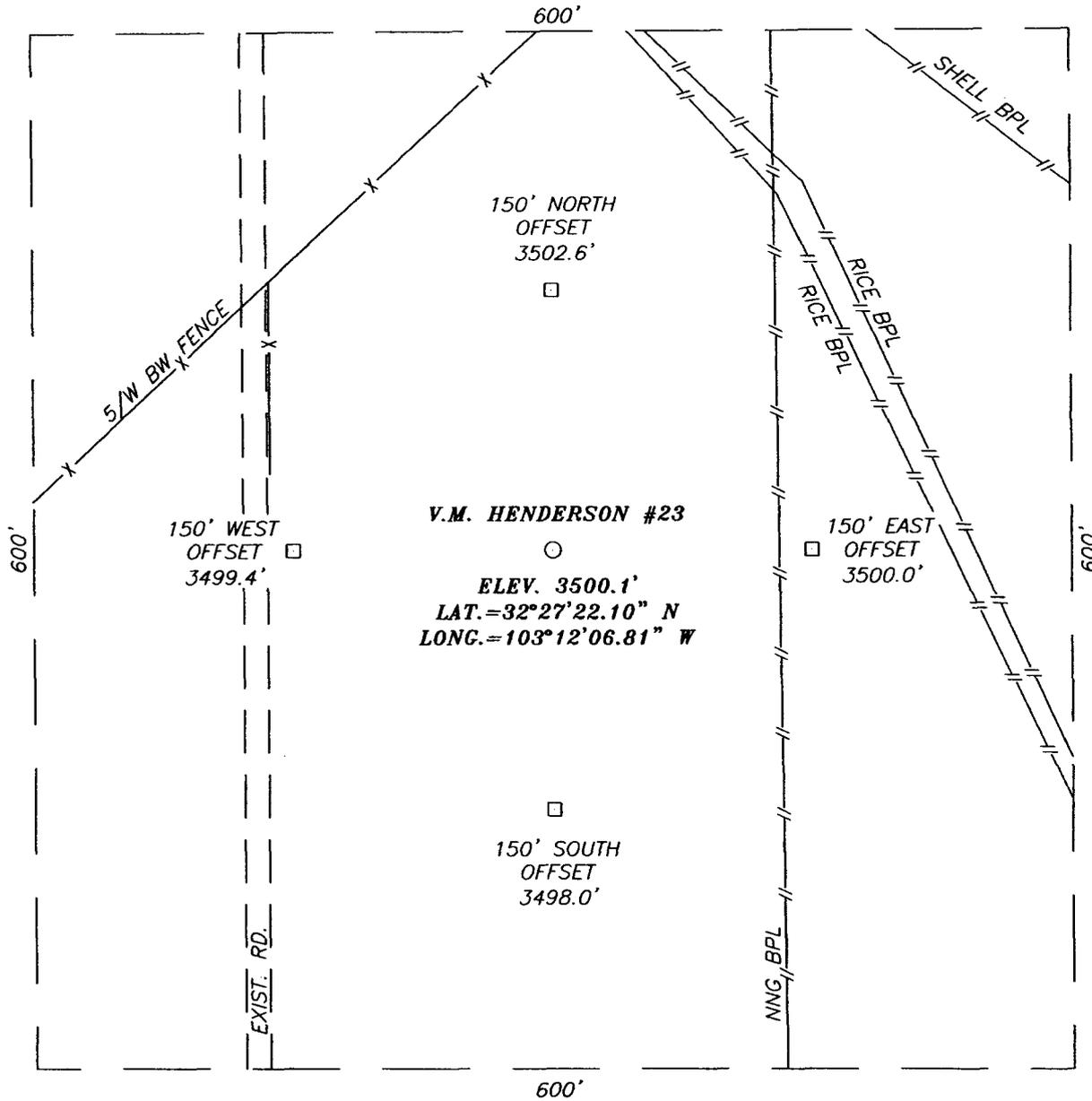
Bottom Hole Location If Different From Surface

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.				

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

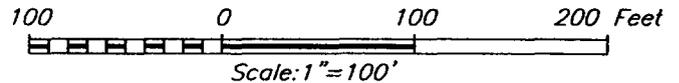
	<p><b>OPERATOR CERTIFICATION</b></p> <p><i>I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i></p> <p>Signature _____ Date _____</p> <p>Printed Name _____</p> <hr/> <p><b>SURVEYOR CERTIFICATION</b></p> <p><i>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.</i></p> <p>FEBRUARY 16, 2006</p> <p>Date Surveyed _____ DSR</p> <p>Signature &amp; Seal of Professional Surveyor</p> <p><i>GARY EDISON</i> 3/14/06</p> <p>06.11.0521</p> <p>Certificate No. GARY EDISON 12641</p>
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**SECTION 30, TOWNSHIP 21 SOUTH, RANGE 37 EAST, N.M.P.M.,**  
 LEA COUNTY, NEW MEXICO



**DIRECTIONS TO LOCATION**

FROM THE INTERSECTION OF ST. HWY 8-176 AND CO. RD. E-33 (N. TURNER), (APPROX. 1.0 MILE WEST OF EUNICE, N.M.), GO WEST ON ST. HWY 8-176 APPROX. 1.0 MILE. TURN RIGHT AND GO NORTH APPROX. 0.58 MILES. TURN LEFT AND GO NORTHWEST APPROX. 0.29 MILES TO A BEND IN THE ROAD. CONTINUE NORTH AND GO APPROX. 0.11 MILES. TURN LEFT AND GO WEST APPROX. 0.31 MILES. TURN RIGHT AND GO NORTH APPROX. 420 FEET. THIS LOCATION IS APPROX. 172 FEET EAST.



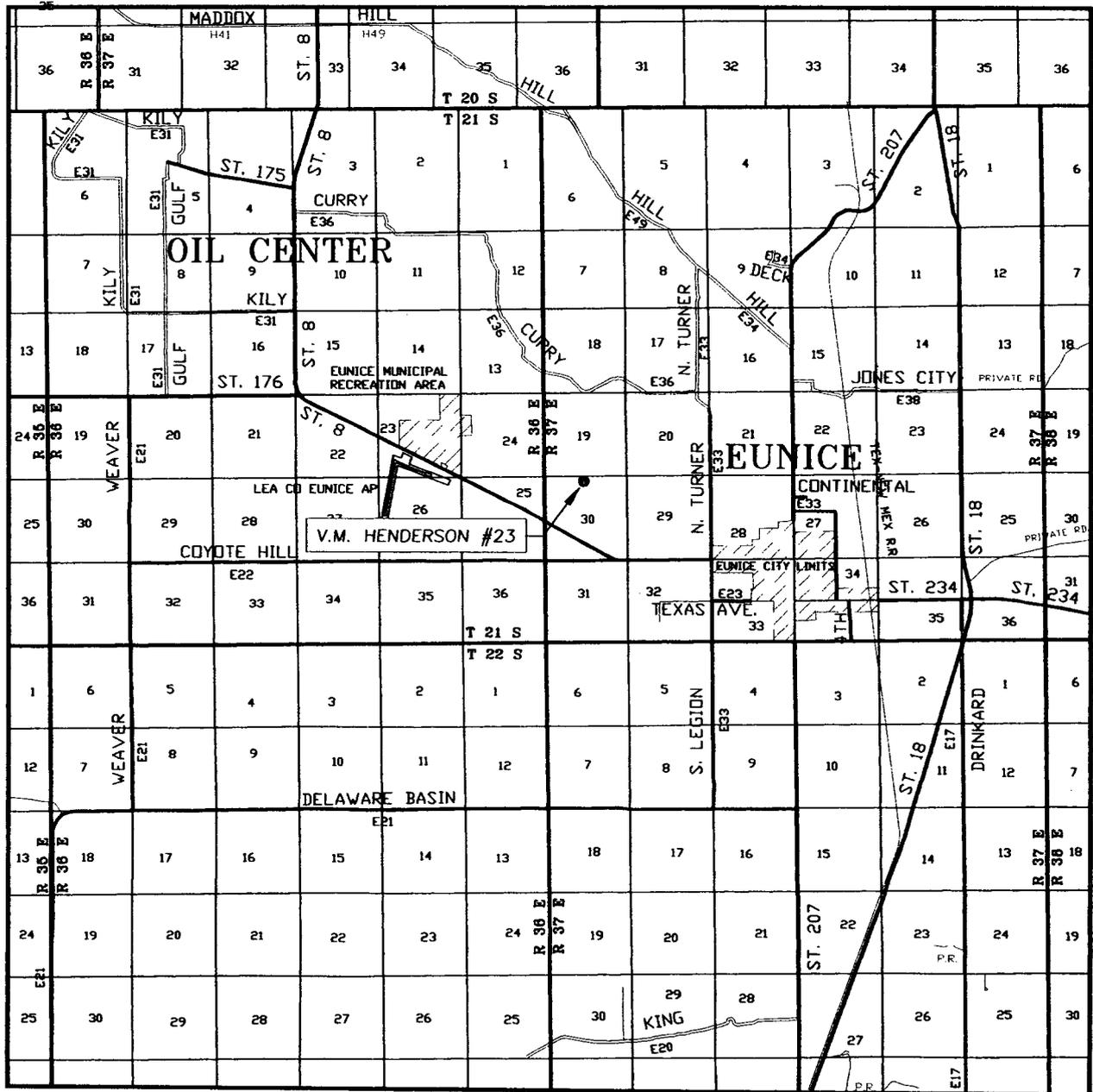
**CHEVRON U.S.A. INC.**

V.M. HENDERSON #23 WELL  
 LOCATED 330 FEET FROM THE NORTH LINE  
 AND 2500 FEET FROM THE WEST LINE OF SECTION 30,  
 TOWNSHIP 21 SOUTH, RANGE 37 EAST, N.M.P.M.,  
 LEA COUNTY, NEW MEXICO.

PROVIDING SURVEYING SERVICES  
 SINCE 1946  
**JOHN WEST SURVEYING COMPANY**  
 412 N. DAL PASO  
 HOBBS, N.M. 88240  
 (505) 393-3117

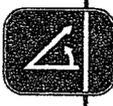
Survey Date: 02/16/06	Sheet 1 of 1 Sheets
W.O. Number: 06.11.0321	Dr By: D.S.R. Rev 1:N/A
Date: 03/04/06	Disk: CD#1 06110321 Scale: 1"=100'

# VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 30 TWP. 21-S RGE. 37-E  
 SURVEY N.M.P.M.  
 COUNTY LEA STATE NEW MEXICO  
 DESCRIPTION 330' FNL & 2500' FWL  
 ELEVATION 3500'  
 OPERATOR CHEVRON U.S.A. INC.  
 LEASE V.M. HENDERSON



**PROVIDING SURVEYING SERVICES**  
 SINCE 1946  
**JOHN WEST SURVEYING COMPANY**  
 412 N. DAL PASO  
 HOBBS, N.M. 88240  
 (505) 393-3117



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

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised June 10, 2003

District II  
1307 W. Grand Avenue, Artesia, NM 88210

**OIL CONSERVATION DIVISION**

Submit to Appropriate District Office

**Exhibit 3.1a**

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

1220 South St. Francis Dr.  
Santa Fe, NM 87505

AMENDED REPORT

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

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number 30-026-37181		<sup>2</sup> Pool Code 50350		<sup>3</sup> Pool Name Penrose Skelly; Grayburg			
<sup>4</sup> Property Code		<sup>5</sup> Property Name V.M. Henderson				<sup>6</sup> Well Number 19	
<sup>7</sup> OGRID No. 4323		<sup>8</sup> Operator Name Chevron U.S.A., Inc.				<sup>9</sup> Elevation 3493' GL	

<sup>10</sup> Surface Location

UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	30	21S	37E		1300	North	2280	West	Lea

<sup>11</sup> 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

<sup>12</sup> Dedicated Acres 40	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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**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>16</p> <p>40-acre proration unit</p> <p>1300'</p> <p>2280'</p> <p>19</p> <p>23</p> <p>30</p> <p>V.M. Henderson Lease</p>	<p>17</p> <p><b>OPERATOR CERTIFICATION</b></p> <p><i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</i></p> <p></p> <p>Signature _____</p> <p>George F. Pritchard</p> <p>Printed Name _____</p> <p>Geologist</p> <p>Title _____</p> <p>March 22, 2006</p>
	<p>18</p> <p><b>SURVEYOR CERTIFICATION</b></p> <p><i>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.</i></p> <p>Signature and Seal of Professional Surveyor: _____</p> <p>Certificate Number _____</p>

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

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised June 10, 2003

**District II**  
1301 W. Grand Avenue, Artesia, NM 88210

**OIL CONSERVATION DIVISION**

Submit to Appropriate District Office

**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410

1220 South St. Francis Dr.  
Santa Fe, NM 87505

**Exhibit 3.1b**

**District IV**  
1220 South St. Francis Dr., Santa Fe, NM  
87505

AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number 30-025-06912		<sup>2</sup> Pool Code 50350		<sup>3</sup> Pool Name Penrose Skelly; Grayburg	
<sup>4</sup> Property Code		<sup>5</sup> Property Name V.M. Henderson			<sup>6</sup> Well Number 6
<sup>7</sup> OGRID No. 4323		<sup>8</sup> Operator Name Chevron U.S.A., Inc.			<sup>9</sup> Elevation 3495' GL

<sup>10</sup> Surface Location

UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	30	21S	37E		760	North	1980	West	Lea

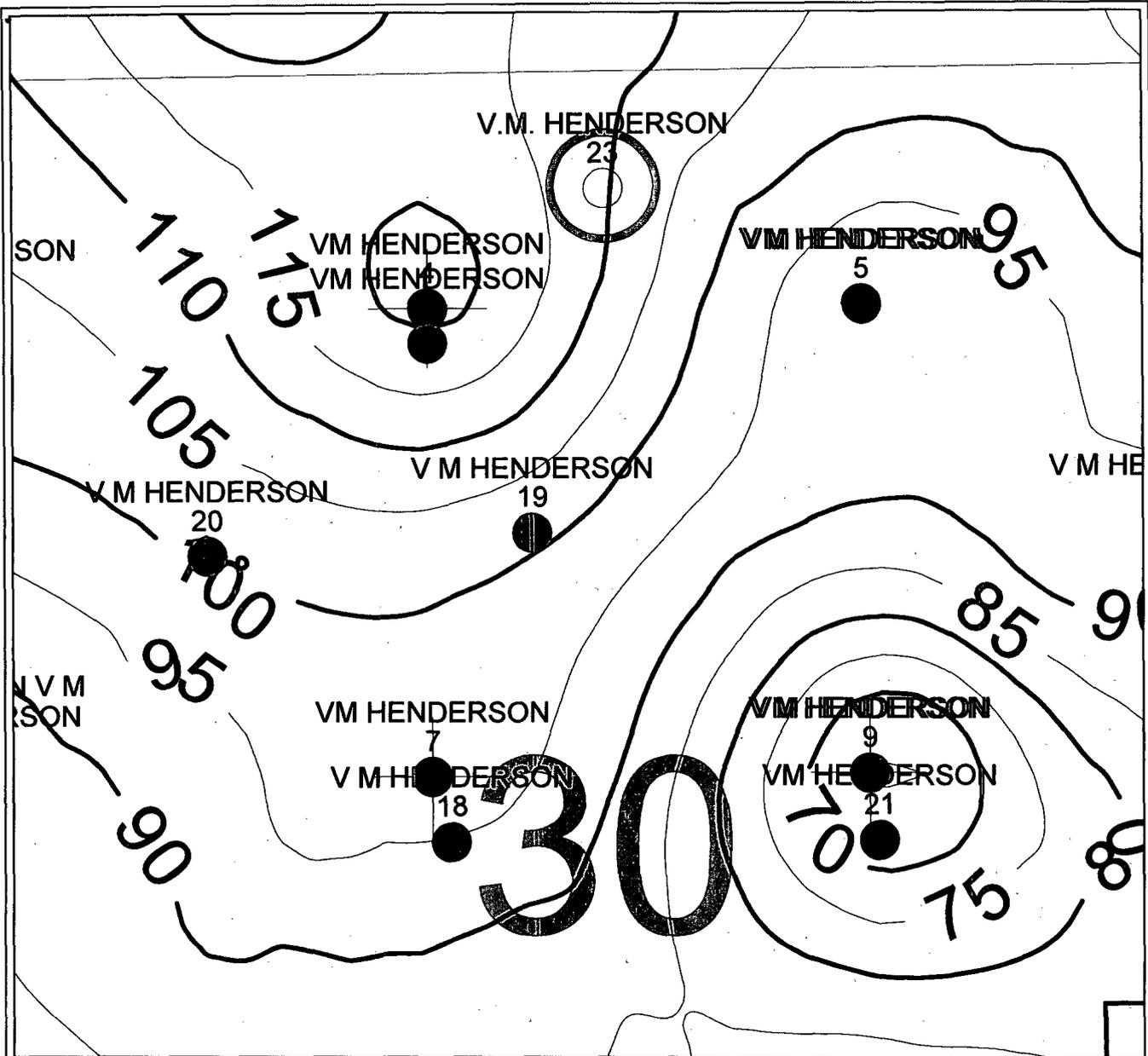
<sup>11</sup> Bottom Hole Location If Different From Surface

UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

<sup>12</sup> Dedicated Acres 40	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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<p>16</p> <p>V.M. Henderson Lease</p>	<p>17</p> <p><b>OPERATOR CERTIFICATION</b></p> <p><i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</i></p> <p><i>George F. Pritchard</i></p> <p>Signature _____ George F. Pritchard Printed Name _____ Geologist Title _____ March 22, 2006</p>



PETRA 3/24/2006 10:44:25 AM

# CHEVRON U.S.A.

## EXHIBIT 4

### PENROSE-SKELLY FIELD V M HENDERSON #23

Sec. 30, T21S-R37E, Lea CO. New Mexico

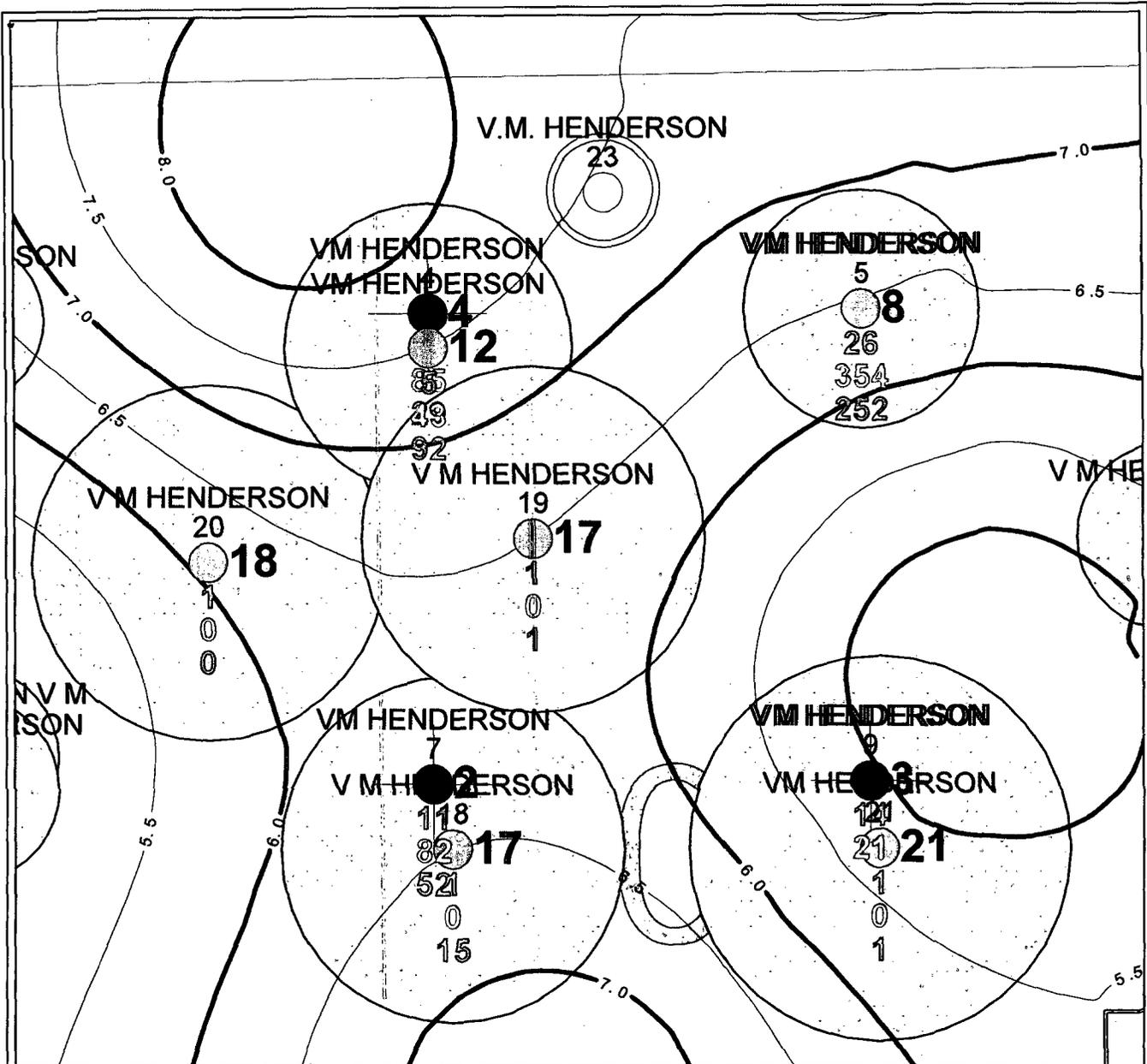
Grayburg Net Pay CI=5. [Gr<40, Por>6%]

#### POSTED WELL DATA

Well Name  
Well Number



March 24, 2006



PETRA 3/24/2006 10:41:34 AM

# CHEVRON U.S.A.

## EXHIBIT 5

### PENROSE-SKELLY FIELD V M HENDERSON #23

Sec. 30, T21S-R37E, Lea CO. New Mexico  
 Grayburg HCPV CI=0.5 & EUR - Drainage

#### POSTED WELL DATA

Well Name	Well Number
GFP_GRAYBURG - EUR-GRAYBURG-ACRES[G	
GFP_GRAYBURG - GRAYBURG-CUM_OIL_MBO[P]	
GFP_GRAYBURG - GRAYBURG-CUM_GAS_MMCF[P]	
GFP_GRAYBURG - GRAYBURG-CUM_WATER_MBO[P]	



March 24, 2006