



George F. Pritchard  
Project Manager / Geologist

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March 22, 2006

2006 MAR 27 PM 12 27

4-13-2006 (9:21 a.m.)

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

Talked w/  
George Pritchard who  
called to check on the  
status of his 8 appls.  
all filed on 3-27-2006.  
*[Signature]*

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

Dear Mr. Fesmire:

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

**Eunice King #31**  
330' FNL & 2630' FEL, C N/2 N/2 of  
Section 28, T21S, R37E, Unit Letter B  
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 of our 3 year infill drilling in the same Pool. Chevron's technical analysis of the reservoir still supports the contention that typical Grayburg wells cannot drain 40 acres.

The NW/4 NE/4 of Section 28 will be simultaneously dedicated in the Penrose Skelly, Grayburg Pool to the proposed well and to the Eunice King #28. The Eunice King #28 was drilled in 2004 and is currently completed as a Penrose Skelly, Grayburg producer. Chevron also requests approval of the 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 five wells that have produced the Grayburg formation in the NE/4 of Section 28. The proposed well will be located in the approximate northern center point of those wells and 330' off the lease line. Based on drainage calculations, Chevron believes that drilling the infill well will recover reserves that would not be recovered by existing Grayburg producers.

A land plat highlighting the proposed well's location is attached as Exhibit 2. The N/2 of Section 28 is covered by a single fee lease and has 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.

March 22, 2006  
Page 2

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 that reads "George F. Pritchard". The signature is written in a cursive style with a large initial "G".

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:

### **Eunice King #31**

330' FNL & 2630' FEL

Section 28, T21S, R37E, Unit Letter B

Lea County, New Mexico

### **Offset Operators, Working Interest Owners, N/2 Section 28:**

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 *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:

**Eunice King #31**

330' FNL & 2630' FEL

Section 28, T21S, R37E, Unit Letter B

Lea County, New Mexico

**PRIMARY OBJECTIVE: GRAYBURG**

**SUPPORTING DATA:**

1. Chevron U.S.A. Inc. (Chevron) is the operator of the proposed Eunice King #31 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	Eunice King #3	3002506839	28-F	Grayburg	120	928	0	520	active Pre-1970
Chevron	Eunice King #7	3002506843	28-G	Grayburg	38	257	--	--	inactive 1973,
Chevron	Eunice King #11	3002506847	28-B	Grayburg	60	441	--	--	inactive 1975
Chevron	Eunice King #19	3002506856	28-C	Grayburg	9	213	5	270	active 7/2003
Chevron	Eunice King #27	3002536738	28-C	Grayburg	4	126	34	518	active 9/2004
Chevron	Eunice King #28	3002536739	28-B	Grayburg	6	86	8	410	active 10/2004
Chevron	Eunice King #29	3002537187	28-F	Grayburg	1	0	44	306	active 11/2005

3. The proposed Eunice King #31 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 ( $\phi$ ) times 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.

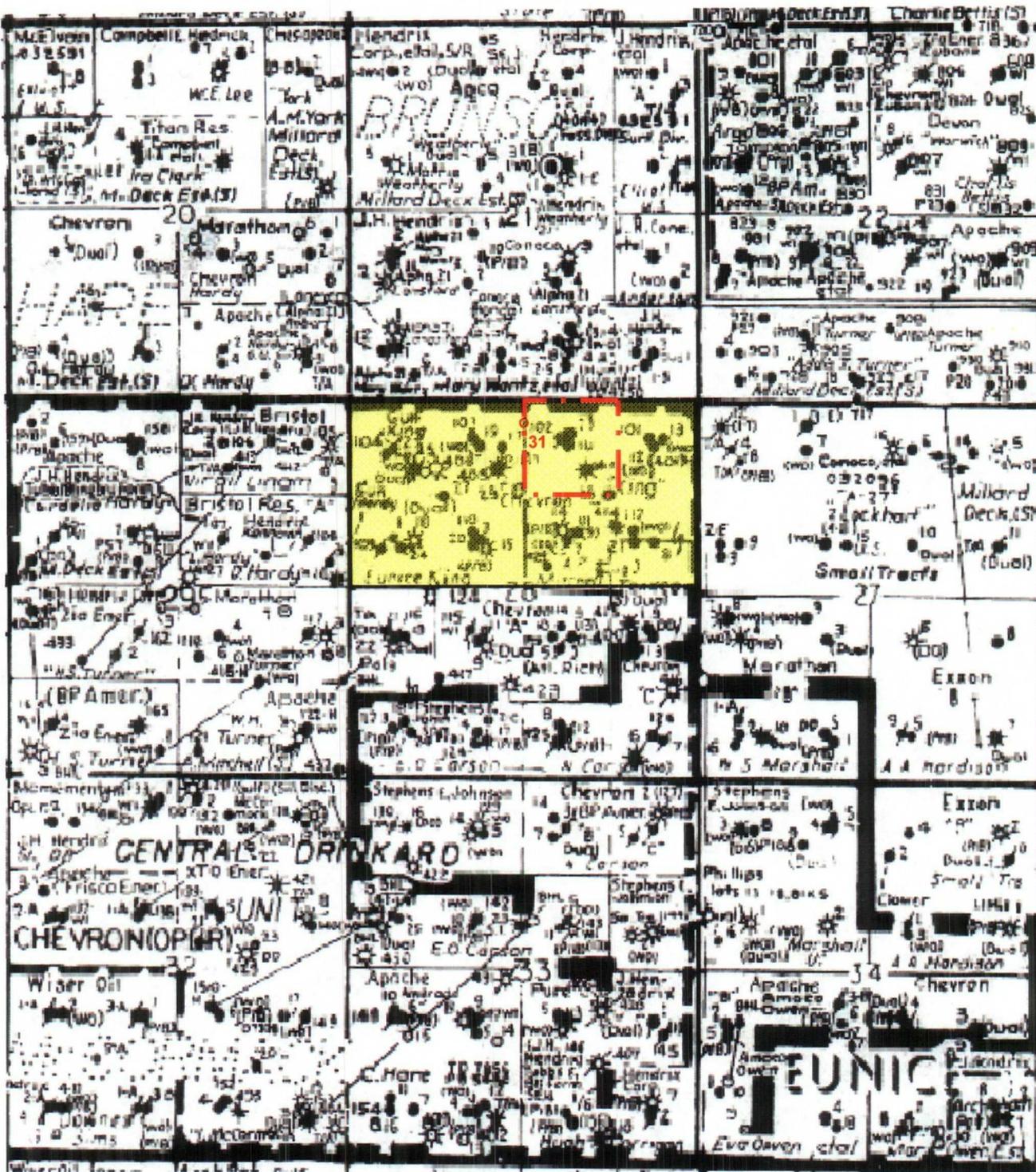
The following table provides drainage areas calculated from the HCPV map and reserves of the offsetting wells.

Operator	Well	API #	Location	Formation	Drainage Acres	EUR	
						MBO	MMCF
Chevron	Eunice King #3	3002506839	28-F	Grayburg	31	124	2405
Chevron	Eunice King #7	3002506843	28-G	Grayburg	9	38	257
Chevron	Eunice King #11	3002506847	28-B	Grayburg	12	60	441
Chevron	Eunice King #19	3002506856	28-C	Grayburg	7	29	908
Chevron	Eunice King #27	3002536738	28-C	Grayburg	15	62	1374
Chevron	Eunice King #28	3002536739	28-B	Grayburg	8	39	801
Chevron	Eunice King #29	3002537187	28-F	Grayburg	20	89	300

As seen above, the average drainage area of the offsetting locations is only 14 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 14 acre drainage area, and a 15% recovery factor. The results are as follows:

Operator	Well	Location	HCPV	Drainage Acres	EUR	
					MBO	MMCF
Chevron	Eunice King #31	28-B	6.0	14	70	409

4. The N/2 of Section 28 is covered by a single fee lease which has 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 Eunice King #31 will share a 40-acre proration unit and will be simultaneously dedicated with the Eunice King #28 as a Penrose Skelly, Grayburg producer in Section 28, Unit Letter B.
6. Approval of this application will allow for the recovery of oil and gas reserves which would not otherwise be recovered.



**Chevron USA Inc.**



Eunice King #28  
 1250 FNL & 1340 FWL, Unit B  
 Eunice King #31 (proposed)  
 330 FNL & 2630 FEL, Unit B  
 Section 28, 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  
1625 N. FRENCH DR., HOBBS, NM 88240

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

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

DISTRICT IV  
1220 S. ST. FRANCES DR., SANTA FE, NM 87505

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

Form C-102  
Revised October 12, 2005  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

AMENDED REPORT

API Number	Pool Code	Pool Name
Property Code	Property Name EUNICE KING	Well Number 31
OGRID No.	Operator Name CHEVRON U.S.A. INC.	Elevation 3457'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	28	21-S	37-E		330	NORTH	2630	EAST	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

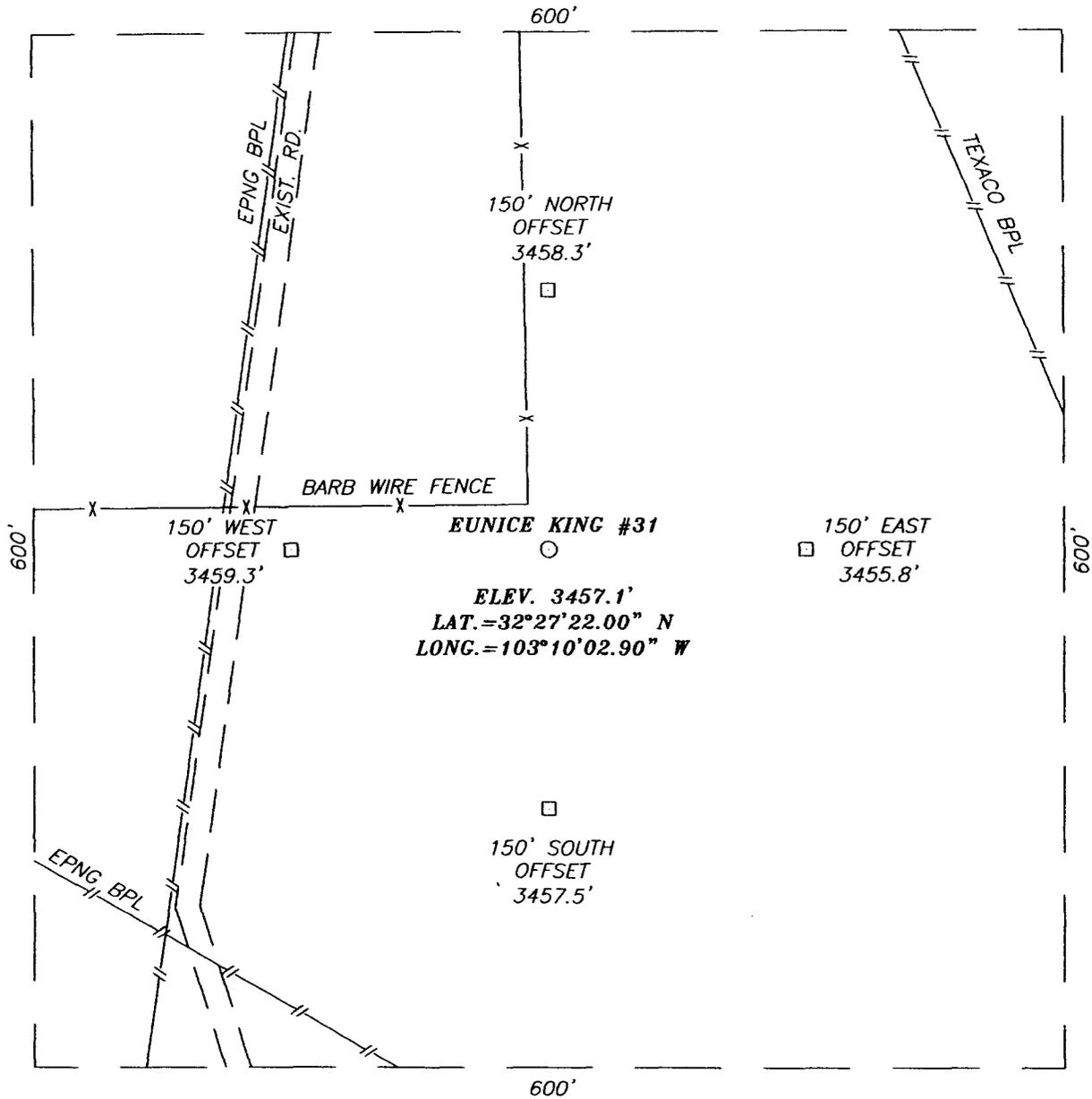
<p>330'</p> <p>2630'</p> <p>GEODETIC COORDINATES NAD 27 NME</p> <p>Y=531610.3 N X=859621.1 E</p> <p>LAT.=32°27'22.00" N LONG.=103°10'02.90" W</p>	<p><b>OPERATOR CERTIFICATION</b></p> <p><i>I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that 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>
	<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 E. Eidsen</i> 3/14/06</p> <p>06.11.0314</p>
	<p>Certificate No. GARY EIDSON 12641</p>
	<p>Standard 640 acre Section</p>



412 N. DAL PASO  
HOBBS, N.M. 88240  
(505) 393-3117

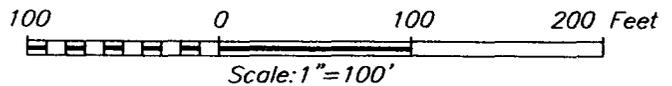
W.O. Number: 06.11.0314	Dr By: D.S.R.	Rev 1:N/A
Date: 03/04/06	Disk: CD#1	06110314
		Scale: 1"=100'

**SECTION 28, TOWNSHIP 21 SOUTH, RANGE 37 EAST, N.M.P.M.,**  
 LEA COUNTY, NEW MEXICO



**DIRECTIONS TO LOCATION**

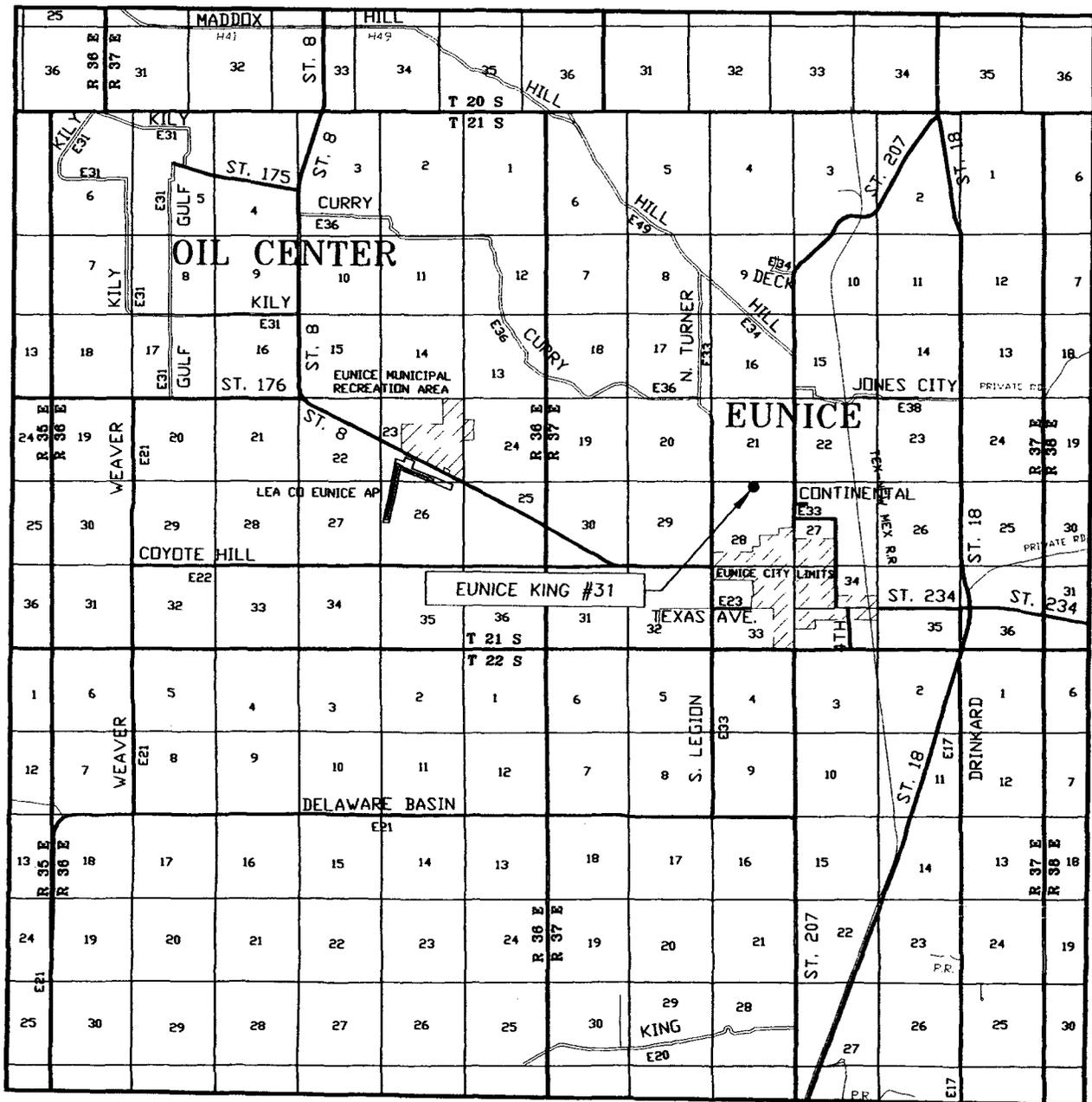
FROM THE INTERSECTION OF ST. HWY 8-176 AND CO. RD. E-33 (N. TURNER), (APPROX. 1.0 MILE WEST OF EUNICE, N.M.), GO NORTH ON CO. RD. E-33 APPROX. 0.86 MILES, TURN RIGHT AND GO EAST APPROX. 0.5 MILES. THIS LOCATION IS APPROX. 450 FEET NORTH.



<b>CHEVRON U.S.A. INC.</b>			
EUNICE KING #31 WELL LOCATED 330 FEET FROM THE NORTH LINE AND 2630 FEET FROM THE EAST LINE OF SECTION 28, TOWNSHIP 21 SOUTH, RANGE 37 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.			
Survey Date: 02/16/06	Sheet 1 of 1 Sheets		
W.O. Number: 06.11.0314	Dr By: D.S.R.	Rev 1:N/A	
Date: 03/04/06	Disk: CD#1	06110314	Scale: 1"=100'

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

# VICINITY MAP



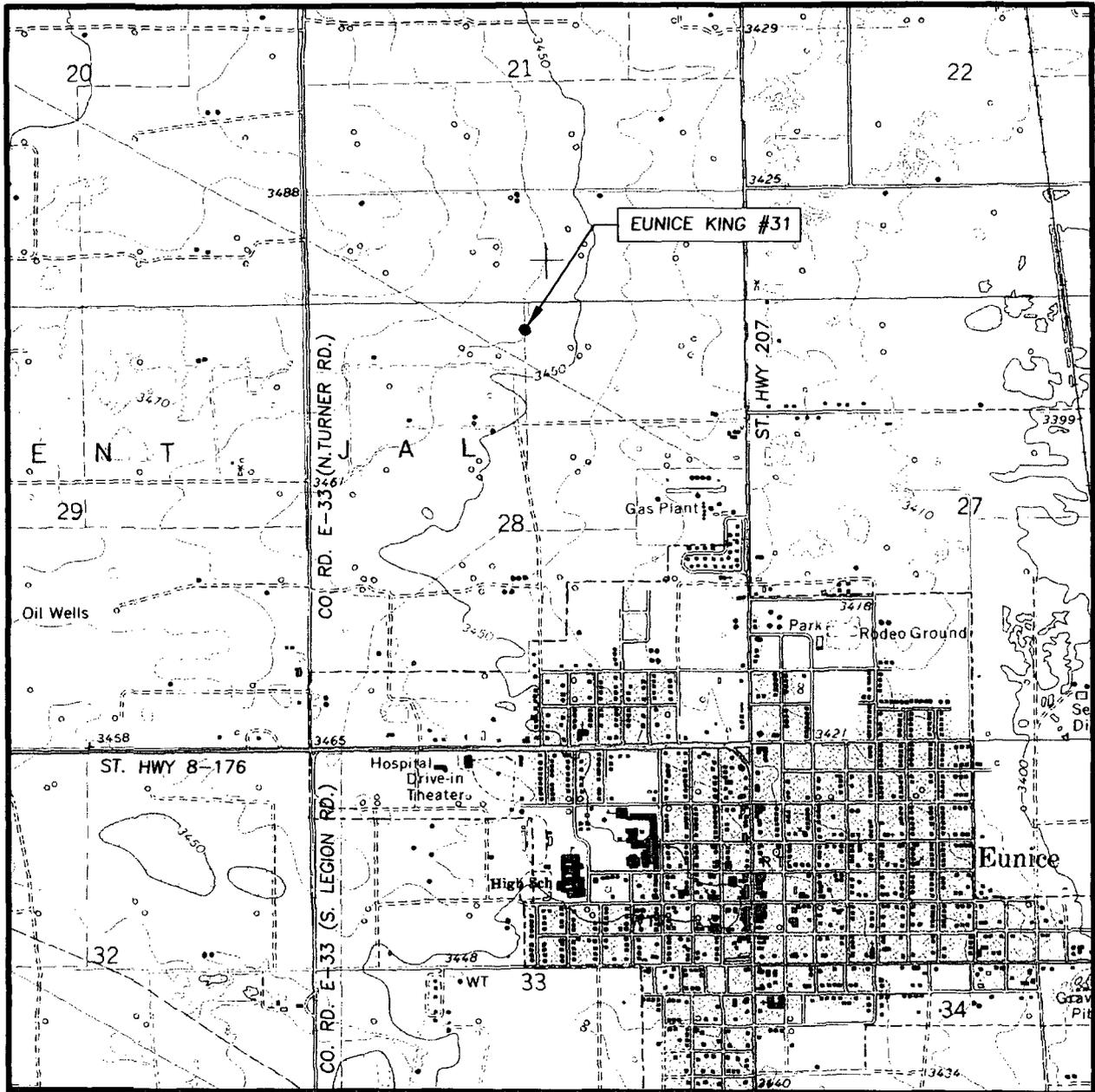
SCALE: 1" = 2 MILES

SEC. 28 TWP. 21-S RGE. 37-E  
 SURVEY \_\_\_\_\_ N.M.P.M.  
 COUNTY LEA STATE NEW MEXICO  
 DESCRIPTION 330' FNL & 2630' FEL  
 ELEVATION 3457'  
 OPERATOR CHEVRON U.S.A. INC.  
 LEASE EUNICE KING



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

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:  
EUNICE, N.M. - 10'

SEC. 28 TWP. 21-S RGE. 37-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

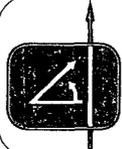
DESCRIPTION 330' FNL & 2630' FEL

ELEVATION 3457'

OPERATOR CHEVRON U.S.A. INC.

LEASE EUNICE KING

U.S.G.S. TOPOGRAPHIC MAP  
EUNICE, N.M.



**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  
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 3.1

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-025-36739	<sup>2</sup> Pool Code 50350	<sup>3</sup> Pool Name Penrose Skelly; Grayburg
<sup>4</sup> Property Code	<sup>5</sup> Property Name Eunice King	<sup>6</sup> Well Number 28
<sup>7</sup> OGRID No. 4323	<sup>8</sup> Operator Name Chevron U.S.A., Inc.	<sup>9</sup> Elevation 3436' 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
B	28	21S	37E		1250	North	1340	West	Lea

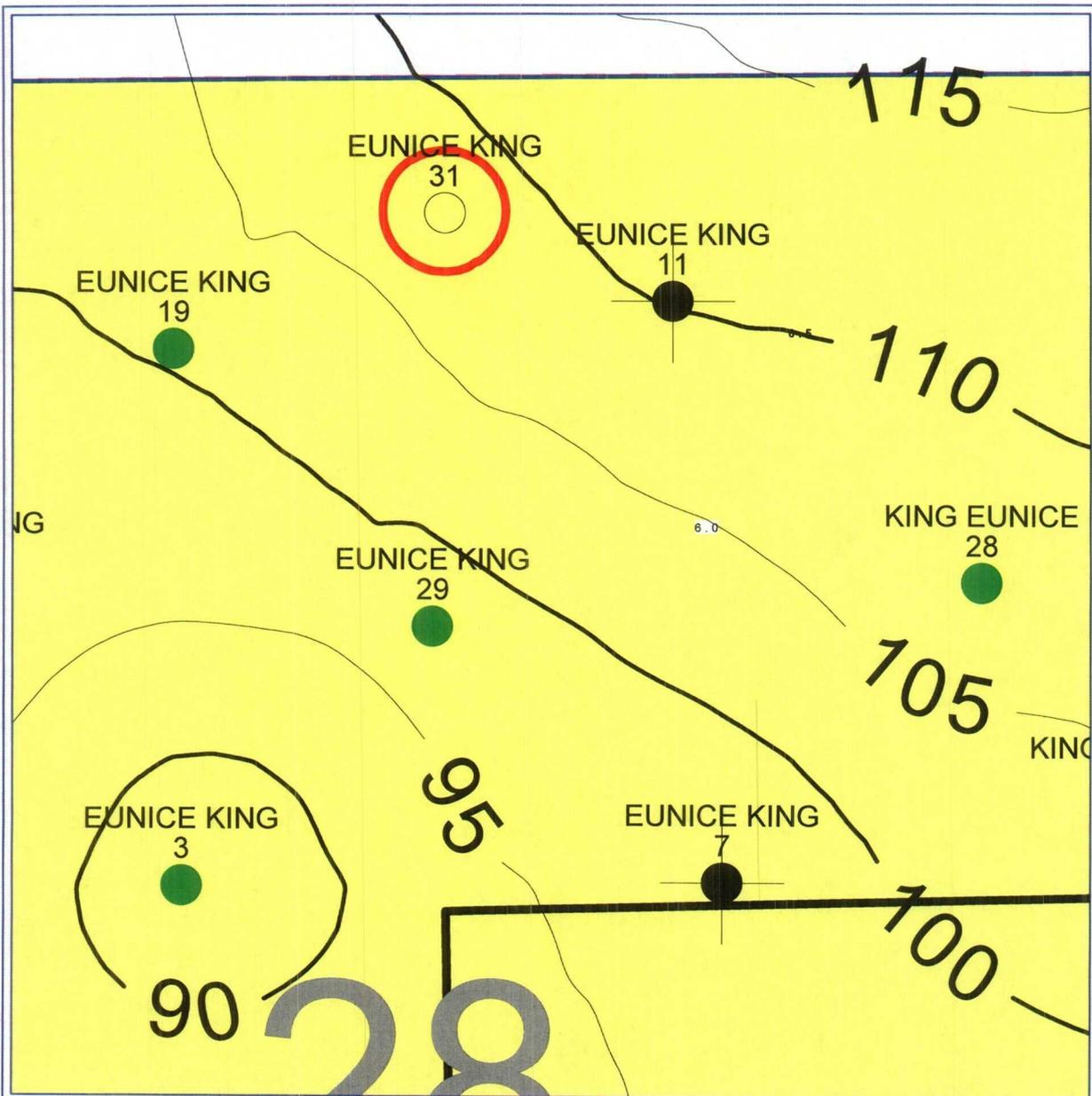
<sup>11</sup> Bottom Hole Location If Different From Surface

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>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>Signature </p> <p>Printed Name <b>George F. Pritchard</b></p> <p>Title <b>Geologist</b></p> <p><b>March 20, 2006</b></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>



PETRA 3/23/2006 6:30:11 AM

## CHEVRON U.S.A.

### EXHIBIT 4

#### PENROSE-SKELLY FIELD EUNICE KING #31

Sec. 28, T21S-R37E, Lea CO. New Mexico

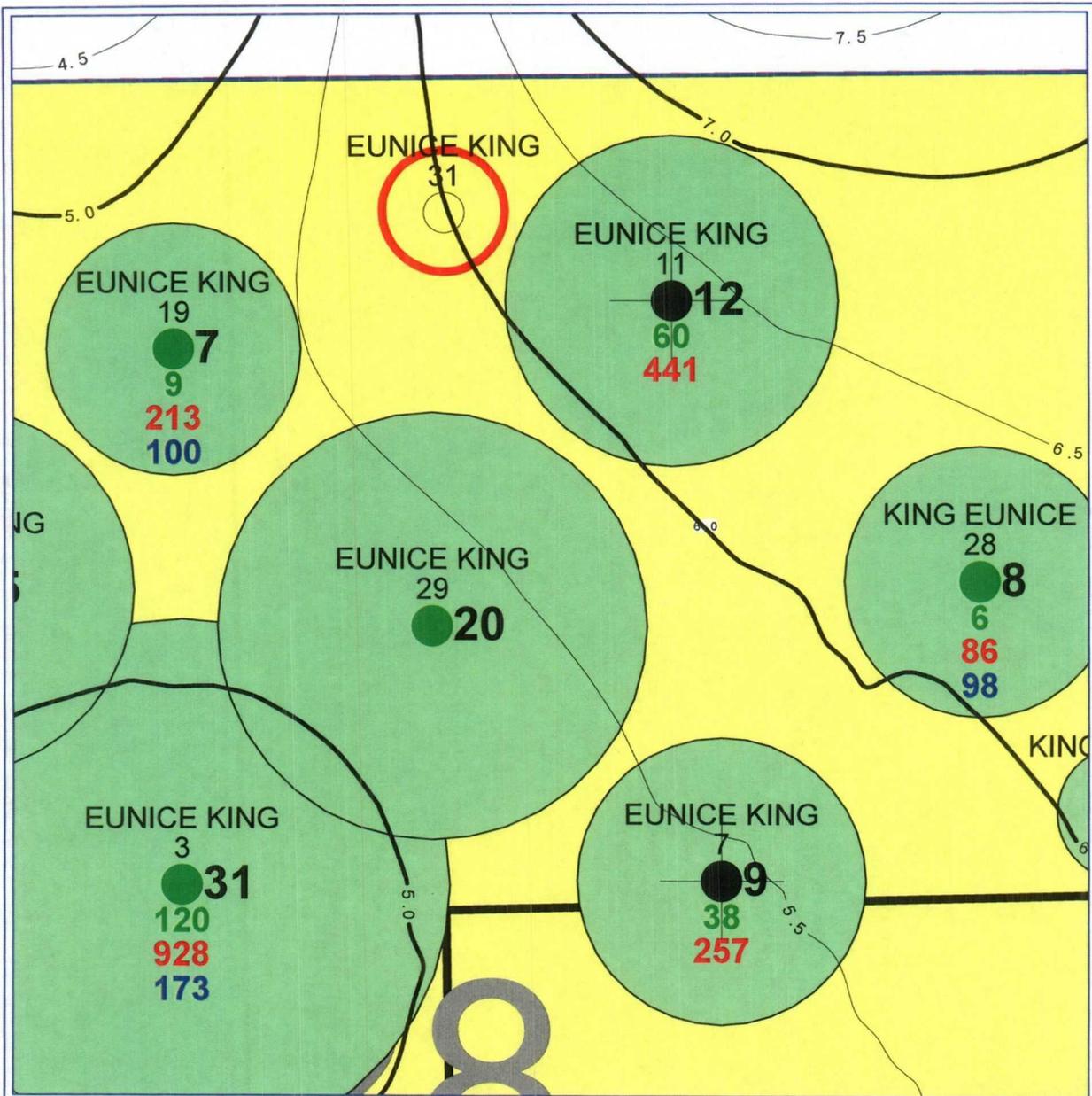
Grayburg Net Pay CI=5. [Gr<40, Por>6%]

#### POSTED WELL DATA

Well Name  
Well Number



March 23, 2006



PETRA 3/23/2006 6:35:00 AM

# CHEVRON U.S.A.

## EXHIBIT 5

### PENROSE-SKELLY FIELD EUNICE KING #31

Sec. 28, 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[GFP]

GFP\_GRAYBURG - GRAYBURG-CUM\_OIL\_MBO[P]  
GFP\_GRAYBURG - GRAYBURG-CUM\_GAS\_MMCF[P]  
GFP\_GRAYBURG - GRAYBURG-CUM\_WATER\_MBO[P]



March 23, 2006