

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.

Print or Type Name

Signature

Title

Date

e-mail Address

*Chevron Texaco*

North America Upstream  
Midcontinent Business Unit  
11111 S. Wilcrest, Rm S1052  
Houston, Texas 77099  
Tel (281) 561-3659  
Fax (281) 561-3576  
mrvillalva@chevrontexaco.com

Michael R. Villalva  
Petroleum Engineer

RECEIVED

MAR 07 2005

CID 11111 S. Wilcrest, Rm S1052  
Houston, Texas 77099  
Division

**ChevronTexaco**

March 2, 2005

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

Mr. Michael E. Stogner  
New Mexico Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

Dear Mr. Stogner:

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

**Mittie Weatherly #8**  
1140' FNL & 1690' FWL, NE/4 NW/4 of  
Section 17, T21S, R37E, Unit Letter  
Lea County, New Mexico

The proposed well will be as an infill producer in the Penrose Skelly, Grayburg Pool, which is an oil pool spaced on 40 acres. This well is a follow-up to our recent infill drilling in the same Pool which recently concluded. ChevronTexaco'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 17 will be simultaneously dedicated in the Penrose Skelly, Grayburg Pool to the proposed well and to the Mittie Weatherly #3. The Mittie Weatherly #3 was drilled in 1952 and is currently producing as a Penrose Skelly, Grayburg producer. ChevronTexaco 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 NW/4 of Section 17. The proposed well will be located in the approximate center of those wells. Based on drainage calculations, ChevronTexaco 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 NW/4 of Section 17 is covered by a six leases of which Chevron is the operator and 75% working interest owner of the Grayburg wells toward which the proposed well will encroach. Therefore, other interest owners will be notified of this application.

March 2, 2005

Page 2

If you have any questions concerning this application or need additional information, please contact me by phone at (281) 561-3659 or by email at [mrvallalva@chevrontexaco.com](mailto:mrvallalva@chevrontexaco.com). If I am not available, you can also reach George Pritchard by phone at (281) 561-4918 or by email at [GPritchard@chevrontexaco.com](mailto:GPritchard@chevrontexaco.com). Thank you for consideration of this matter.

Sincerely,

A handwritten signature in cursive script that reads "Michael R. Villalva".

Michael R. Villalva  
Petroleum Engineer

Attachments

cc: NMOCD District 1 – Hobbs, NM  
Working Interest Owners  
Michael R. Villalva  
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:

**Mittie Weatherly #8**

1140' FNL & 1690' FWL

Section 17, T21S, R37E, Unit Letter C

Lea County, New Mexico

**Offset Operators, Working Interest Owners, NW/4 Section 17:**

- |    |  |                 |
|----|--|-----------------|
| 1. | Chevron U.S.A. Inc.<br>11111 S. Wilcrest<br>Houston, TX 77099  | Operator/75% WI |
| 2. | Carl David Ganz<br>P. O. Box 65<br>Farmingdale, New York 11735-0065  | 0.25%           |
| 3. | Catherine M. Roach Trust<br>c/o Hibernia National Bank<br>P. O. Box 61964<br>New Orleans, Louisiana 70161-1964 | 2.00%           |
| 4. | Buttram Energies, Inc.<br>501 Oil Center West<br>2601 N.W. Expressway<br>Oklahoma City, Oklahoma 73112-7272    | 21.00%          |
| 5. | Cathy Ganz Johnsen<br>P. O. Box 65<br>Farmingdale, New York 11735-0065   | 0.25%           |
| 6. | Joan Miller Ganz Trust<br>P. O. Box 65<br>Farmingdale, New York 11735-0065                                     | 0.20%           |
| 7. | Mary D. Pearlbrook<br>P. O. Box 65<br>Farmingdale, New York 11735-0065   | 1.3%            |

DATE IN	SUSPENSE	ENGINEER	LOGGED IN	TYPE	APP NO.
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## NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

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



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Check One Only for [B] or [C]

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☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify \_\_\_\_\_

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[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

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

Michael R. Villalva  
 Print or Type Name

Signature

Petroleum Engineer  
 Title

Mar 2, 2005  
 Date

mrvillalva@chevrontexaco.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:

**Mittie Weatherly #8**

1140' FNL & 1690' FWL

Section 17, 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 Mittie Weatherly #8 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	Location	Formation	Cum Prod		Current Prod		Status
				MBO	MMCF	BOPD	MCFPD	
Chevron	Weatherly #1	17-F	Grayburg	28	577			Shut In
Chevron	Weatherly #3	17-C	Grayburg	32	346			Shut In
Chevron	Weatherly #4	17-E	Grayburg	53	1153	12	300	Producing
Chevron	Weatherly #5	17-D	Grayburg	27	351			P&A
Chevron	Weatherly #7	17-D	Grayburg	2	137	2	85	Producing

3. The proposed Mittie Weatherly #8 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.

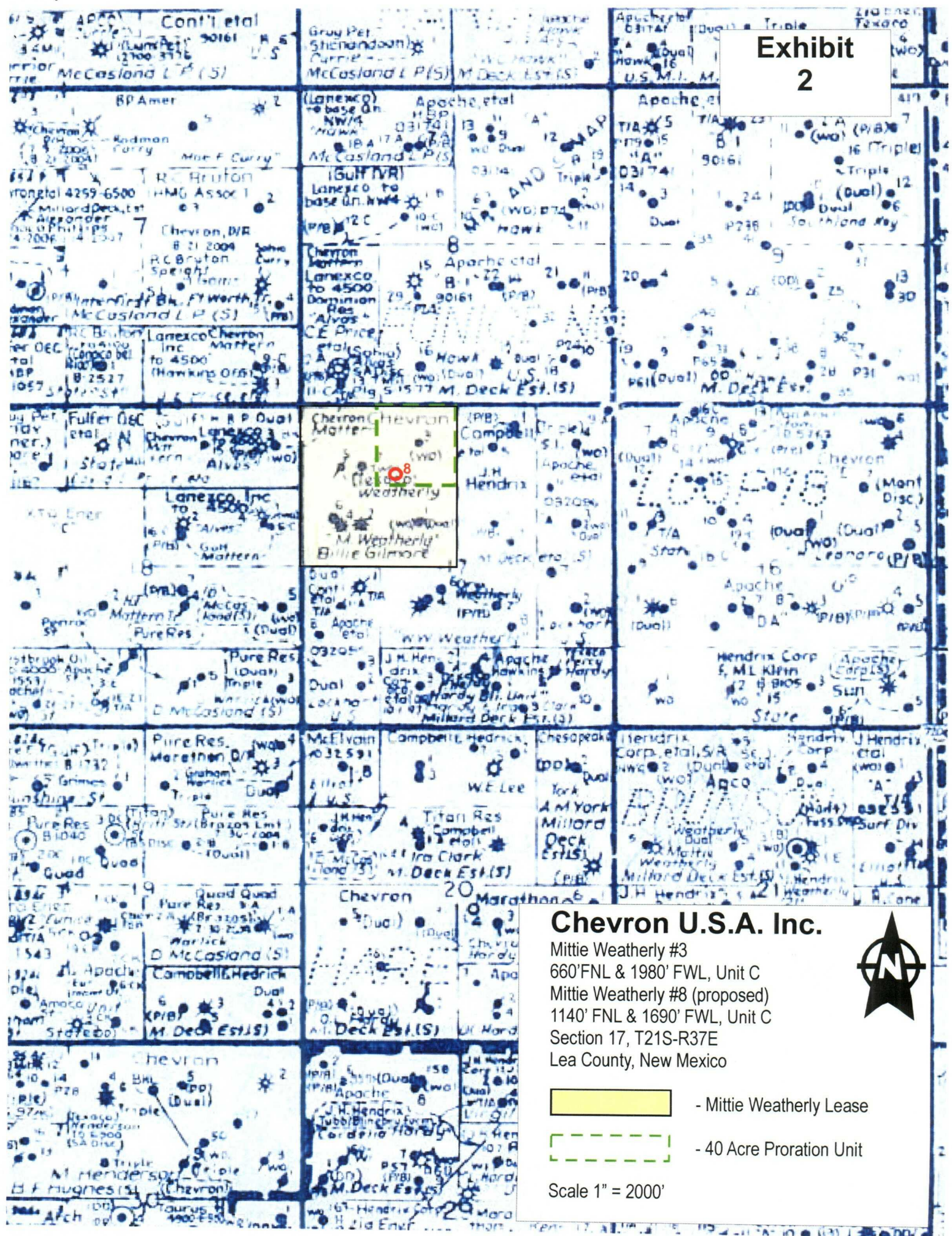
Operator	Well	Location	Formation	Drainage Acres	EUR	
					MBO	MMCF
Chevron	Weatherly #1	17-F	Grayburg	7	41	947
Chevron	Weatherly #3	17-C	Grayburg	7	39	631
Chevron	Weatherly #4	17-E	Grayburg	12	67	1285
Chevron	Weatherly #5	17-D	Grayburg	5	27	351
Chevron	Weatherly #7	17-D	Grayburg	1	5	184

As seen above, the average drainage area of the offsetting locations is 8 acres, and additional reserves can be recovered by drilling the proposed infill well. The well will be moved from the approximate center location of the existing offsetting producers due to surface related issues. Reserves for the proposed location were calculated using the HCPV map, a 8 acre drainage area, and a 15% recovery factor. The results are as follows:

Operator	Well	Location	HCPV	Drainage Acres	EUR	
					MBO	MMCF
Chevron	Weatherly #8	34-C	6.6	8	45	801

4. The NW/4 of Section 17 is covered by six leases of which Chevron is the operator and 75% working interest owner of the Grayburg wells toward which the proposed well will encroach. Therefore, other interest owners will be notified of this application.
5. The proposed Mittie Weatherly #8 will share a 40-acre proration unit and will be simultaneously dedicated with the Mittie Weatherly #3 as a Penrose Skelly, Grayburg producer in Section 17, Unit Letter C.
6. Approval of this application will allow for the recovery of oil and gas reserves which would not otherwise be recovered.







## State of New Mexico

Energy, Minerals and Natural Resources Department

**Exhibit 3**

## DISTRICT I

1825 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. FRANCIS DR., SANTA FE, NM 87505

## OIL CONSERVATION DIVISION

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

Form C-102

Revised JUNE 10, 2003

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
Property Code	Property Name <b>MITTIE WEATHERLY</b>	Well Number <b>8</b>
OGRID No.	Operator Name <b>CHEVRON U.S.A., INC.</b>	Elevation <b>3477'</b>

## 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	17	21-S	37-E		1140	NORTH	1690	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 style="text-align: center;"><i>Standard 640-acre Section</i></p> <p style="text-align: center;">GEODETIC COORDINATES NAD 27 NME</p> <p style="text-align: center;">Y=541302.0 N X=853263.9 E</p> <p style="text-align: center;">LAT.=32°28'58.57" N LONG.=103°11'15.86" W</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>Signature _____</p> <p>Printed Name _____</p> <p>Title _____</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 style="text-align: right;">JANUARY 12, 2005</p> <p>Date Surveyed _____ JR</p> <p>Signature &amp; Seal of Professional Surveyor</p> <p style="text-align: center;">GARY G. EIDSON 1/17/05 04.11.1718 12641</p> <p>Certificate No. GARY EIDSON 12641</p>

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

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised June 10, 2003

OIL CONSERVATION DIVISION

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

Submit to Appropriate District Office

Exhibit 3.1

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-025-06649	<sup>2</sup> Pool Code 50350	<sup>3</sup> Pool Name Penrose Skelly; Grayburg
<sup>4</sup> Property Code 11129	<sup>5</sup> Property Name Mittle Weatherly	<sup>6</sup> Well Number 3
<sup>7</sup> OGRID No. 4323	<sup>8</sup> Operator Name Chevron U.S.A., Inc.	<sup>9</sup> Elevation 3484'

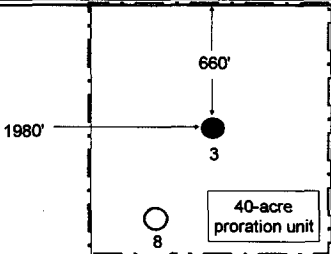
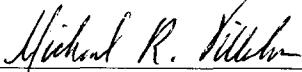
<sup>10</sup> Surface Location

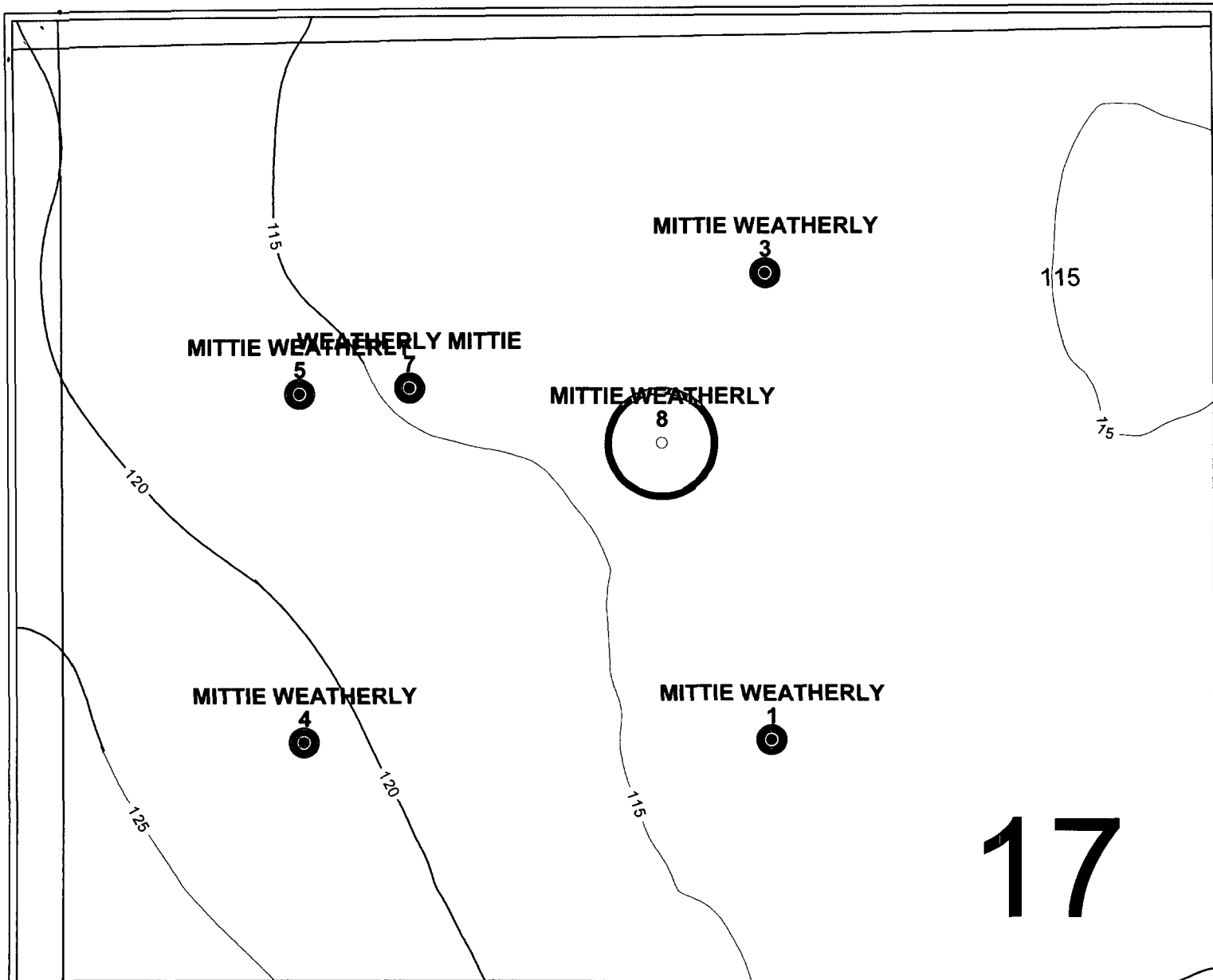
UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	17	21S	37E		660	North	1980	West	Lea

<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.						

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

16				<sup>1</sup> OPERATOR CERTIFICATION  I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.   Signature Michael R. Villalva Printed Name Petroleum Engineer Title February 21, 2005
				<sup>1</sup> 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.  Signature and Seal of Professional Surveyor:   Certificate Number



PETRA 3/2/2005 7:20:25 AM

**ChevronTexaco**

**EXHIBIT 4**

**PENROSE-SKELLY FIELD M. WEATHERLY #8**

Sec. 17, T21S-R37E, Lea Co, New Mexico

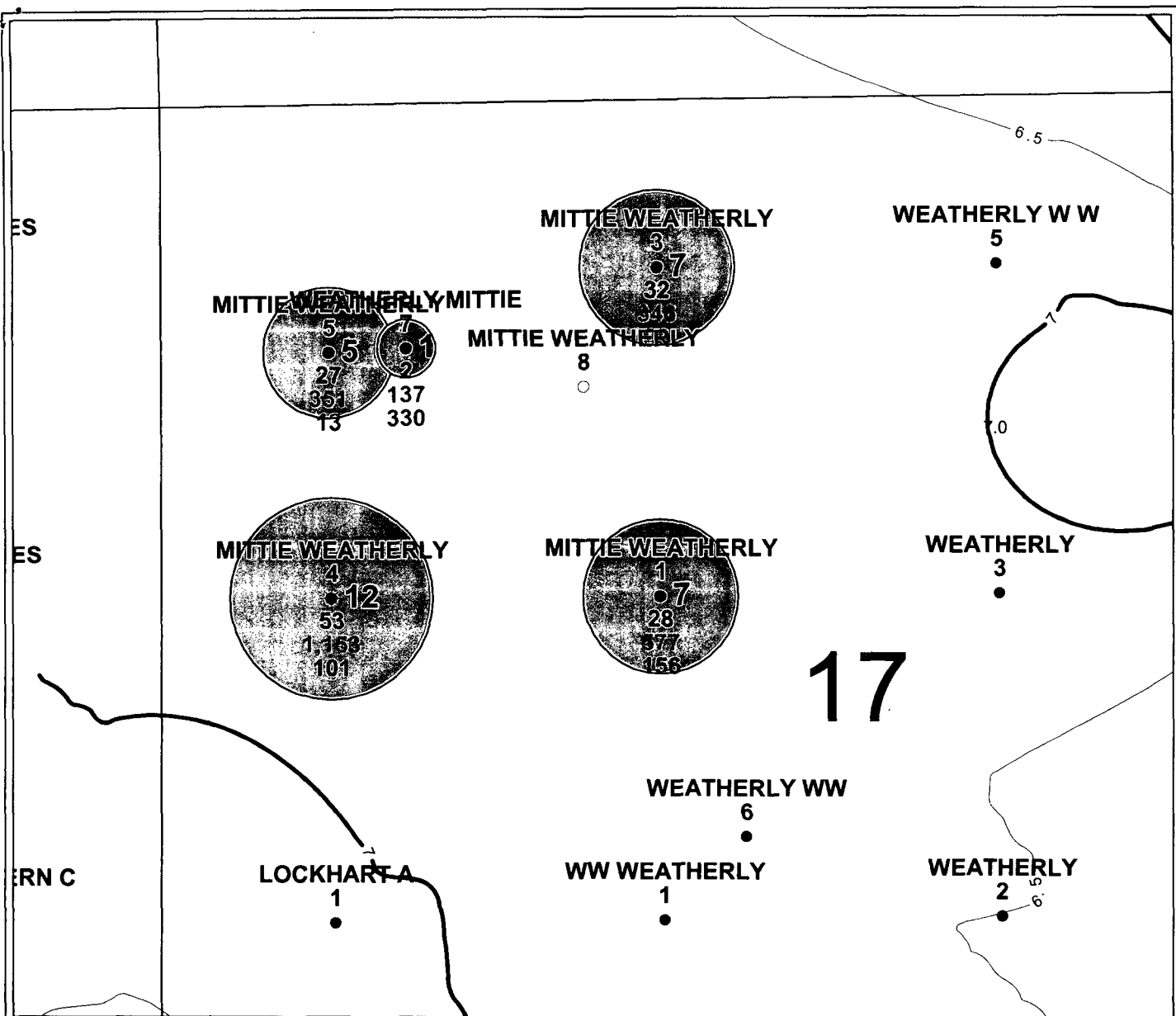
Grayburg Net Pay CI=5.0' [Gr<40, Por>6%]

**POSTED WELL DATA**

Well Name  
Well Number



March 2, 2005



PETRA 2/28/2005 10:35:42 AM

## ChevronTexaco

### EXHIBIT 5

#### PENROSE-SKELLY FIELD M. WEATHERLY #8

Sec. 17, T21S-R37E, Lea Co, New Mexico

Grayburg HCPV CI=0.5, & EUR - Drainage

#### POSTED WELL DATA

Well Name  
Well Number

● GFP\_GRAYBURG - EUR-GRAYBURG-AI

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

0 633 1,266  
FEET

February 28, 2005