

3/4/09 DATE IN	SUSPENSE	D. Brooks ENGINEER	3/4/09 LOGGED IN	NSL TYPE	PRAA0906358404 APP NO.
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -
2009 MAR 4 12:01 PM South 22 Francis Drive, Santa Fe, NM 87505



30-025
State S #12
Chevron USA
4323
606

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.

Casey R. Mobley
Print or Type Name

Signature

Project Manager / Geologist
Title

3/2/2009
Date

Casey.Mobley@chevron.com
e-mail Address



Casey R. Mobley
Project Manager / Geologist

North America Upstream
Midcontinent Business Unit
11111 S. Wilcrest, Rm S-1037
Houston, Texas 77099
Tel (281) 561-4830
Fax (281) 561-3576
Casey.Mobley@chevron.com

RECEIVED
2009 MAR 4 PM 1 22

March 2, 2009

Request for Administrative Approval of
Unorthodox Oil Well Location

Mr. Mark E. Fesmire
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:

State S #12
990' FNL & 1330' FWL, NE/4 NW/4 of
Section 15, 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 of our 6 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 NE/4 NW/4 of Section 15 will be simultaneously dedicated in the Penrose Skelly, Grayburg Pool to the proposed well and to the State S #4 pursuant to statewide Rule 104.B(1). The State S #4 was drilled in 1950 as an Ellenberger producer, and was re-completed in 2001 as a horizontal Penrose Skelly, Grayburg producer. The State S #2 well also produced from the Grayburg, from 1993-2000; this well is currently inactive.

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. Four wells have produced from the Grayburg formation in the N/2 of the NW/4 of Section 15. The proposed well will be located in the approximate southern 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 N/2 of Section 15 is covered by a single Chevron U.S.A. Inc. fee lease which has common royalty and working interest ownerships. Chevron U.S.A. Inc. owns a 100% working interest as to all depths on the N/2 N/2 of Section 15. The proposed location encroaches upon a fee lease covering the SW1/4 NW1/4

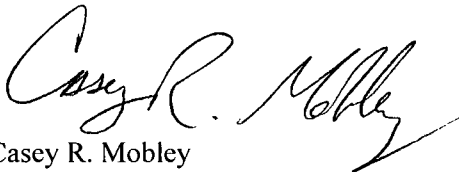
March 2, 2009

Page 2

(Unit Letter E) of Section 15. Notification letters have been sent to the offset working interest owners covering this fee lease, and their approval is pending.

If you have any questions concerning this application or need additional information, please contact me by phone at (281) 561-4830 or by email at Casey.Mobley@chevron.com. If I am not available, you can also reach Nestor Santos by phone at (281) 561-4731 or by email at Nestor.Santos@chevron.com. Thank you for consideration of this matter.

Sincerely,

A handwritten signature in cursive script, reading "Casey R. Mobley". The signature is written in dark ink and is positioned above the printed name and title.

Casey R. Mobley
Project Manager / Geologist

Attachments

cc: NMOCD District 1 – Hobbs, NM
Ed Van Reet
Nestor Santos
Well File

NOTIFICATION LIST

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

State S #12

990' FNL & 1330' FWL, NE/4 NW/4 of
Section 15, T21S, R37E, Unit Letter C
Lea County, New Mexico

Offset Operators, Working Interest Owners, N/2 N/2 Section 15:

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

EXHIBIT 1

ENGINEERING AND GEOLOGICAL JUSTIFICATION

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

State S #12

990' FNL & 1330' FWL, NE/4 NW/4 of
Section 15, 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 State S #12 well (Exhibit 3). The proposed total depth is 4300' in 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	STATE S #1	30025065860001	15D 21 37E	Grayburg	49.3	286.3	5	73	Active
Chevron	STATE S #10	30025360200000	15B 21 37E	Grayburg	15.5	46.7	5	20	Active
Chevron	STATE S #11	30025360210000	15A 21 37E	Grayburg	9.7	38.4	3	14	Active
Chevron	STATE S #2	30025066090002	15C 21 37E	Grayburg	28.4	90.9	-	-	Inactive
Chevron	STATE S #4	30025066110100	15C 21 37E	Grayburg	33.9	168.1	10	95	Active
Chevron	STATE S #5	30025066120003	15D 21 37E	Grayburg	18.2	904.2	3	91	Active

3. The proposed State S #12 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 (ϕ) 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	STATE S #1	30025065860001	15D 21 37E	Grayburg	7	49	286
Chevron	STATE S #10	30025360200000	15B 21 37E	Grayburg	3	15	47
Chevron	STATE S #11	30025360210000	15A 21 37E	Grayburg	2	10	38
Chevron	STATE S #2	30025066090002	15C 21 37E	Grayburg	5	28	91
Chevron	STATE S #4	30025066110100	15C 21 37E	Grayburg	6	34	168
Chevron	STATE S #5	30025066120003	15D 21 37E	Grayburg	3	18	904

As seen above, the average drainage area of the offsetting locations is only 5 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 5 acre drainage area, and a 15% recovery factor. The results are as follows:

Operator	Well	Location	HCPV	Drainage Acres	EUR	
					MBO	MMCF
Chevron	State S #12	15-C	6.5	5	25	256

4. A land plat highlighting the proposed well's location is attached as Exhibit 2. The N/2 N/2 of Section 15 is covered by a single Chevron U.S.A. Inc. fee lease which has common royalty and working interest ownerships. Chevron U.S.A. Inc. owns a 100% working interest as to all depths on the N/2 N/2 of Section 15. The proposed location encroaches upon a fee lease covering the SW1/4 NW1/4 (Unit Letter E) of Section 15. Notification letters have been sent to the offset working interest owners covering this fee lease, and their approval is pending.
5. The proposed State S #12 will share a 40-acre proration unit and will be simultaneously dedicated with the State S #4 as a Penrose Skelly, Grayburg producer in Section 15, 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.



State S #4
660 FNL & 2080 FWL
State S #12 (proposed)
990 FNL & 1330 FWL

Section 17, T21S-R37E
Lea County, New Mexico



State S Lease



40 Acre Proration Unit

Scale: 1"=2000' Approx.

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

State of New Mexico
Energy, Minerals and Natural Resources Department

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 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 STATE S	Well Number 12
OGRID No.	Operator Name CHEVRON USA INC.	Elevation 3445'

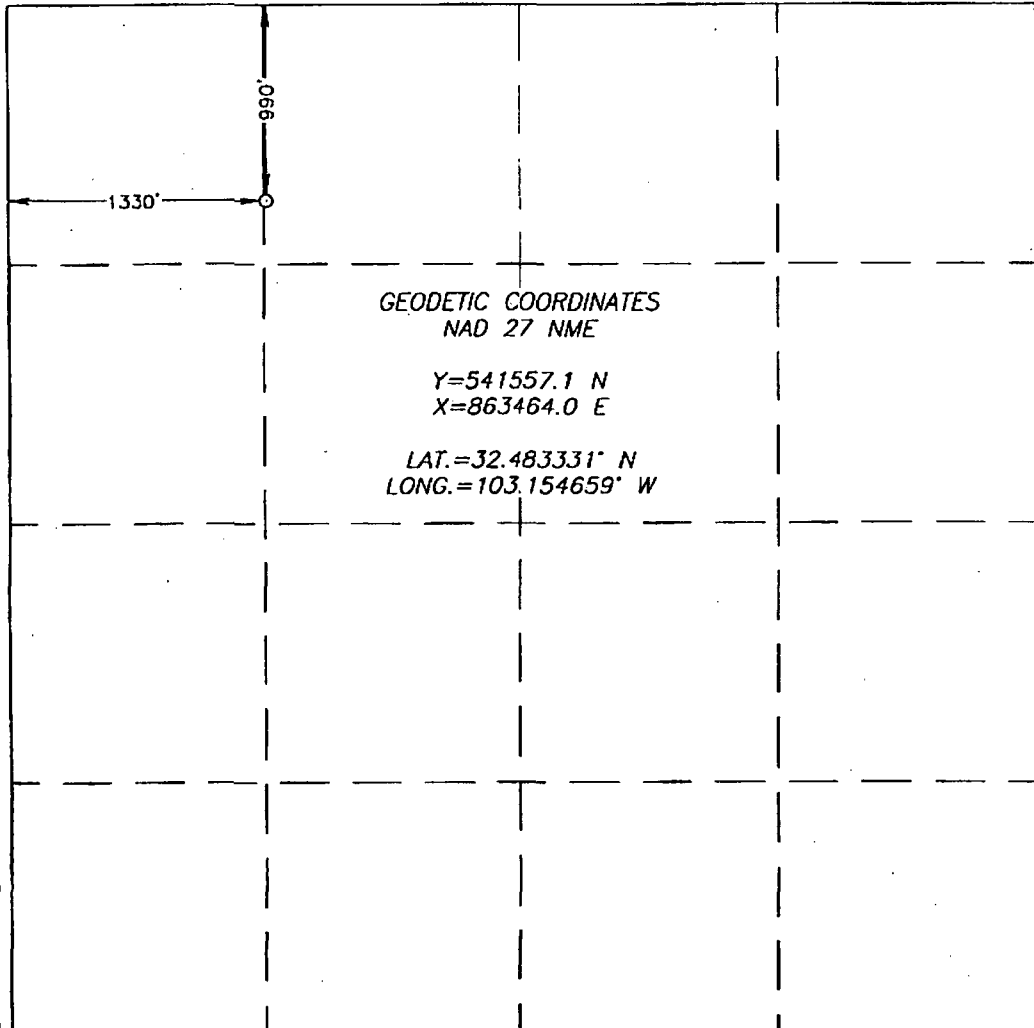
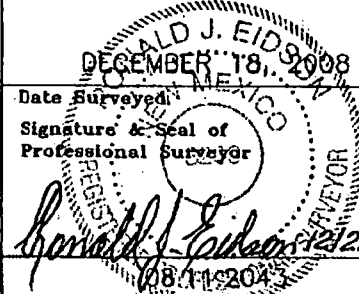
Surface Location

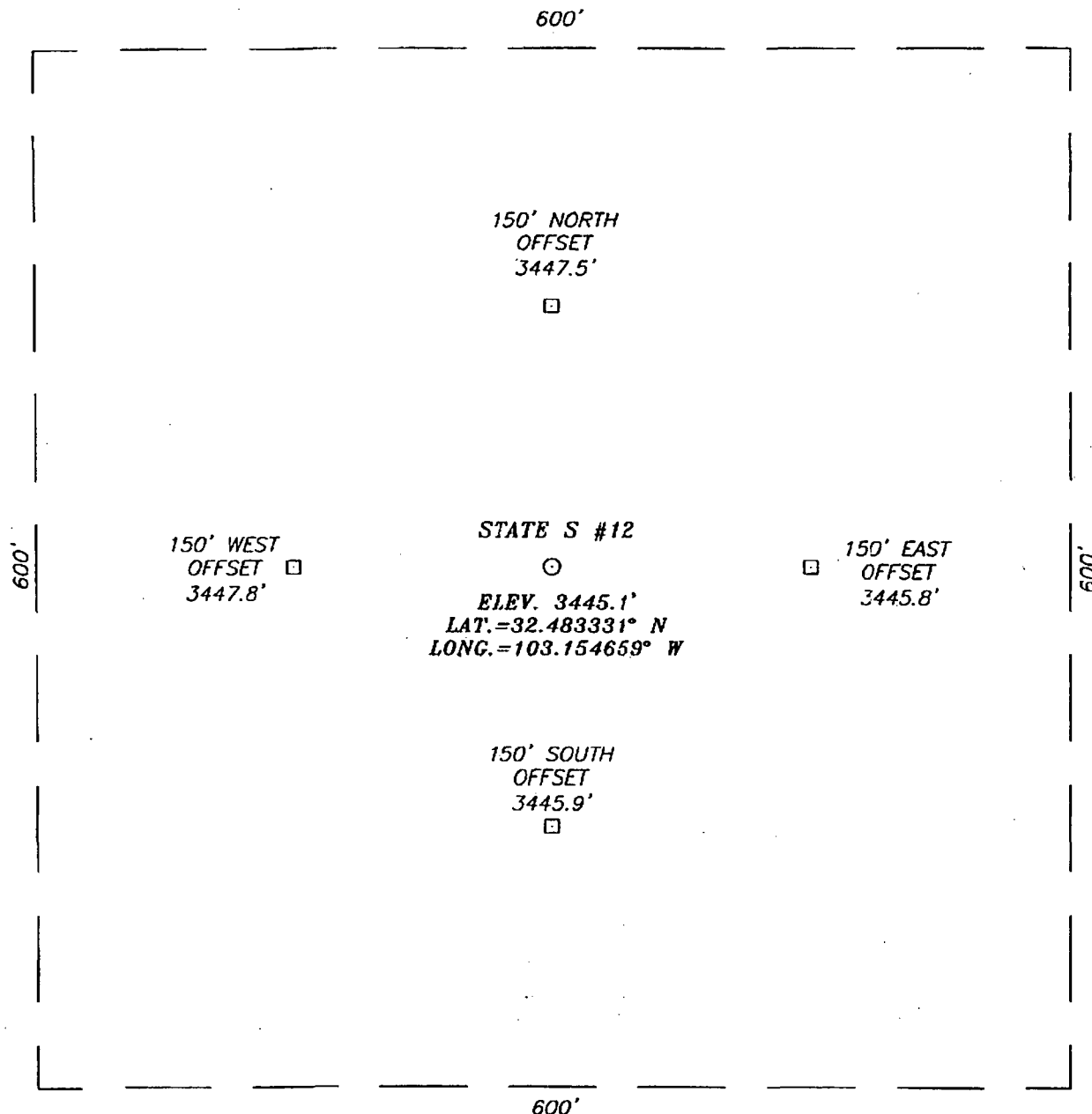
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	15	21-S	37-E		990	NORTH	1330	WEST	LEA

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.						

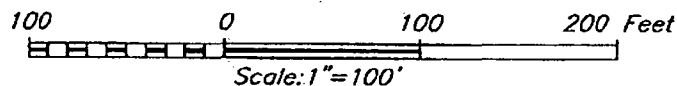
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	<p>OPERATOR CERTIFICATION</p> <p>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.</p> <p>Signature _____ Date _____</p> <p>Printed Name _____</p>
	<p>SURVEYOR CERTIFICATION</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>RONALD J. EIDSON DECEMBER 18, 2008 NEW MEXICO Date Surveyed _____ AR Signature & Seal of Professional Surveyor  Certificate No. GARY EIDSON 12641 RONALD J. EIDSON 3239</p>



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF ST. HWY. #207 AND HILL ROAD, GO NORTH ON ST. HWY. #207 APPROX. 0.4 MILES TO A LEASE ROAD. TURN RIGHT AND GO EAST APPROX. 0.25 MILES. THIS LOCATION IS APPROX. 320 FEET SOUTH OF LEASE ROAD.



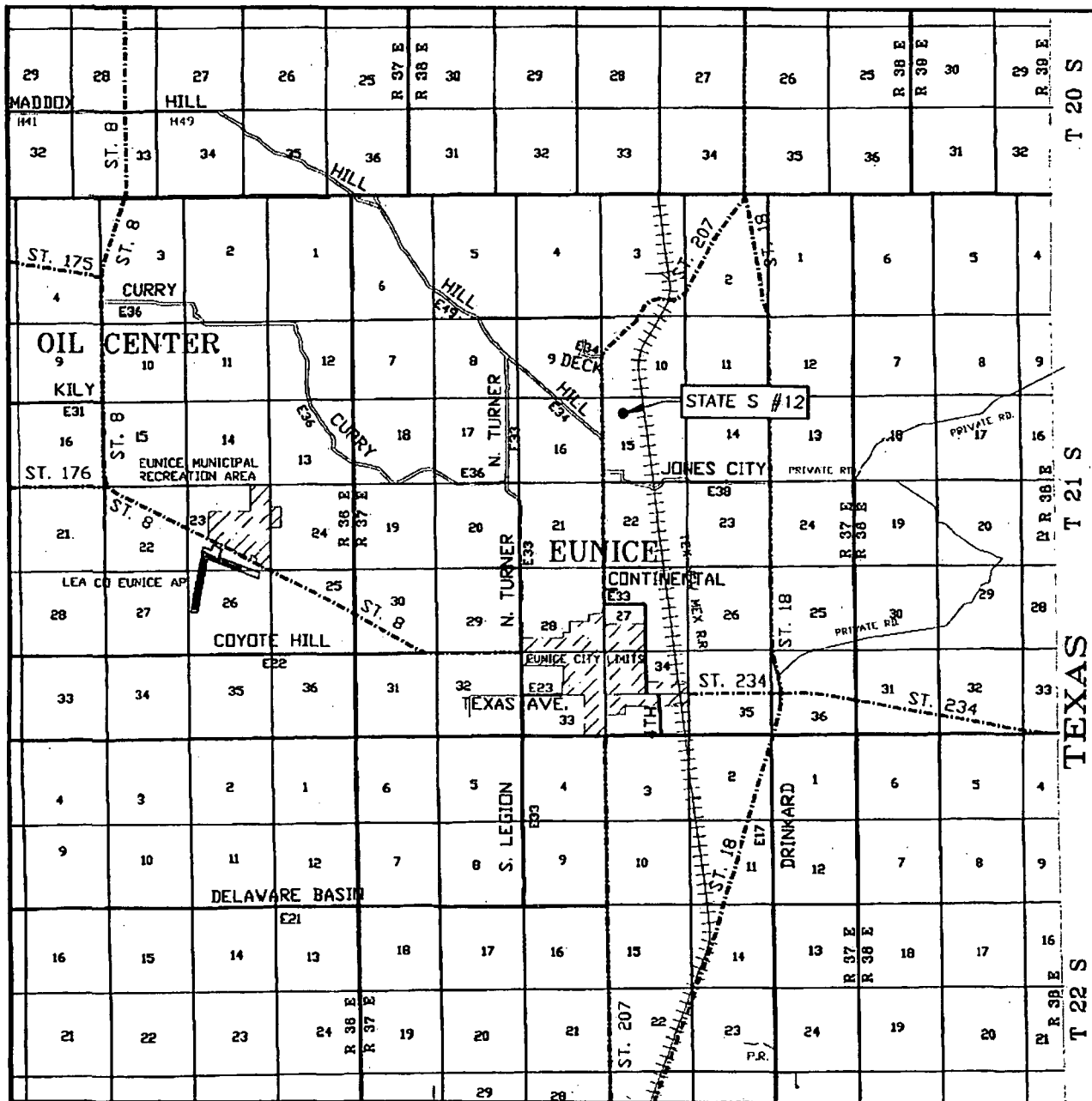
CHEVRON USA INC.

STATE S #12 WELL
LOCATED 990 FEET FROM THE NORTH LINE
AND 1330 FEET FROM THE WEST LINE OF SECTION 15,
TOWNSHIP 21 SOUTH, RANGE 37 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.

Survey Date: 12/18/08	Sheet 1 of 1 Sheets
W.O. Number: 08.11.2043	Dr By: AR
Date: 12/22/08	Disk: 08112043
	Scale: 1"=100'

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(575) 393-3117

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 15 TWP. 21-S RGE. 37-E

SURVEY N.M.P.M.


COUNTY LEA STATE NEW MEXICO

DESCRIPTION 990' FNL & 1330' FWL

ELEVATION 3445'

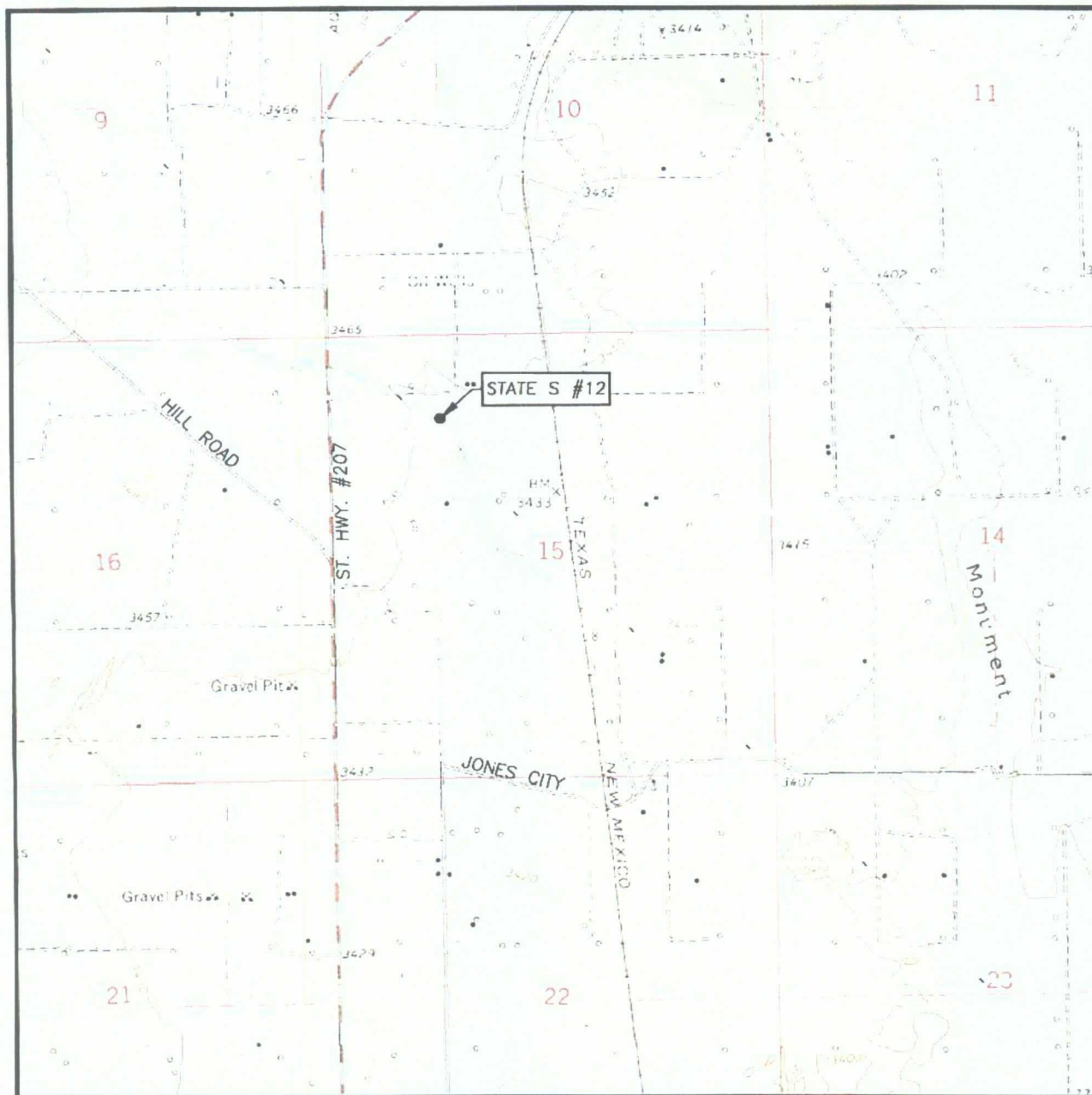
OPERATOR CHEVRON USA INC.

LEASE STATE S



PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(575) 393-3117

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

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

SEC. 15 TWP. 21-S RGE. 37-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

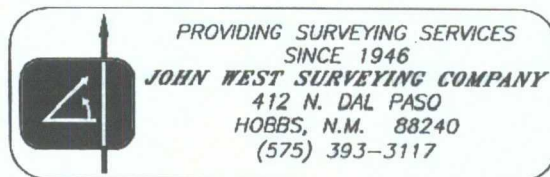
DESCRIPTION 990' FNL & 1330' FWL

ELEVATION 3445'

OPERATOR CHEVRON USA INC.

LEASE STATE S

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



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

¹ API Number 30-025-	² Pool Code 50350	³ Pool Name Penrose Skelly; Grayburg
⁴ Property Code	⁵ Property Name State S	⁶ Well Number 12
⁷ OGRID No. 4323	⁸ Operator Name Chevron U.S.A., Inc.	⁹ Elevation 3445'

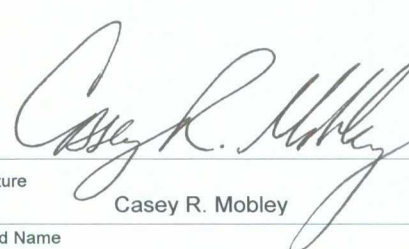
¹⁰ Surface Location

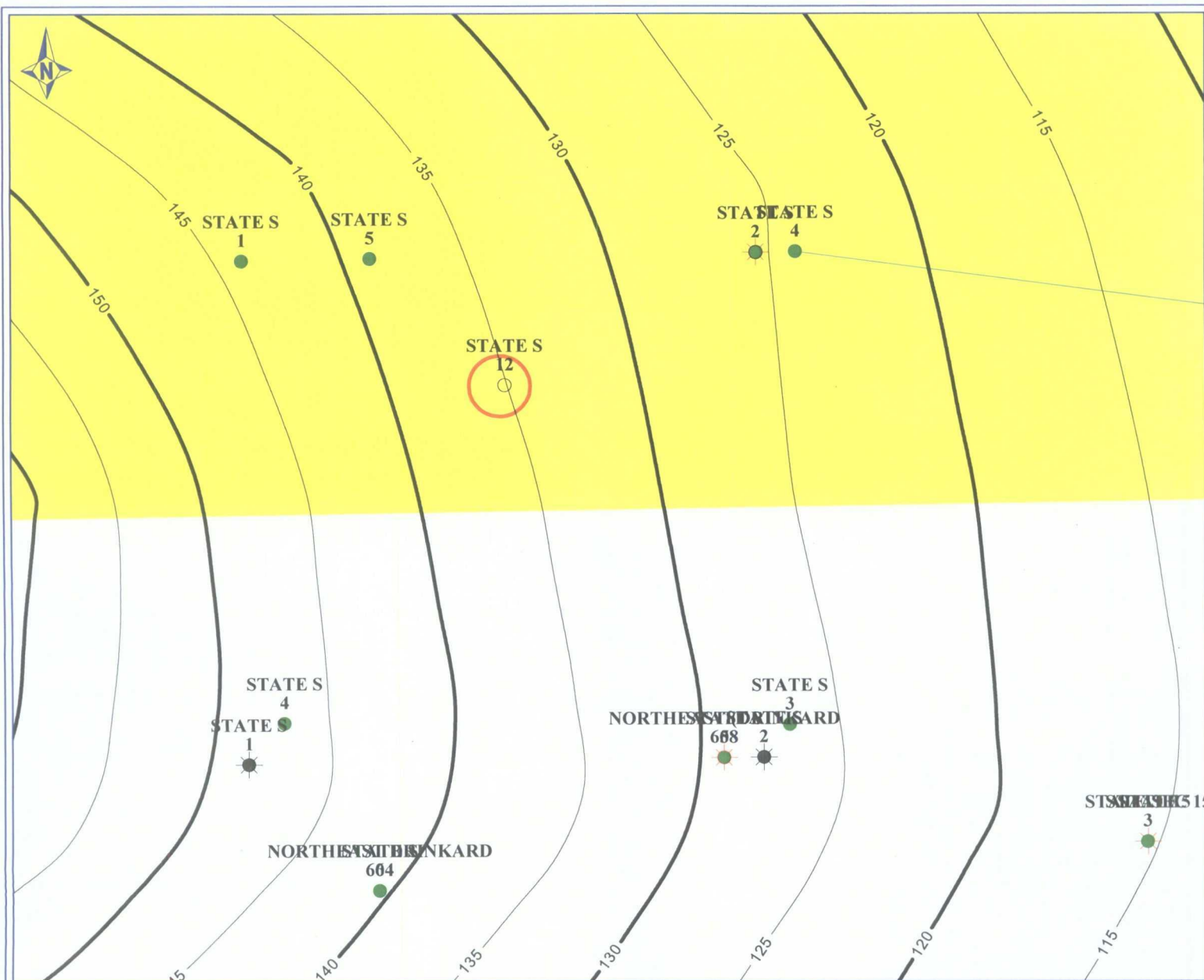
UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	15	21S	37E		990	North	1330	West	Lea

¹¹ 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
¹² Dedicated Acres 40		¹³ Joint or Infill	¹⁴ Consolidation Code		¹⁵ 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

<div><p>¹⁶</p><p>40-acre proration unit</p></div>	<div><p>¹⁷</p><p>OPERATOR CERTIFICATION</p><p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p><p></p><p>Signature _____</p><p>Printed Name <u>Casey R. Mobley</u></p><p>Title <u>Geologist</u></p><p><u>January 19, 2009</u></p></div>
<div><p>¹⁸</p><p>SURVEYOR CERTIFICATION</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>Signature and Seal of Professional Surveyor: _____</p><p>Certificate Number _____</p></div>	



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Chevron U.S.A. Inc.

EXHIBIT 4

STATE S #12

Sec 15, T21S-R37E, Lea Co., New Mexico

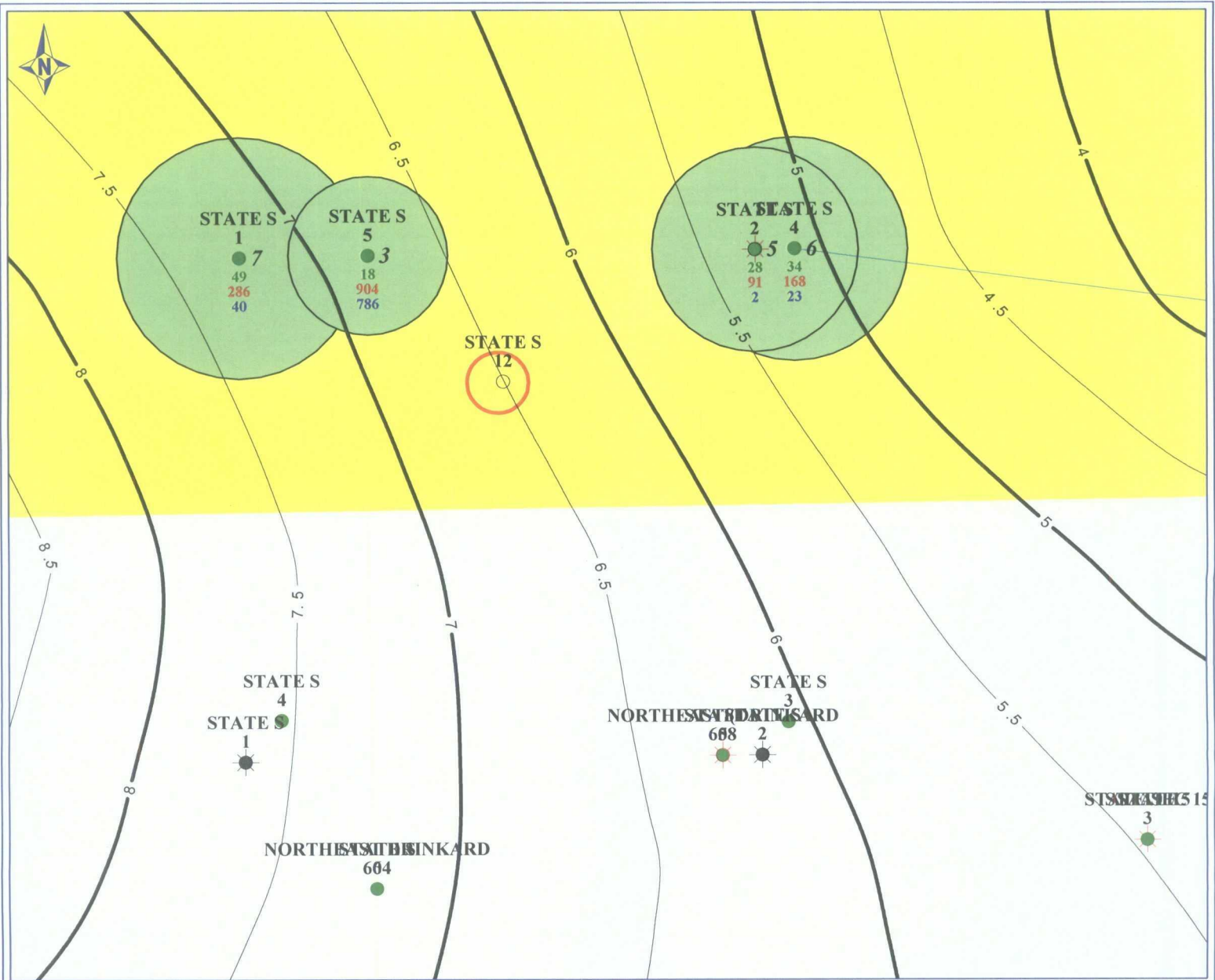
Grayburg Net Pay CI=5' [GR<40, Por>6%]

POSTED WELL DATA

Well Name
Well Number



January 9, 2009



PETRA 1/9/2009 2:45:18 PM



Chevron U.S.A. Inc.

EXHIBIT 5

STATE S #12

Sec 15, T21S-R37E, Lea Co., New Mexico

Grayburg HCPV CI=0.5 & EUR - Drainage

POSTED WELL DATA

Well Name
Well Number

● GRBG Drained Area (ACRES)

Grayburg Cum Oil Production (MBO)
Grayburg Cum Gas Production (MMCF)
Grayburg Cum Water Production (MBW)



January 9, 2009

Brooks, David K., EMNRD

From: Brooks, David K., EMNRD
Sent: Monday, March 23, 2009 11:07 AM
To: 'Casey.Mobley@chevron.com'
Subject: State S #12; NSL Application

Dear Mr. Mobley

Your application for this well correctly notes that the location encroaches toward the SW/4 NW/4 of Section 15. You state that notification letter have been sent to interest owners in this tract, but you do not, so far as I can find, identify the owners notified, nor have you furnished us with a copy of the letter sent to them. We need you to identify to whom notice was sent. We also need a copy of your notice letter so we can verify that it complies with the requirements of Rule 15.13.D.

Thanks

David K. Brooks
Legal Examiner
505-476-3450

January 16, 2009

Offset Owner Notification

T-21-S, R-37-E, Lea Co. New Mexico
Surface to 4300'

SW/4 NW/4 Section 15 (State of NM land)

Oxy USA Inc.
P.O. Box 4294
Houston, TX 77210

State S #12

990 FNL
1330 FNL Sec 15, T-21-S R-37-E
Unit Letter C, NE 1/4 NW 1/4

SE/4 SW/4 Section 32 (Fee land)

Black Stone Minerals Co. LP
1001 Fannin, Suite 2020
Houston, TX 77002

Wiser Oil Co.
8115 Preston Rd.
Dallas, TX 75225

W.T. McCracken #28

1330 FSL

2310 FEL Sec. 32, T-21-S

NW 1/4 SE 1/4, Unit Letter J R-37-E

SW/4 NW/4 Section 33 (Fee land)

Exxon Mobil Production Co.
P.O. Box 4610
Houston, TX 77210

W.T. McCracken #27

1150 FNL

330 FEL Sec 32 T-21-S R-37-E

NENE, Unit Letter A

SW/4 SW/4 Section 33 (Fee land)

Apache Corp.
2000 Post Oak Blvd., Suite 100
Houston, TX 77056

W.T. McCracken #30

1515 FSL

330 FEL

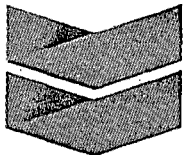
Sec 32, T-21-S,

R-37-E

NE SE

Unit Letter I

Chevron



James E. Baca
Staff Land
Representative
Land Department
New Mexico Asset
Development

Chevron North America
Exploration and Production
Company
MidContinent Alaska BU
11111 S. Wilcrest
Houston, Texas 77099
Tel 281-561-3605
Fax 866-887-5130
jmeb@chevron.com

January 29, 2009

VIA CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Oxy USA Inc.
Attn: Land Department
P. O. Box 4294
Houston, Texas 77210

Dear Sir or Madam:

Chevron U.S.A. Inc. has filed an application with the New Mexico Oil Conservation Division seeking an unorthodox oil well location for the State S #12 located 990' FNL, & 1,330' FWL, NE1/4NW1/4, Unit Letter C, of Section 15 Township 21 South, Range 37 East, N.M.P.M., Lea County, New Mexico. A copy of the application is enclosed. If you object to the application, you must notify the Division in writing no later than 20 days from the date of this letter (the Division's address is 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505). Failure to object will preclude you from contesting this matter at a later date. The director may approve the unorthodox location upon receipt of waivers from all the affected persons or if no affected person has filed an objection within the 20-day period.

If you have no objection to this unorthodox well location, please sign in the space provided below and return one copy to my attention at the fax number or address shown in the letterhead.

Sincerely,

A handwritten signature in black ink, appearing to read "James E. Baca".

James E. Baca, CPL

Enclosure

cc: Mr. Mark Fesmire, P.E., Director, Oil Conservation Division

OXY USA INC. HAS NO OBJECTIONS TO THE UNORTHODOX WELL LOCATION DESCRIBED ABOVE.

AGREED TO AND ACCEPTED THIS _____ DAY OF _____, 2009

OXY USA INC.

By: _____

Printed Name: _____

Title: _____