

12/2/07 DATE IN	SUSPENSE	BROOKS ENGINEER	12/2/07 LOGGED IN	NSL SD TYPE	PKUR0733750557 APP NO. PKUR0733750996
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ABOVE THIS LINE FOR DIVISION USE ONLY

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



Chevron USA Inc

V.M. Henderson #25

5764

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.

Sarah Rittenhouse
Print or Type Name

Sarah Rittenhouse
Signature

Project Manager / Geologist
Title

11/6/2007
Date

Sarah.Rittenhouse@chevron.com
e-mail Address



Sarah C. Rittenhouse
Project Manager / Geologist

North America Upstream
Midcontinent Business Unit
11111 S. Wilcrest, Rm S1037
Houston, Texas 77099
Tel (281) 561-3773
Fax (281) 561-3576
sarah.rittenhouse@chevron.com

October 30, 2007

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

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:

V.M. Henderson #25

2310' FNL & 1310' FEL, SE/4 NE/4 of
Section 30, T21S, R37E, Unit Letter H
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 5 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 SE/4 NE/4 of Section 30 will be simultaneously dedicated in the Penrose Skelly, Grayburg Pool to the proposed well and to the V.M. Henderson 24H and the V.M. Henderson #3. The V.M. Henderson 24H was drilled in 2007 and was completed as a Penrose Skelly horizontal producer. The V.M. Henderson #3 was drilled in 1983 and was re-completed as a Penrose Skelly, Grayburg producer in 2004. 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 seven wells that have produced the Grayburg formation in the NE/4 of Section 30. 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 (and the N/2 of the S/2) of Section 30 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.

RECEIVED
2007 DEC 3 PM 1 29

October 30, 2007

Page 2

If you have any questions concerning this application or need additional information, please contact me by phone at (281) 561-3773 or by email at sarah.rittenhouse@chevron.com. If I am not available, you can also reach Meilin Du by phone at (281) 561-3564 or by email at meilin.du@chevron.com. Thank you for consideration of this matter.

Sincerely,

A handwritten signature in black ink that reads "Sarah C. Rittenhouse". The signature is written in a cursive, flowing style.

Sarah C. Rittenhouse
Project Manager / Geologist

Attachments

cc: NMOCD District 1 – Hobbs, NM
Sarah Rittenhouse
Meilin Du
Ed Van Reet
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 #25

2310' FNL & 1310' FEL, SE/4 NE/4 of
Section 30, T21S, R37E, Unit Letter H
Lea County, New Mexico

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

- | | | |
|----|---|------------------|
| 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 and Simultaneous Dedication:

V.M. Henderson #25

2310' FNL & 1310' FEL, SE/4 NE/4 of
Section 30, T21S, R37E, Unit Letter H
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 #25 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	API #	Well	Location	Formation	Cum Prod		Current Prod		Status
					BO	MCF	BOPD	MCFPD	
Chevron	30025295120001	V.M. Henderson #12	30 21S 37E	GRAYBURG	8095	136733	7	161	Oil
Chevron	30025069100001	V.M. Henderson #4	30C 21S 37E	GRAYBURG	24483	85135	0	0	InactiveOil
Chevron	30025069110002	V.M. Henderson #5	30B 21S 37E	GRAYBURG	13843	444530	11	442	Oil
Chevron	30025069130000	V.M. Henderson #7	30F 21S 37E	GRAYBURG	10626	81553	0	0	InactiveOil
Chevron	30025069160000	V.M. Henderson #10	30 21S 37E	GRAYBURG	18925	48528	0	0	InactiveOil
Chevron	30025069080003	V.M. Henderson #2	30A 21S 37E	GRAYBURG	24575	645261	10	243	Oil
Chevron	30025329030001	V.M. Henderson #13	30 21S 37E	GRAYBURG	12313	200798	2	119	Oil
Chevron	30025367420000	V.M. Henderson #17	30A 21S 37E	GRAYBURG	10516	283558	7	165	Oil
Chevron	30025069110000	V.M. Henderson #5	30B 21S 37E	GRAYBURG	18887	98047	0	0	InactiveOil
Chevron	30025069120001	V.M. Henderson #6	30C 21S 37E	GRAYBURG	18198	177661	5	80	Gas
Chevron	30025371810000	V.M. Henderson #19	30C 21S 37E	GRAYBURG	11501	115103	24	0	Oil
Chevron	30025374120000	V.M. Henderson #20	30F 21S 37E	GRAYBURG	7201	73712	8	106	Oil
Chevron	30025371100000	V.M. Henderson #18	30F 21S 37E	GRAYBURG	15137	123864	5	177	Oil
Chevron	30025373700000	V.M. Henderson #21	30G 21S 37E	GRAYBURG	11236	230145	14	186	Oil
Chevron	30025378350000	V.M. Henderson #22	30A 21S 37E	GRAYBURG	6268	106386	11	331	Oil
Chevron	30025378360000	V.M. Henderson #23	30C 21S 37E	GRAYBURG	6097	122878	10	290	Oil
Chevron	30025069090005	V.M. Henderson #3	30H 21S 37E	GRAYBURG	6666	205785	5	160	Oil

3. The proposed V.M. Henderson #25 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.

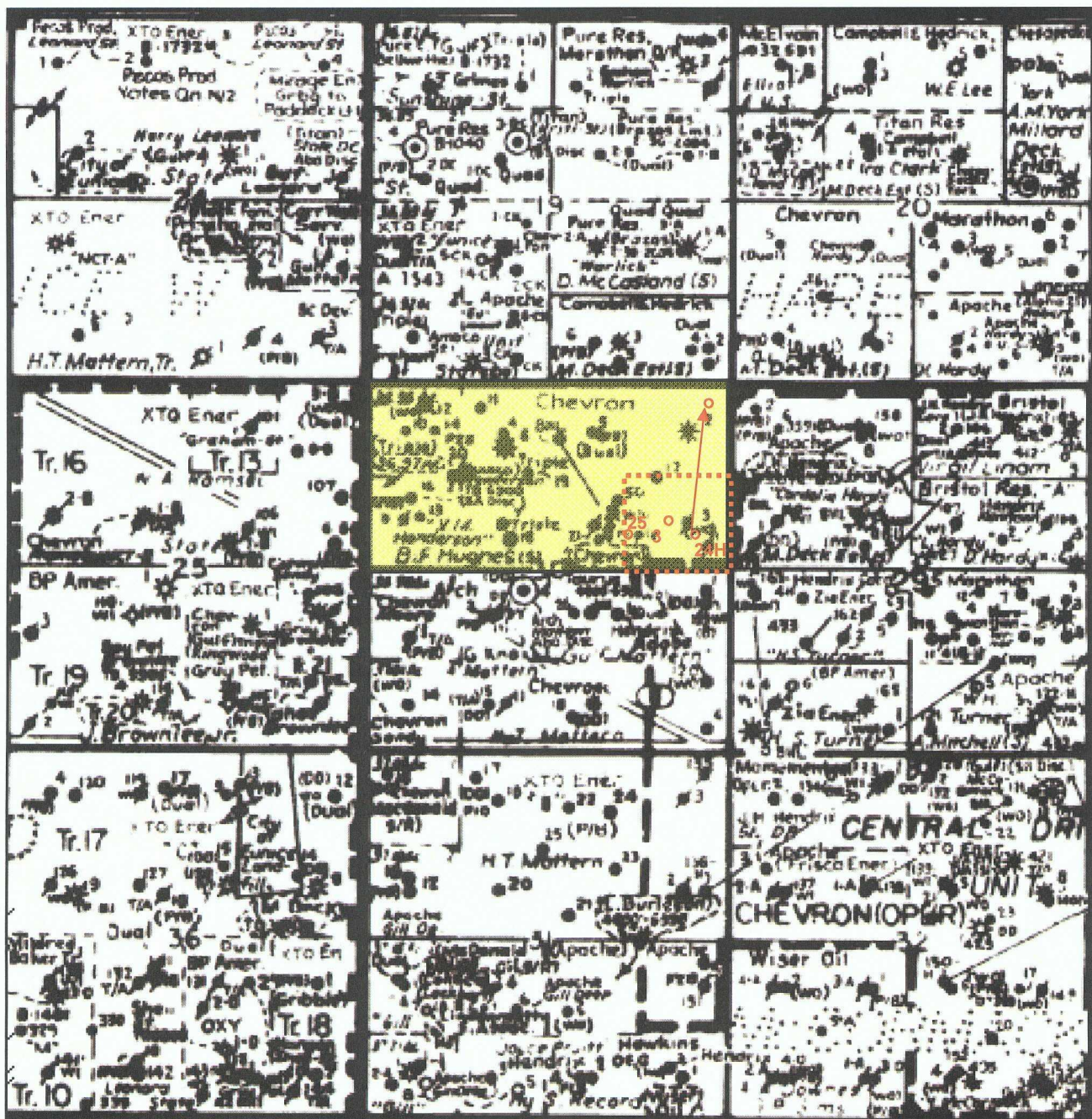
The following table provides drainage areas calculated from the HCPV map and reserves of the offsetting wells.

Operator	Well	#	API #	Location	Formation	Drainage Acres	EUR	
							MBO	MMCF
Chevron	V M HENDERSON	12	30025295120001	30 21S 37E	Grayburg	6	16	209
Chevron	V M HENDERSON	4	30025069100001	30C 21S 37E	Grayburg	5	24	85
Chevron	V M HENDERSON	5	30025069110002	30B 21S 37E	Grayburg	18	30	774
Chevron	V M HENDERSON	7	30025069130000	30F 21S 37E	Grayburg	3	11	82
Chevron	V M HENDERSON	10	30025069160000	30 21S 37E	Grayburg	3	19	49
Chevron	V M HENDERSON	2	30025069080003	30A 21S 37E	Grayburg	21	42	928
Chevron	V M HENDERSON	13	30025329030001	30 21S 37E	Grayburg	11	13	427
Chevron	V M HENDERSON	17	30025367420000	30A 21S 37E	Grayburg	9	21	399
Chevron	V M HENDERSON	5	30025069110000	30B 21S 37E	Grayburg	4	19	98
Chevron	V M HENDERSON	6	30025069120001	30C 21S 37E	Grayburg	8	23	233
Chevron	V M HENDERSON	19	30025371810000	30C 21S 37E	Grayburg	4	13	115
Chevron	V M HENDERSON	20	30025374120000	30F 21S 37E	Grayburg	7	16	233
Chevron	V M HENDERSON	18	30025371100000	30F 21S 37E	Grayburg	8	23	234
Chevron	V M HENDERSON	21	30025373700000	30G 21S 37E	Grayburg	14	25	577
Chevron	V M HENDERSON	22	30025378350000	30A 21S 37E	Grayburg	13	33	538
Chevron	V M HENDERSON	23	30025378360000	30C 21S 37E	Grayburg	9	18	333
Chevron	V M HENDERSON	3	30025069090005	30H 21S 37E	Grayburg	4	16	138
Chevron	V M HENDERSON	24H	30025200600015	30H 21S 37E	Grayburg	16	58	474

As seen above, the average drainage area of the offsetting locations is only 9 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 6 acre drainage area, and a 15% recovery factor. The results are as follows:

Operator	Well	Location	HCPV	Drainage Acres	EUR	
					MBO	MMCF
Chevron	V.M. Henderson #25	30-F	10.2	6	47	201

4. The N/2 of Section 30 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 V.M. Henderson #25 will share a 40-acre proration unit and will be simultaneously dedicated with the V.M. Henderson #24H and the V.M. Henderson #3 as a Penrose Skelly, Grayburg producers in Section 30, Unit Letter F.
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 #3

1980 FNL & 660 FEL, Unit H

V.M. Henderson #24H

2300 FNL & 370 FEL, Unit A & H

V.M. Henderson #25

2310 FNL & 1310 FEL, Unit H

Section 30, T21S-R37E

Lea County, New Mexico

 V.M. Henderson Lease

 40 Acre Proration Unit

Scale: 1"=2000' Approx.

LOT 1					
36.95 AC					
LOT 2					
36.97 AC					
LOT 3					
36.99 AC					
LOT 4					
37.01 AC					

2310'

1310'

GEODETIC COORDINATES
NAD 27 NME

Y=529542.9 N
X=850394.7 E

LAT.=32.450702° N
LONG.=103.197449° W

OPERATOR CERTIFICATION

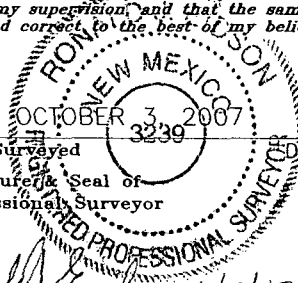
I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant 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.

Signature _____ Date _____

Printed Name _____

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.



Date Surveyed _____

Signature of _____ Seal of _____

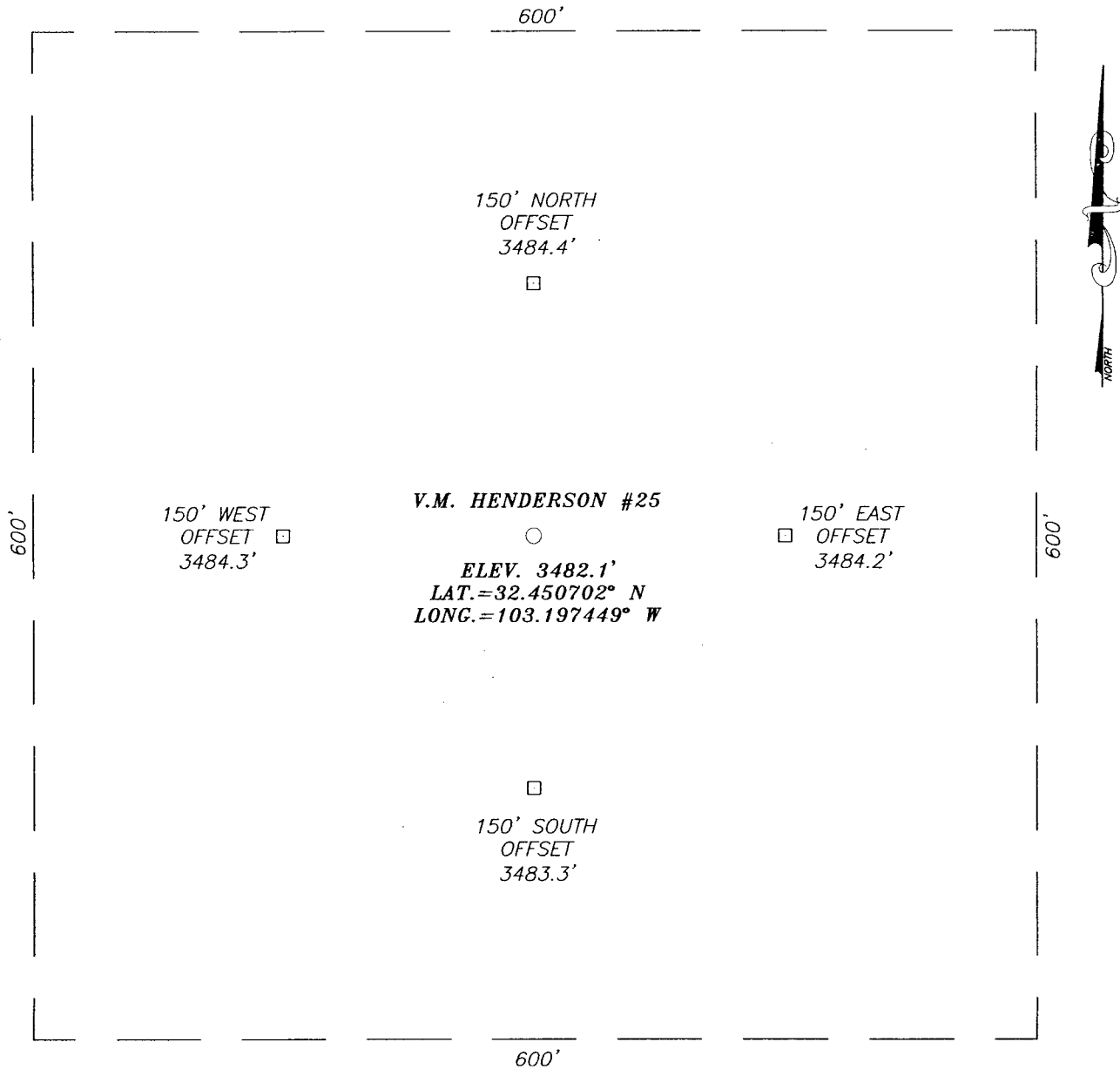
Professionally Surveyor

Ronald G. Eidson 10/13/07

07.11.1315

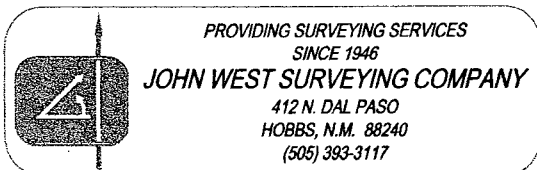
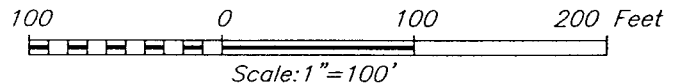
Certificate No. GARY G. EIDSON 12641
RONALD J. EIDSON 3239

SECTION 30, TOWNSHIP 21 SOUTH, RANGE 37 EAST, N.M.P.M.,
 LEA COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF STATE HWY. 8 AND
 LEGION RD. (CO. RD. #E-33) GO WEST ON STATE
 HWY. 8 APPROX. 1.0 MILE. TURN RIGHT AND GO
 NORTH APPROX. 0.55 MILES. TURN LEFT AND GO
 WEST APPROX. 0.25 MILES. THIS LOCATION IS
 APPROX. 200 FEET LEFT (SOUTH).

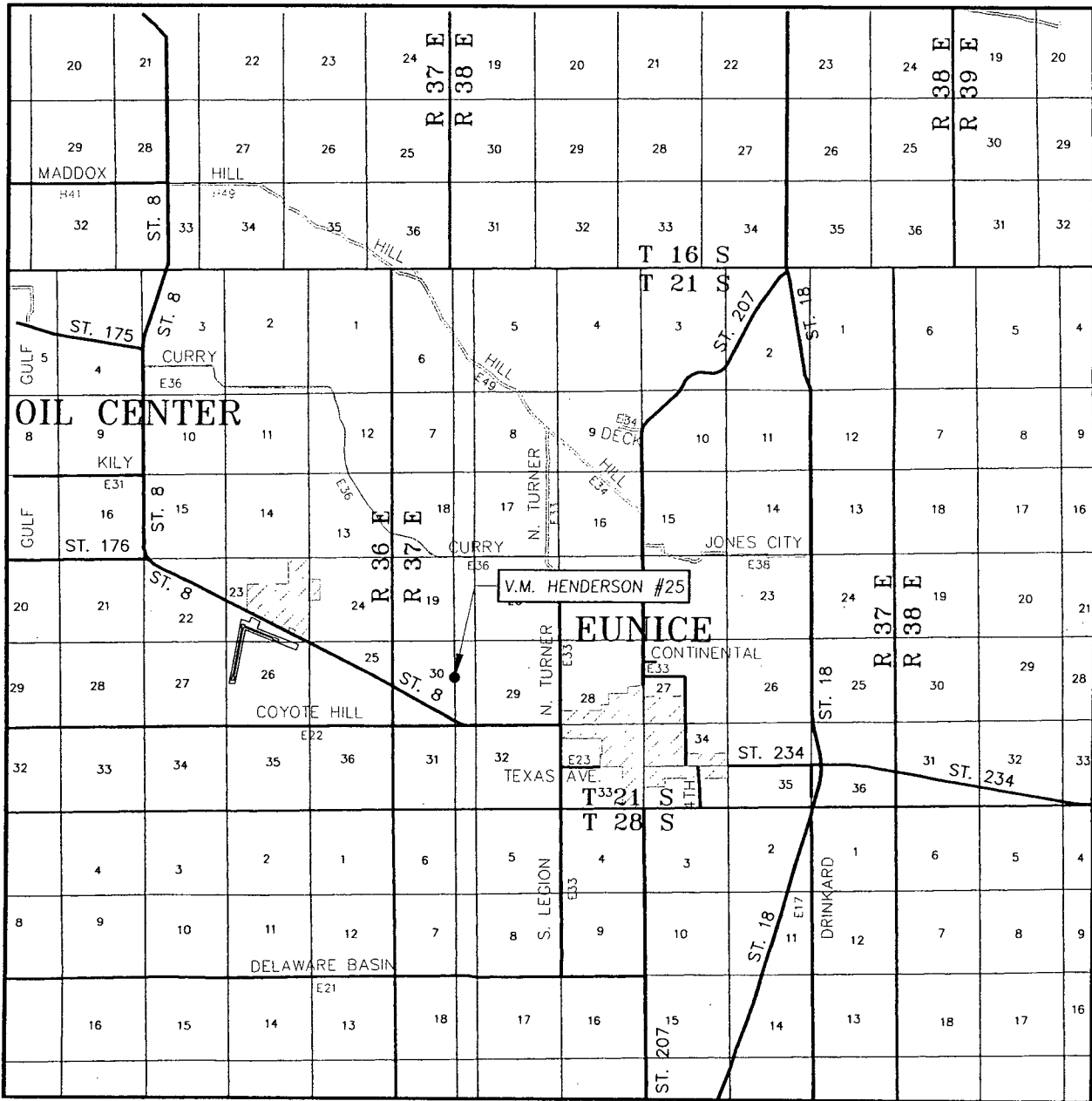


CHEVRON USA INC.

V.M. HENDERSON #25 WELL
 LOCATED 2310 FEET FROM THE NORTH LINE
 AND 1310 FEET FROM THE EAST LINE OF SECTION 30,
 TOWNSHIP 21 SOUTH, RANGE 37 EAST, N.M.P.M.,
 LEA COUNTY, NEW MEXICO.

Survey Date: 10/3/07	Sheet 1 of 1 Sheets
W.O. Number: 07.11.1315	Dr By: DSS
Date: 10/15/07	Disk: .
07111315	Scale: 1"=100'

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 30 TWP. 21-S RGE. 37-E

SURVEY _____ N.M.P.M.

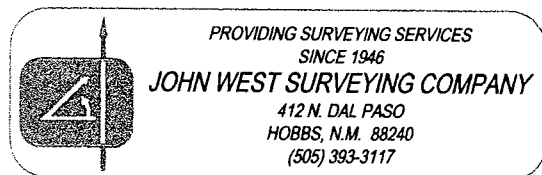
COUNTY LEA STATE NEW MEXICO

DESCRIPTION 2310' FNL & 1310' FEL

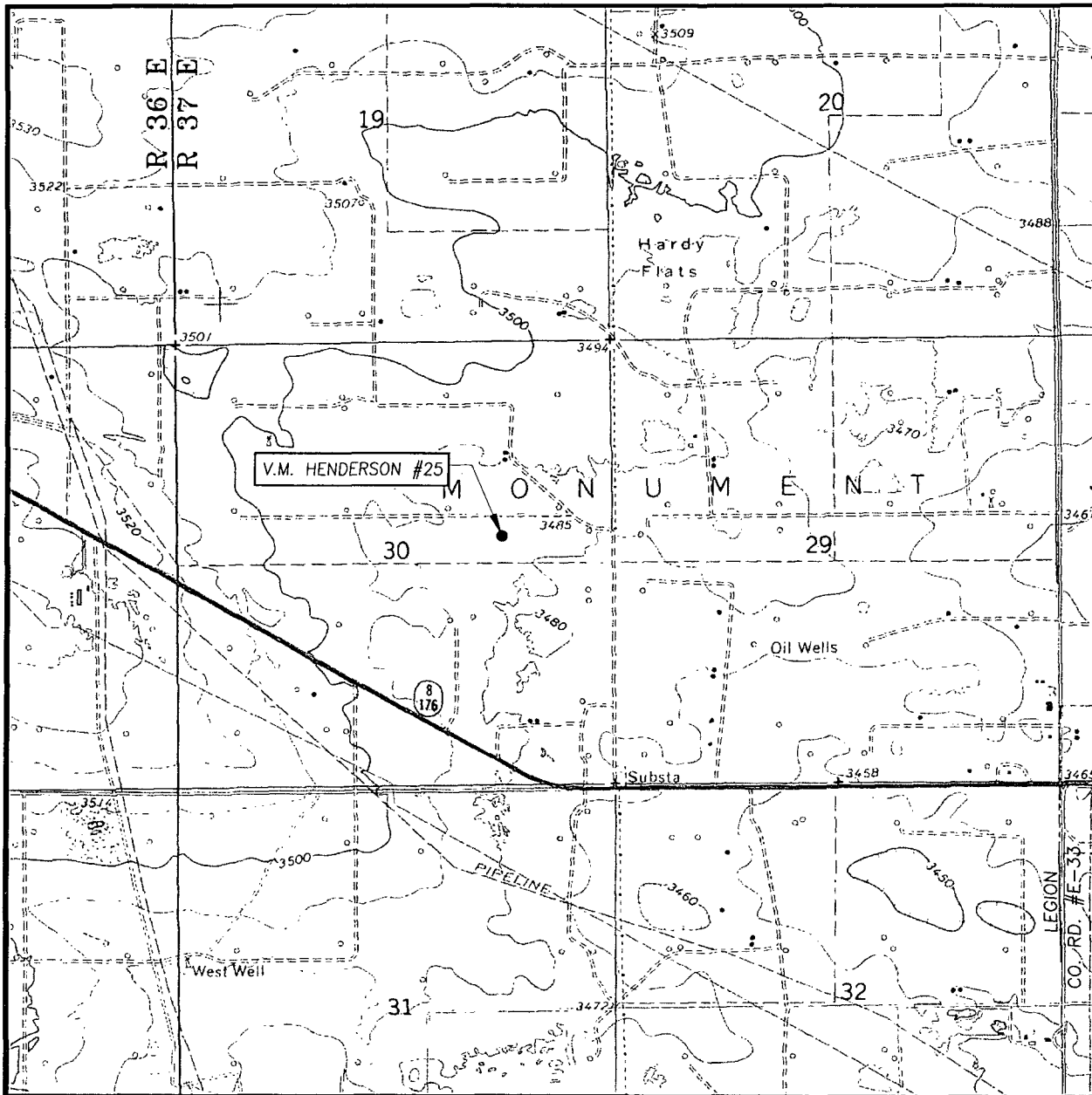
ELEVATION 3482'

OPERATOR CHEVRON USA INC.

LEASE V.M. HENDERSON



LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

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

SEC. 30 TWP. 21-S RGE. 37-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

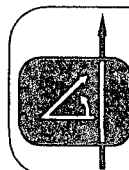
DESCRIPTION 2310' FNL & 1310' FEL

ELEVATION 3482'

OPERATOR CHEVRON USA INC.

LEASE V.M. HENDERSON

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

¹ API Number	² Pool Code 50350	³ Pool Name Penrose Skelly; Grayburg
⁴ Property Code	⁵ Property Name V.M. Henderson	⁶ Well Number 25
⁷ OGRID No.	⁸ Operator Name Chevron U.S.A., Inc.	⁹ Elevation 3482

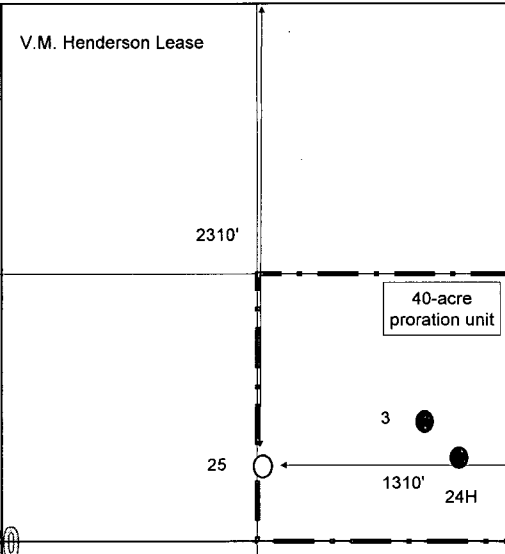
¹⁰ Surface Location

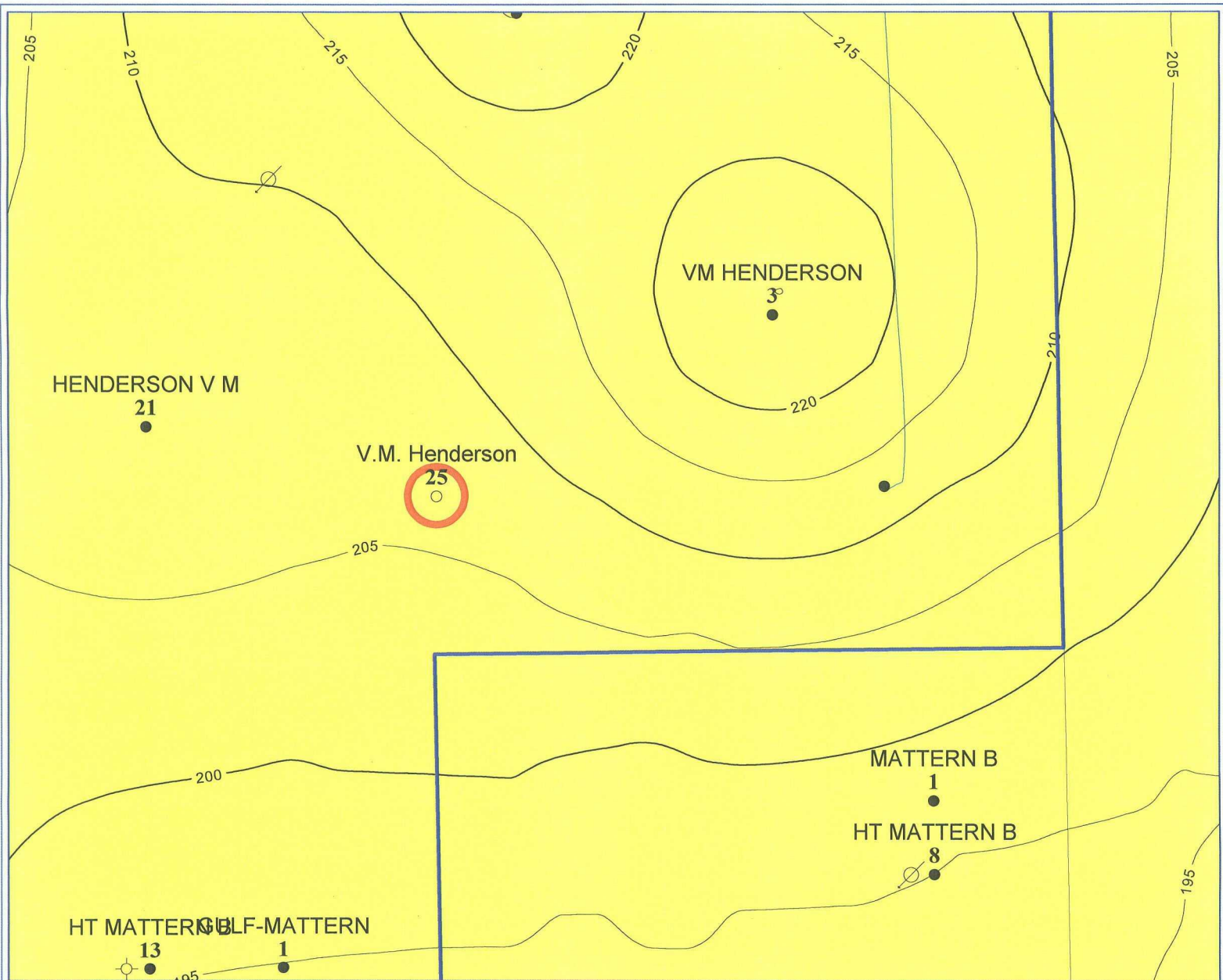
UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	30	21S	37E		2310	North	1310	East	Lea

¹¹ Bottom Hole Location If Different From Surface

UL or Lot No. A	Section 30	Township 21S	Range 37E	Lot Idn	Feet from the 330	North/South line South	Feet from the 330	East/West line East	County Lea
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

¹⁶		V.M. Henderson Lease	¹⁷ OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</i> Signature <u>Sarah C. Rittenhouse</u> Printed Name <u>Sarah C. Rittenhouse</u> Title <u>Geologist</u> <u>November 1, 2007</u>
			¹⁸ SURVEYOR CERTIFICATION <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> Signature and Seal of Professional Surveyor: Certificate Number



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Chevron U.S.A. Inc.

EXHIBIT 4

Penrose-Skelly Field V.M. Henderson 25

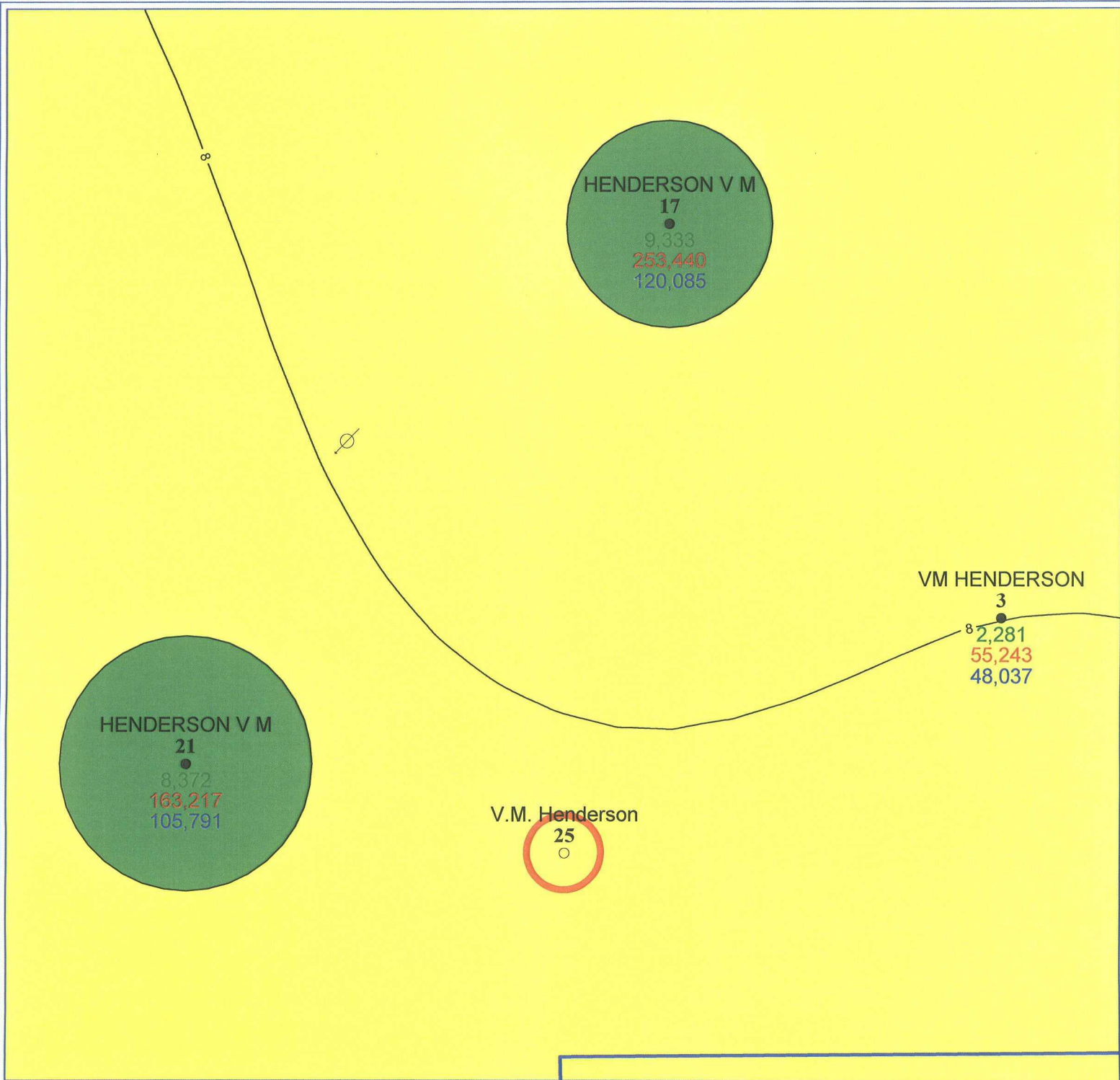
Sec 30, T21S-37E, Lea CO. New Mexico

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

POSTED WELL DATA

Well Name
Well Number





PETRA 11/28/2007 8:43:33 AM



Chevron U.S.A. Inc.

EXHIBIT 5

Penrose Skelly Field V.M. Henderson 25

Sec 30, T21S-37E, Lea CO. New Mexico

Grayburg HCPV CI=2 & EUR - Drainage

POSTED WELL DATA

Well Name
Well Number



PRODUCTION - O. GRAYBURG
PRODUCTION - G. GRAYBURG
PRODUCTION - W. GRAYBURG

0 224