

DATE 3/13/08	SUSPENSE	ENGINEER Brooks	LOGGED IN 3/13/08	TYPE NSL	APP NO. PKVR0807353175
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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
Eaves #9

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

Casey R. Mobley
 Signature

Project Manager / Geologist
 Title

Casey.Mobley@chevron.com
 e-mail Address

03/10/2008
 Date

RECEIVED
 2008 MAR 13 PM 1 54



Casey R. Mobley
Project Manager / Geologist

North America Upstream
Midcontinent Business Unit
11111 S. Wilcrest, Rm S1037
Houston, Texas 77099
Tel (281) 561-4830
Fax (281) 561-3576
Casey.Mobley@chevron.com

March 10, 2008

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:

Eaves #9

1395' FNL & 330' FEL, SE/4 NE/4 of
Section 10, T22S, 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 10 will be simultaneously dedicated in the Penrose Skelly, Grayburg Pool to the proposed well and to the So. Penrose Skelly Unit #167 well pursuant to statewide Rule 104.B(1). The So. Penrose Skelly Unit #167 was drilled in 1948 and was completed as a Penrose Skelly, Grayburg producer.

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 NE/4 of Section 10. The proposed well will be located in the approximate western center point 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.

A land plat highlighting the proposed well's location is attached as Exhibit 2. The E/2 of the NE/4 of Section 10 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.

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,

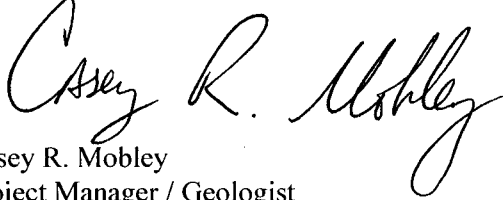
RECEIVED
2008 MAR 13 PM 1:54

March 10, 2008

Page 2

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 cursive script that reads "Casey R. Mobley". The signature is written in black ink and is positioned above the printed name and title.

Casey R. Mobley
Project Manager / Geologist

Attachments

cc: NMOCD District 1 – Hobbs, NM
Casey R. Mobley
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:

Eaves #9

1395' FNL & 330' FEL, SE/4 NE/4 of
Section 10, T22S, R37E, Unit Letter H
Lea County, New Mexico

Offset Operators, Working Interest Owners, E/2 NE/4 Section 10:

- | | | |
|----|---|------------------|
| 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:

Eaves #9

1395' FNL & 330' FEL, SE/4 NE/4 of
Section 10, T22S, 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 Eaves #9 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 #	Lease Name	Location	Formation	Cum Prod		Current Prod		Status
					BO	MCF	BOPD	MCFPD	
Chevron	30025383840000	Eaves #8	10A 22S 37E	Grayburg	2438	27222	16	168	Oil
Chevron	30025101620005	Rollon Brunson #6	10B 22S 37E	Grayburg	11749	297665	3	231	Oil
Chevron	30025383350000	Rollon Brunson #7	10G 22S 37E	Grayburg	4106	46367	12	234	Oil
Chevron	30025383850000	Rollon Brunson #8	10G 22S 37E	Grayburg	6339	52773	10	172	Oil
Chevron	30025101630000	So. Penrose Skelly Unit #140	10A 22S 37E	Grayburg	1971	45409	0	0	InactiveOil
Chevron	30025101590000	So. Penrose Skelly Unit #141	10B 22S 37E	Grayburg	69368	61829	0	0	InactiveOil
Chevron	30025101710001	So. Penrose Skelly Unit #166	10G 22S 37E	Grayburg	31615	0	0	0	InactiveOil
Chevron	30025101640000	So. Penrose Skelly Unit #167	10H 22S 37E	Grayburg	76094	694065	0	0	InactiveOil

3. The proposed Eaves #9 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.

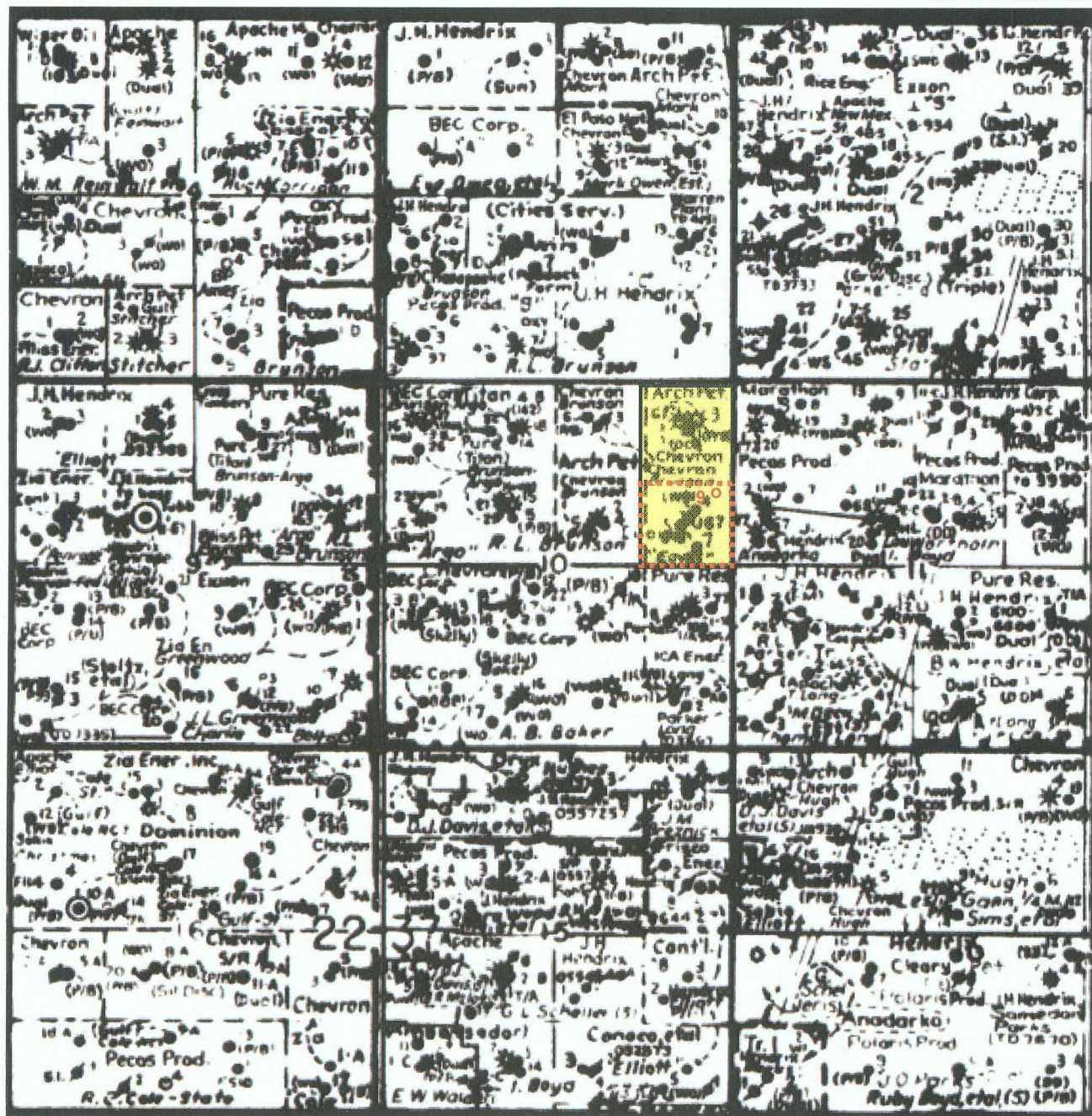
The following table provides drainage areas calculated from the HCPV map and reserves of the offsetting wells.

Operator	Well	#	API #	Location	Formation	Drainage Acres	EUR	
							MBO	MMCF
Chevron	Eaves	8	30025383840000	10A 22S 37E	Grayburg	6	25	259
Chevron	Rollon Brunson	6	30025101620005	10B 22S 37E	Grayburg	9	20	556
Chevron	Rollon Brunson	7	30025383350000	10G 22S 37E	Grayburg	10	27	542
Chevron	Rollon Brunson	8	30025383850000	10G 22S 37E	Grayburg	7	23	364
Chevron	So. Penrose Skelly Unit	140	30025101630000	10A 22S 37E	Grayburg	1	2	45
Chevron	So. Penrose Skelly Unit	141	30025101590000	10B 22S 37E	Grayburg	7	69	62
Chevron	So. Penrose Skelly Unit	166	30025101710001	10G 22S 37E	Grayburg	3	32	0
Chevron	So. Penrose Skelly Unit	167	30025101640000	10H 22S 37E	Grayburg	15	76	694

As seen above, the average drainage area of the offsetting locations is only 7 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 calculated average HCPV, an average drainage area of 7 acres, and a 15% recovery factor. The results are as follows:

Operator	Well	Location	HCPV	Drainage Acres	EUR	
					MBO	MMCF
Chevron	Eaves #9	10-H	13.6	7	34	315

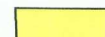
4. The E/2 of the NE/4 of Section 10 is covered by a single fee lease which has common royalty and working interest ownerships. Chevron is the operator and 100% working interest owner of the Grayburg wells toward which the proposed well will encroach. Therefore, there are no offset interest owners or adversely affected parties to notify of this application.
5. The proposed Eaves #9 will share a 40-acre proration unit and will be simultaneously dedicated with the SO Penrose Skelly Unit #167 as a Penrose Skelly, Grayburg producer in Section 10, Unit Letter H pursuant to statewide Rule 104.B(1).
6. Approval of this application will allow for the recovery of oil and gas reserves which would not otherwise be recovered.



Chevron USA Inc.



Eaves #9 (proposed)
 1395 FNL & 330 FEL, Unit H
 Section 10, T22S-R37E
 Lea County, New Mexico



Eaves Lease



40 Acre Proration Unit

Scale: 1"=2000' Approx.

DISTRICT I
1525 N. FRENCH DR., ROBBES, NM 88240

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102

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

OIL CONSERVATION DIVISION

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

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

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 EAVES	Well Number 9
OGRID No.	Operator Name CHEVRON USA INC.	Elevation 3377

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	10	22-S	37-E		1395	NORTH	330	EAST	LEA

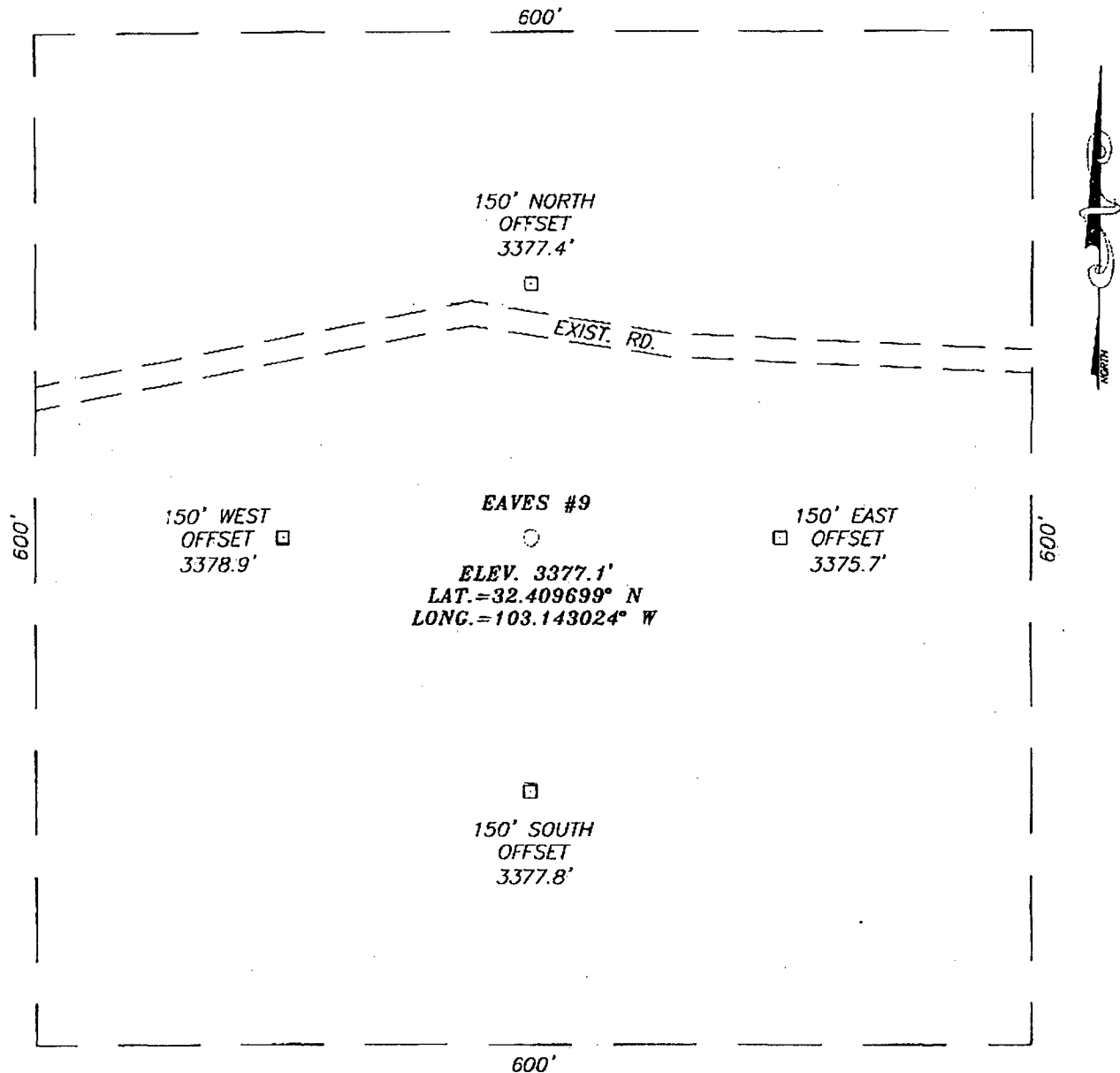
Bottom Hole Location If Different From Surface

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

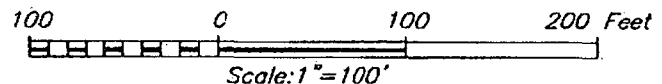
<p>GEODETIC COORDINATES NAD 27 NME Y=514808.2 N X=867350.7 E LAT.=32.409699° N LONG.=103.143024° W</p>	<p>1395'</p> <p>330'</p>	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either 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>WALD J. EIDSON OCTOBER 9, 2007 Date Surveyed _____ Signature & Seal of Professional Surveyor Certificate No. GARY EIDSON 12641</p>
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SECTION 10, TOWNSHIP 22 SOUTH, RANGE 37 EAST, N.M.P.M.,
 LEA COUNTY, NEW MEXICO



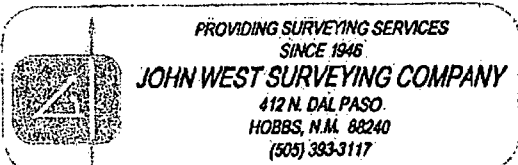
DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF STATE HWY. 234 AND STATE HWY. 207, GO SOUTH ON STATE HWY. 207 APPROX. 1.65 MILES. TURN LEFT (EAST) AND GO APPROX. 0.85 MILES. ROAD TURNS RIGHT (SOUTH), GO APPROX. 0.1 MILE. ROAD TURNS LEFT (EAST), GO APPROX. 200 FEET. THIS LOCATION IS APPROX. 200 FEET RIGHT (SOUTH).



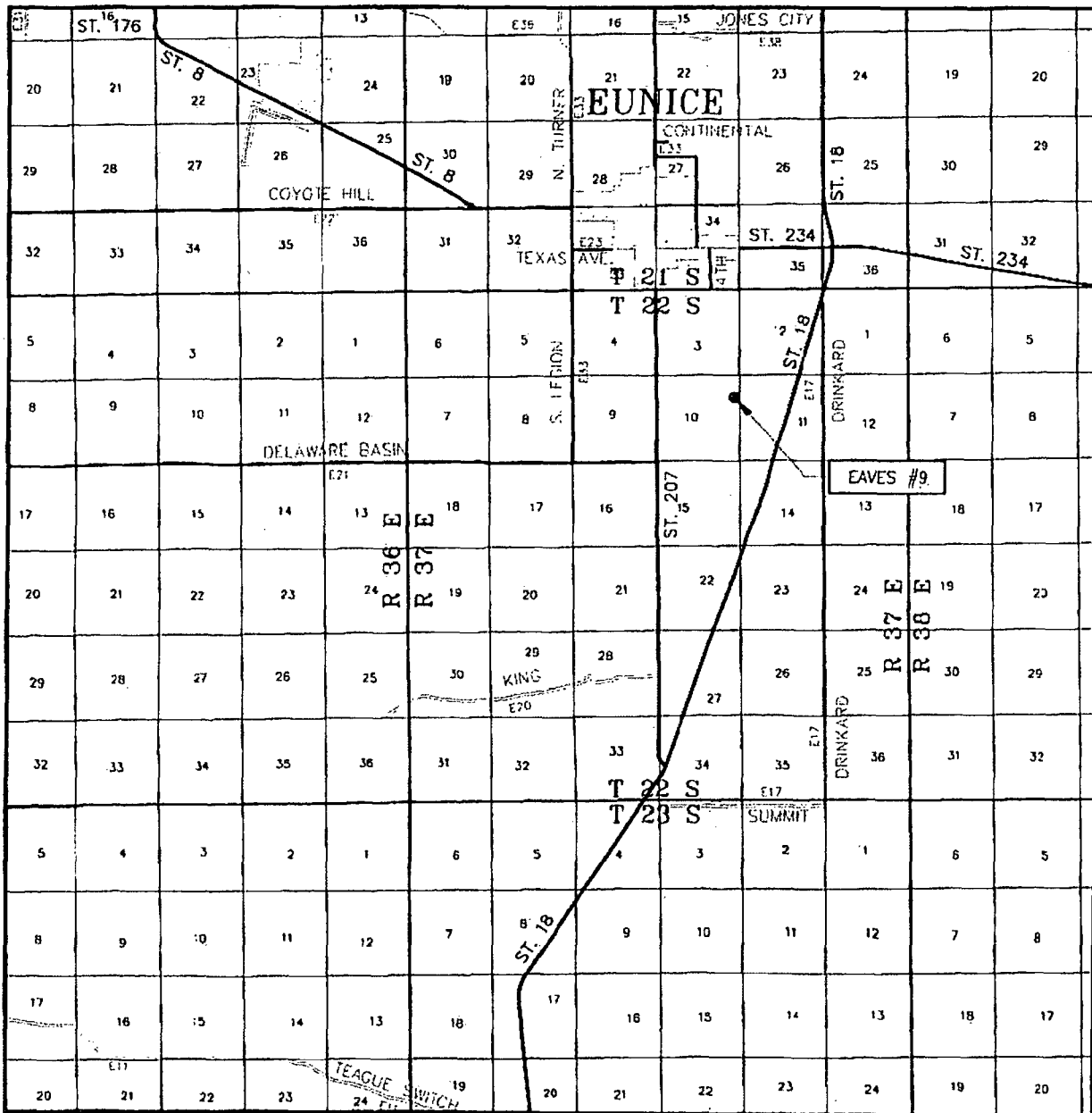
CHEVRON USA INC.

EAVES #9 WELL
 LOCATED 1395 FEET FROM THE NORTH LINE
 AND 330 FEET FROM THE EAST LINE OF SECTION 10,
 TOWNSHIP 22 SOUTH, RANGE 37 EAST, N.M.P.M.,
 LEA COUNTY, NEW MEXICO.



Survey Date: 10/9/07	Sheet 1 of 1 Sheets
W.O. Number: 07-11-1317	Dr By: DSS
Date: 10/15/07	Rev 1: N/A
Disk: .	07111317
	Scale: 1"=100'

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 10 TWP. 22-S RGE. 37-E

SURVEY N.M.P.M.

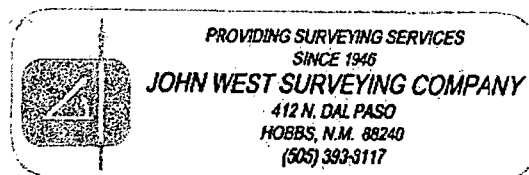
COUNTY LEA STATE NEW MEXICO

DESCRIPTION 1395' FNL & 330' FEL

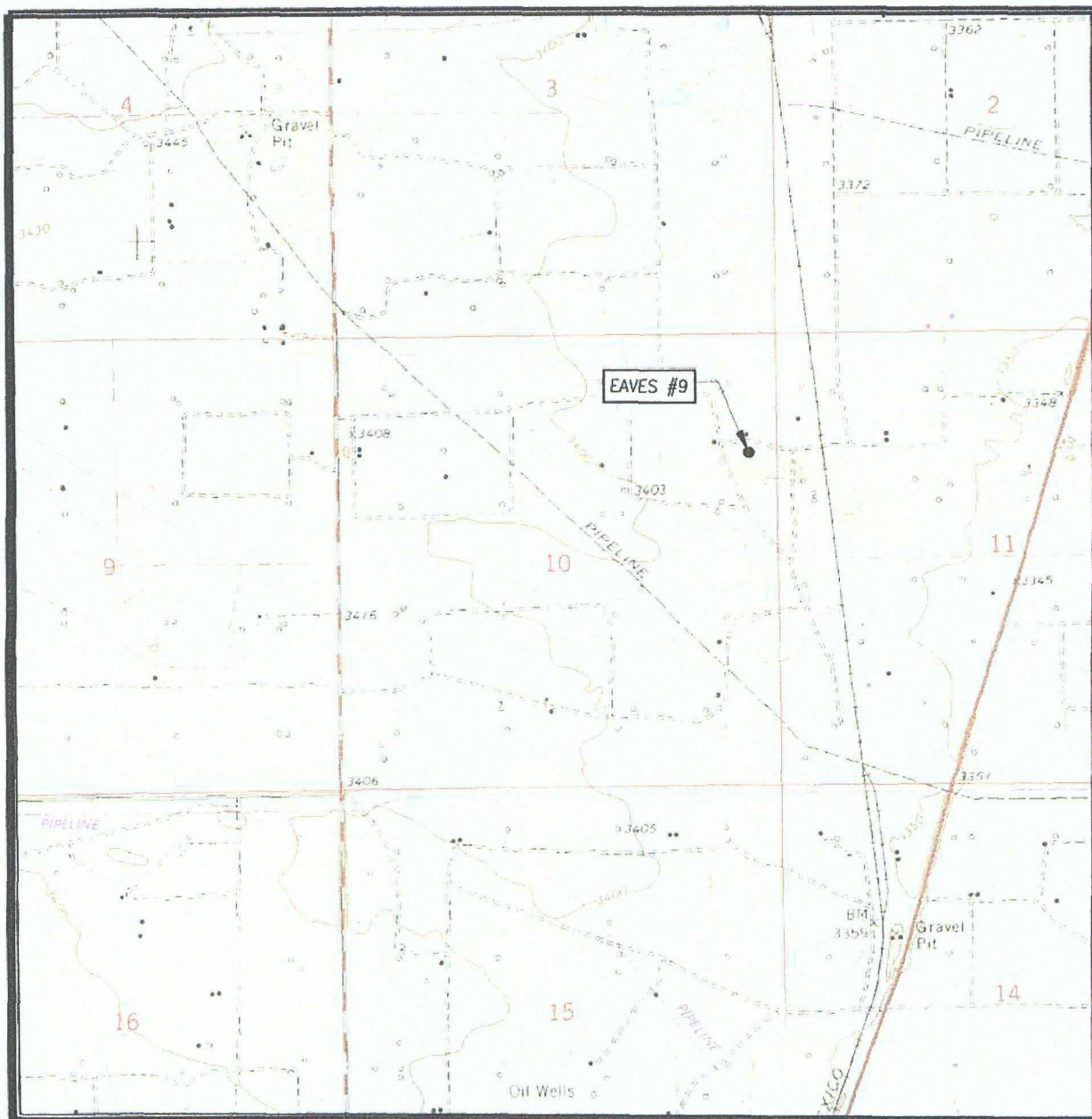
ELEVATION 3377'

OPERATOR CHEVRON USA INC.

LEASE EAVES



LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

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

SEC. 10 TWP. 22-S RGE. 37-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

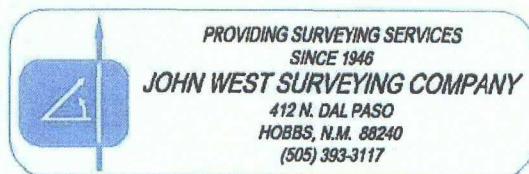
DESCRIPTION 1395' FNL & 330' FEL

ELEVATION 3377'

OPERATOR CHEVRON USA

LEASE EAVES

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



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 Eaves	⁶ Well Number 9
⁷ OGRID No.	⁸ Operator Name Chevron U.S.A., Inc.	⁹ Elevation 3377

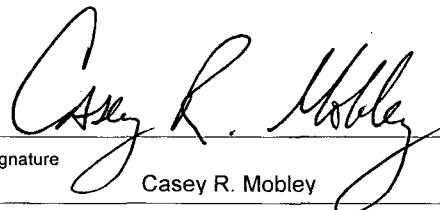
¹⁰ Surface Location

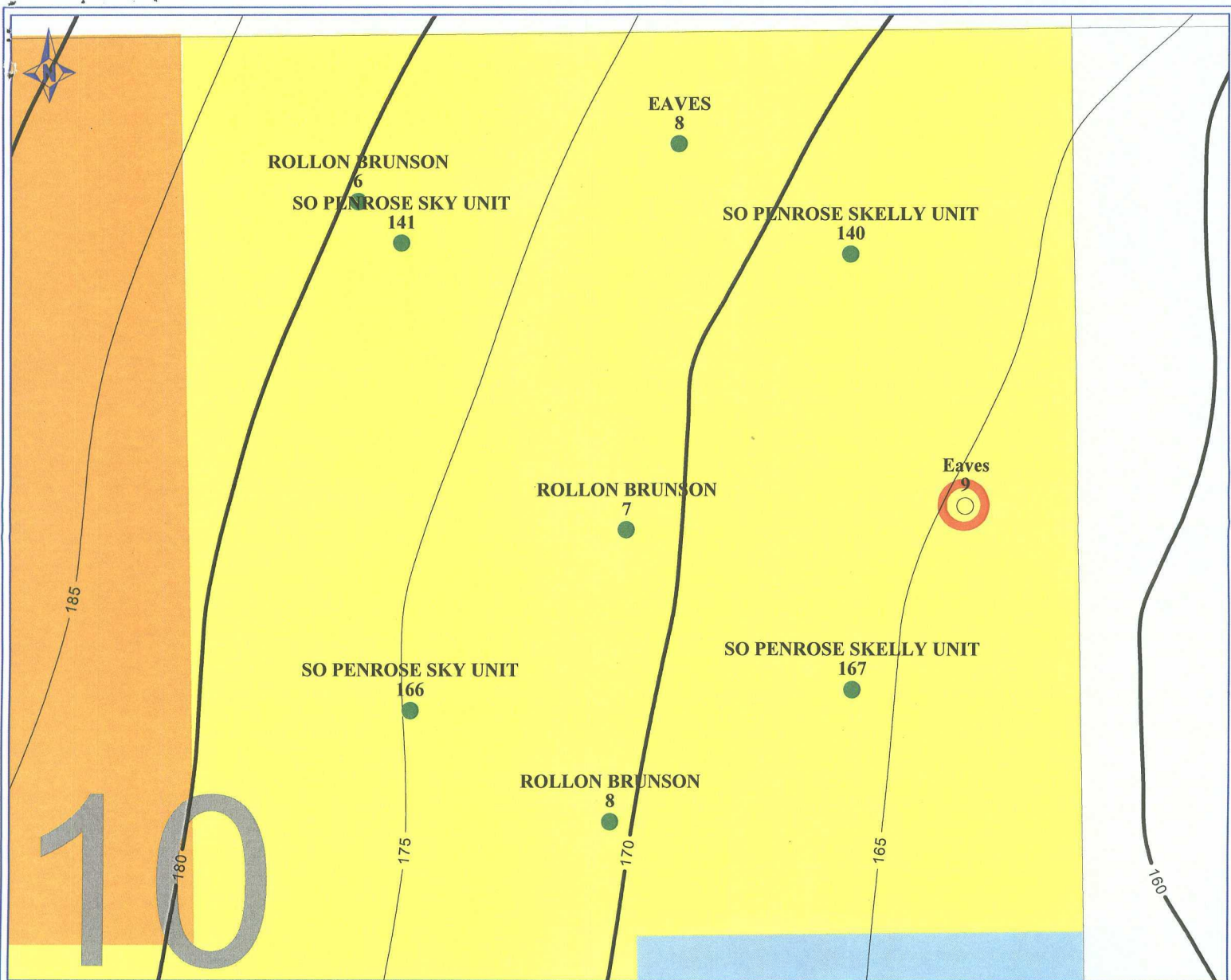
UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	10	22S	37E		1395	North	330	East	Lea

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

16		Brunson Lease	Eaves Lease 1395'	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 Casey R. Mobley Printed Name Geologist Title March 10, 2008
			167 40-acre proration unit 330'	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



PETRA 3/7/2008 9:09:50 AM



Chevron U.S.A. Inc.

EXHIBIT 4

PENROSE-SKELLY FIELD EAVES #9

Sec 10, T22S-37E, Lea Co., New Mexico

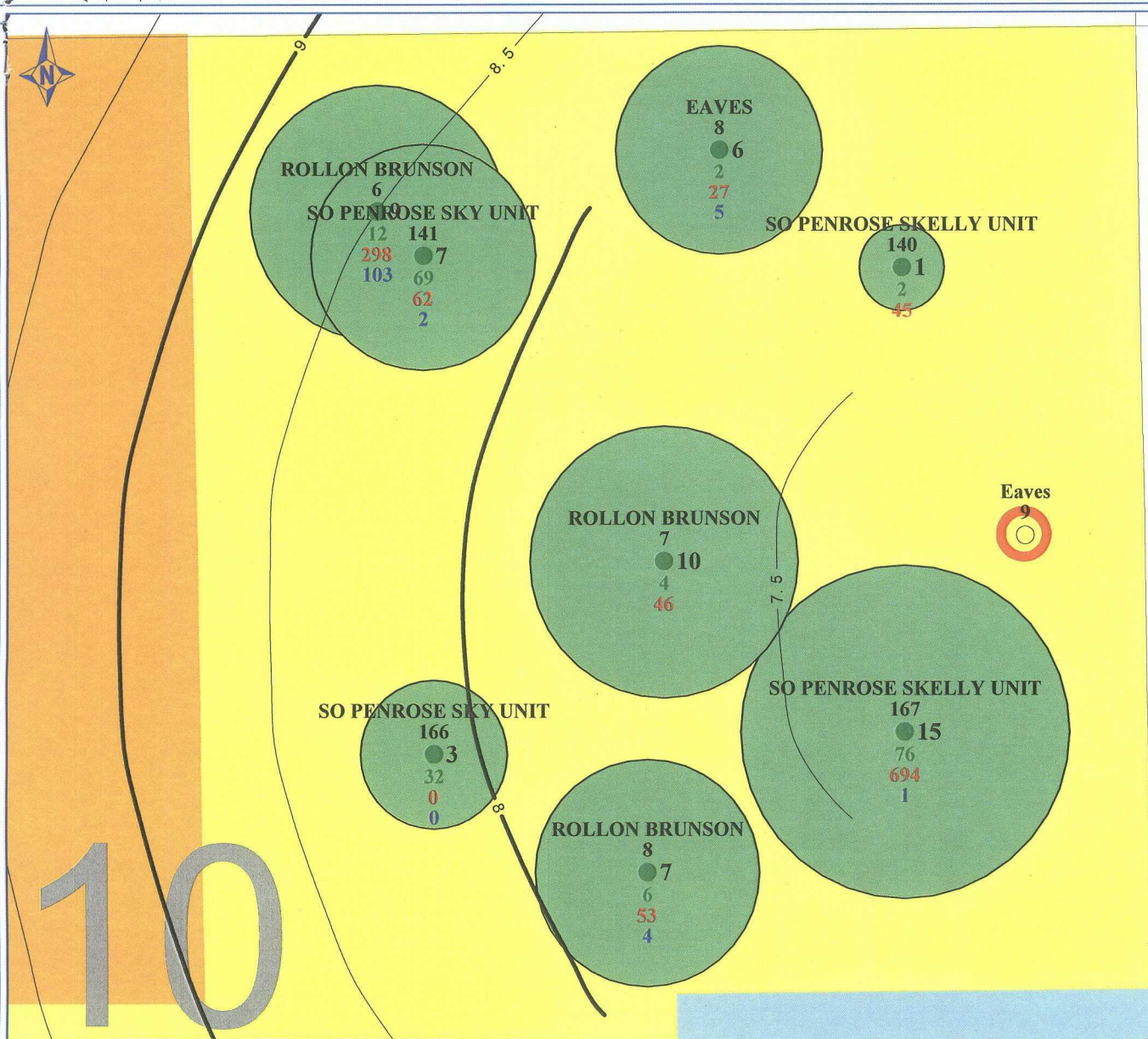
Grayburg Net Pay CI=5' [GR<40, Por>6%]

POSTED WELL DATA

Well Name
Well Number



March 7, 2008



PETRA 3/7/2008 9:06:27 AM



Chevron U.S.A. Inc.

EXHIBIT 5

PENROSE-SKELLY FIELD EAVES #9

Sec 10, T22S-37E, Lea Co., New Mexico

Grayburg HCPV CI=0.5 & EUR - Drainage

POSTED WELL DATA

Well Name
Well Number

● GRBG Drained Area

Cum Oil (MBO)
Cum Gas (MMCF)
Cum water (MBO)



March 7, 2008