

DATE IN 5-12-04	SUSPENSE 6/1/04	ENGINEER Stogner	LOGGED 5-13-04	TYPE NSL
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -

PSEM 0413440719

ADMINISTRATIVE APPLICATION COVERSHEET

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS

Application Acronyms:

[NSP-Non-Standard Proration Unit] [NSL-Non-Standard Location]
[DD-Directional Drilling] [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 - Directional Drilling
☒ NSL NSP DD ☒ SD

Check One Only for [B] and [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

[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] **INFORMATION / DATA SUBMITTED IS COMPLETE** - Statement of Understanding

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I understand that any omission of data, information or notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with supervisory capacity.

A. M. Howell		Advisor Petro. Engineer	4/12/2004
Print or Type Name	Signature	Title	Date

Permian Business Unit
North America Upstream
15 Smith Road
Midland, Texas 79705
Tel (432) 687 7516
MAHO@chevrontexaco.com

May 5, 2004

ChevronTexaco

Request For Administrative Approval
Of Unorthodox Oil Well Location And
Simultaneous Dedication

RECEIVED

MAY 12 2004

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

Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Dear Mr. Stogner:

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

C. L. Hardy # 6
1345' FSL & 1385' FWL, NE/4 SW/4 of
Section 20, T21S, R37E, Unit Letter K
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 recent similar infill drilling by Apache Corporation in the same Pool. ChevronTexaco is a working interest partner in several of their recent infill wells and supports their contention that typical Grayburg wells cannot drain 40 acres. ChevronTexaco's technical analysis of the reservoir revealed similar results to Apache's.

The NE/4 SW/4 of Section 20 will be simultaneously dedicated in the Penrose Skelly; Grayburg Pool to the proposed well and to the existing C. L. Hardy # 3. ChevronTexaco also requests approval of the simultaneous dedication.

This application is based on geological and engineering analysis. That analysis and justification for this request is attached as Exhibit 1, along with other supporting documentation. There are four wells that have produced or are producing the Grayburg Formation in the SW/4 of Section 20. 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 the existing Grayburg wells.

A land plat highlighting the proposed well's location is attached as Exhibit 2. The SW/4 of Section 20 is covered by a single fee lease and has **common royalty and working interest ownership**. 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.

May 5, 2004
Page 2

If you have any questions concerning this application or need additional information, please contact me by telephone at (432) 687-7516 or by e-mail at MAHO@chevrontexaco.com. Thank you for your consideration of this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Howell". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Mike Howell
Advisor Petroleum Engineer

Attachments

cc: NMOCD District 1 – Hobbs, NM
Mike Howell
Well File

NOTIFICATION LIST

Application Of Chevron U.S.A. Inc. For Administrative Approval Of An Unorthodox Oil Well Location And Simultaneous Dedication:

C. L. Hardy # 6

1345' FSL & 1385' FWL

Section 20, T21S, R37E, Unit Letter K

Lea County, New Mexico

Offset Operators, Working Interest Owners, SW/4 Section 20:

- | | |
|------------------------|------------------|
| 1. Chevron U.S.A. Inc. | Operator/100% WI |
| 15 Smith Road | |
| Midland, TX 79705 | |

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:

C. L. Hardy # 6

1345' FSL & 1385' FWL

Section 20, T21S, R37E, Unit Letter K

Lea County, New Mexico

PRIMARY OBJECTIVE: GRAYBURG

SUPPORTING DATA:

1. Chevron U.S.A. Inc. (Chevron) is the operator of the proposed C. L. Hardy # 6 well (Exhibit 3). The proposed total depth is 4000' 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	C. L. Hardy # 1	20-N	Grayburg	41	0			P&A
Chevron	C. L. Hardy # 3	20-K	Grayburg	37	714	17	353	Producing
Chevron	C. L. Hardy # 4	20-M	Grayburg	16	17	16	532	Producing
Chevron	C. L. Hardy # 5	20-L	Grayburg	2	37	10	278	Producing

3. The proposed C. L. Hardy # 6 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 and the supratidal rock being 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 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 analyzed by mapping Hydrocarbon Pore Volume (HCPV) (Exhibit 5). HCPV is the product of feet of net pay (h) times average porosity (phi) times oil saturation (So). The 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.

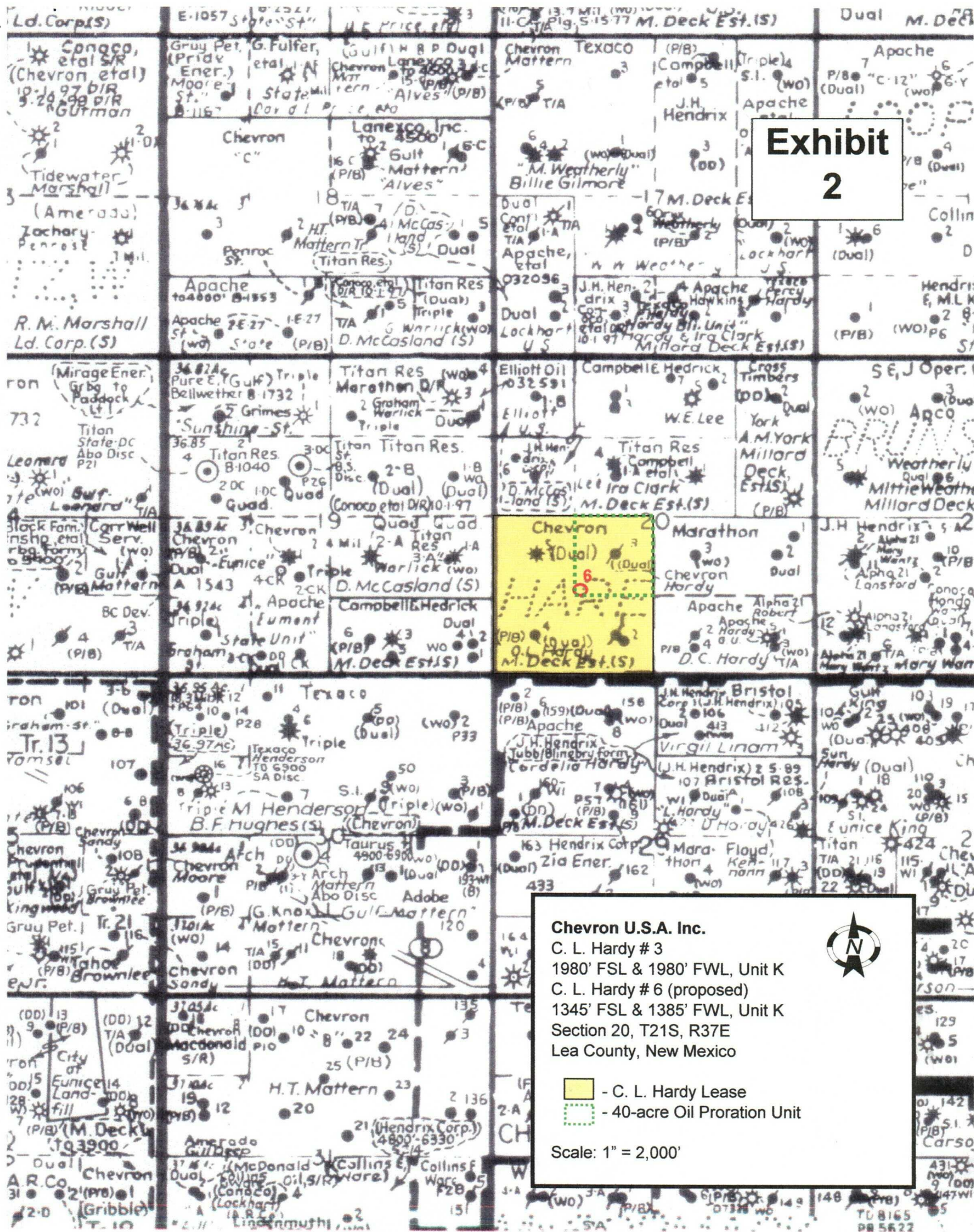
The following table provides drainage areas calculated from the HCPV map and reserves of the offsetting wells.

Operator	Well	Location	Formation	Drainage Acres	EUR	
					MBO	MMCF
Chevron	C. L. Hardy # 1	20-N	Grayburg	26	41	0
Chevron	C. L. Hardy # 3	20-K	Grayburg	15	22	598
Chevron	C. L. Hardy # 4	20-M	Grayburg	6	9	380
Chevron	C. L. Hardy # 5	20-L	Grayburg	6	11	389

As can be seen above, the average drainage area of the offsetting wells is only 13 acres, and additional reserves can be recovered by drilling the proposed well, C. L. Hardy # 6, at an infill location approximately equidistant from the offsetting Grayburg producers. Reserves for the proposed location were calculated using the HCPV map, a 13 acre drainage area, and a 15% recovery factor. The results are as follows:

Operator	Well	Location	HCPV	Drainage Acres	EUR	
					MBO	MMCF
Chevron	C. L. Hardy # 6	20-K	7.72	13	21	695

4. The SW/4 of Section 20 is covered by a single fee lease which has common royalty and working interest ownership. 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 C. L. Hardy # 6 will share a 40-acre proration unit and be simultaneously dedicated with the C. L. Hardy # 3, a current Penrose Skelly; Grayburg producer in Section 20, Unit Letter K.
6. Approval of this application will allow for the recovery of oil and gas reserves which would not otherwise be recovered.



DISTRICT I
P. O. Box 1980, Hobbs, NM 88240

DISTRICT II
P. O. Drawer DD, Artesia, NM 88210

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

DISTRICT IV
P. O. Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

EXHIBIT
3

Submit to Appropriate District Office

State Lease-4 copies
Fee Lease-3 copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number		² Pool Code		³ Pool Name Penrose Skelly (Grayburg)					
⁴ Property Code		⁵ Property Name C.L. Hardy						⁶ Well Number 6	
⁷ OGRID No. 22351		⁸ Operator Name CHEVRON USA, Inc.						⁹ Elevation 3492'	
¹⁰ Surface Location									
UL or lot no. K	Section 20	Township 21-S	Range 37-E	Lot Idn	Feet from the 1345'	North/South line South	Feet from the 1385'	East/West line West	⁷ County 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	⁷ 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 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.
	Signature
	Printed Name Ted Tipton
	Position Manager of Drilling Department
	Company Chevron USA, Inc.
	Date May 1, 2004
	¹⁸ 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 knowledge and belief.
	Date Surveyed April 22, 24, 26, & 27, 2004
	Signature & Seal of Professional Surveyor
	Certificate No. 7254 John S. Piper

Sheet 1 of 1

○ = Staked Location • = Producing Well = Injection Well ◇ = Water Supply Well ⊕ = Plugged & Abandon Well
⊙ = Found Section Corner, 2 or 3" Iron Pipe & GLO B.C. ○ = Found 1/4 Section Corner, 1" Iron Pipe & GLO B.C.

ADDITIONAL INFORMATION ON THE LOCATION

State Plane Coordinates Northing 533283.89 (1927= 533224.21)		Easting 894234.78 (1927= 853050.47)	
Latitude 32°27'39.104" (1927= 32°27'38.670")		Longitude 103°11'21.061" (1927= 103°11'19.367")	
Zone North American Datum	Combined Grid Factor 0.9998847	Coordinate File Weathrly.cr5	
East 1983			
Drawing File Chevron-Eunice.Dwg	Field Book Lea #23, Pg.43		

District I
1625 N. French Dr., Hobbs, NM 88240

District II
811 South First, Artesia, NM 88210

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

District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised March 17, 1999

OIL CONSERVATION DIVISION Submit
2040 South Pacheco
Santa Fe, NM 87505

EXHIBIT
3.1

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-06688	² Pool Code 50360	³ Pool Name Penrose Skelly; Grayburg
⁴ Property Code 2634	⁵ Property Name C. L. Hardy	⁶ Well Number 3
⁷ OGRID No. 4323	⁸ Operator Name Chevron U.S.A., Inc.	⁹ Elevation 3305' GL

¹⁰ Surface Location

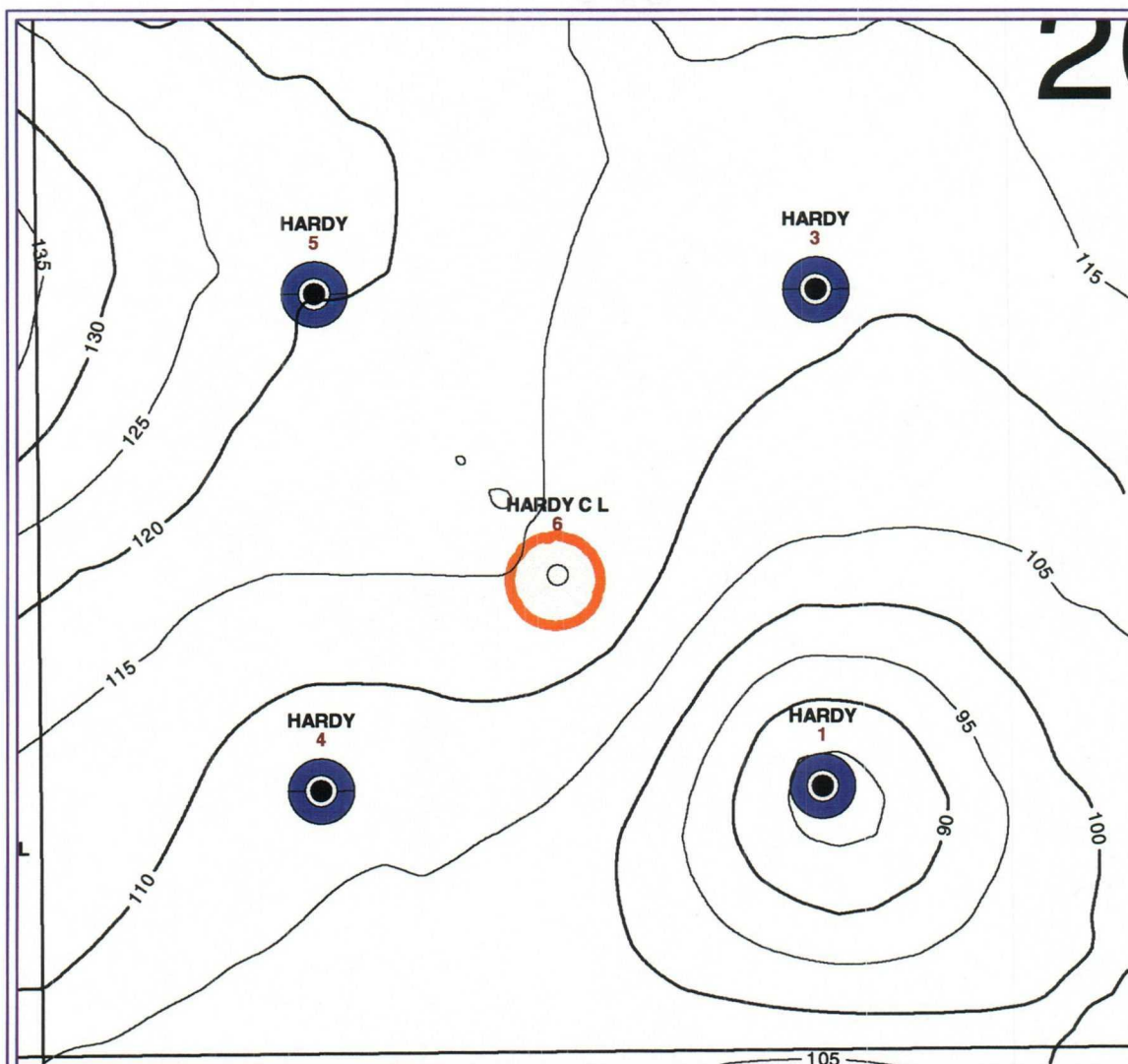
UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	20	21S	37E		1980	South	1980	West	Lea

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>16</div> <div>C. L. Hardy Lease</div> <div>40-acre proration unit</div> <div>1980'</div> <div>1980'</div> <div>3</div> <div>6</div> <div>20</div>
--



PETRA 5/6/2004 3:15:52 PM

ChevronTexaco

EXHIBIT 4

21S-37E-20 SW/4 Lea County, New Mexico

Grayburg Net Pay CI=5'

Cutoffs: Gr \leq 40 API, Porosity \geq 6%

ATTRIBUTE MAP

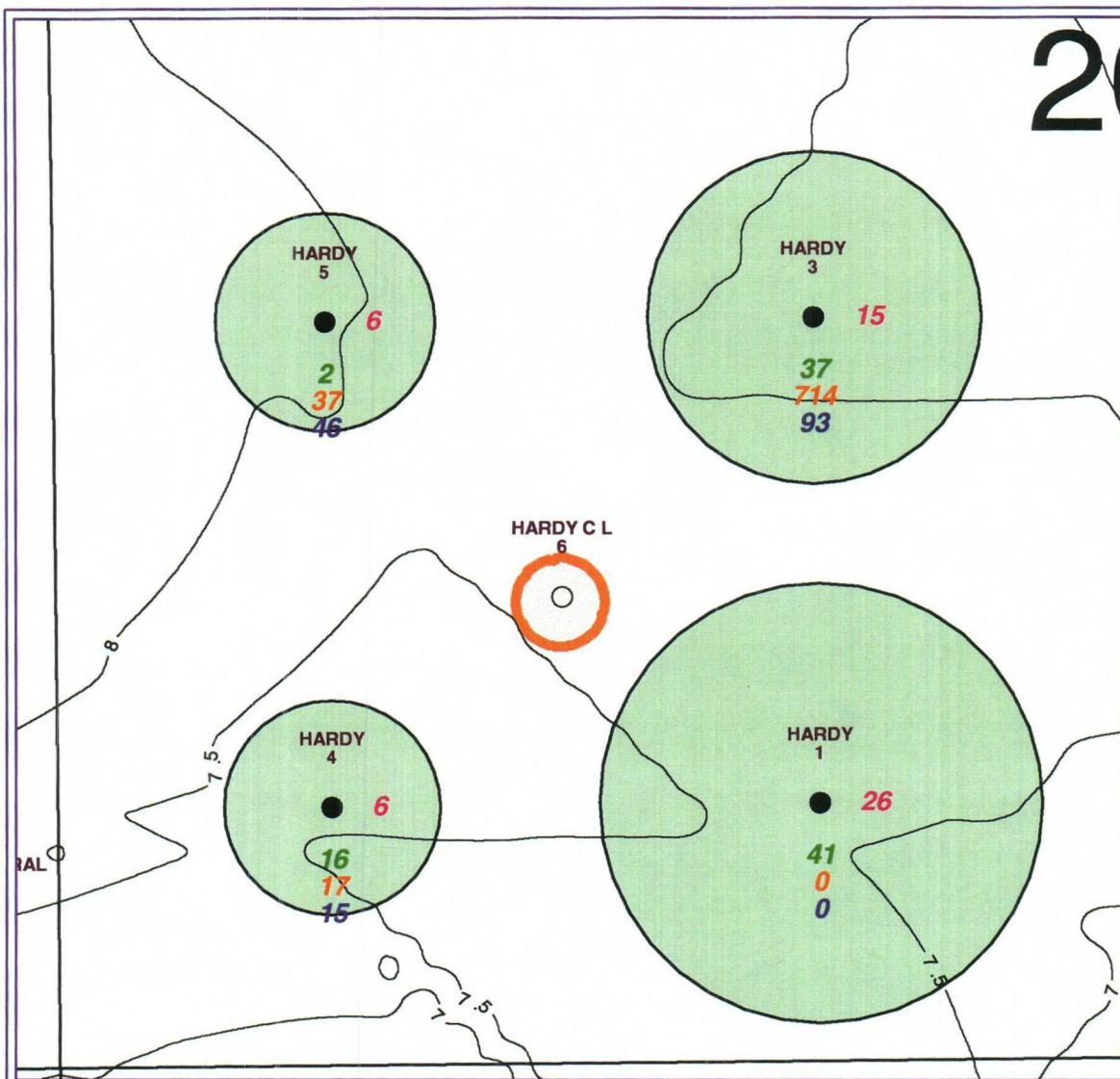


Zone: PRODUCTION - O_453GRBG IS PRESENT
 Zone: PRODUCTION - G_453GRBG IS PRESENT



FEET

May 6, 2004



PETRA 5/6/2004 12:20:55 PM

ChevronTexaco

EXHIBIT 5

21S-37E-20 SW/4 Lea County, New Mexico

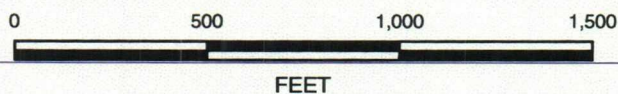
Grayburg HCPV CI=.5 & EUR-Drainage

POSTED WELL DATA

Well Name
Well Number

● EUR-GRAYBURG-ACRES

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



May 6, 2004

CMD : ONGARD 05/25/04 15:33:33
 OG6IWCN INQUIRE WELL COMPLETIONS OGOMES -TQCL

API Well No : 30 25 6686 Eff Date : 01-30-2003 WC Status : A
 Pool Idn : 50350 PENROSE SKELLY;GRAYBURG
 OGRID Idn : 4323 CHEVRON U S A INC
 Prop Idn : 2634 C L HARDY

Well No : 003
 GL Elevation: 3505

U/L Sec Township Range North/South East/West Prop/Act (P/A)

 B.H. Locn : K 20 21S 37E FTG 1980 F S FTG 1980 F W A
 Lot Identifier:
 Dedicated Acre: 40.00
 Lease Type : P
 Type of consolidation (Comm, Unit, Forced Pooling - C/U/F/O) :

PF01 HELP PF02 PF03 EXIT PF04 GOTO PF05 PF06
 PF07 PF08 PF09 PF10 NEXT-WC PF11 HISTORY PF12 NXTREC

CMD : ONGARD 05/25/04 15:33:39
 OG6ACRE C102-DEDICATE ACREAGE OGOMES -TQCL
 Page No : 1

API Well No : 30 25 6686 Eff Date : 01-30-2003
 Pool Idn : 50350 PENROSE SKELLY,GRAYBURG
 Prop Idn : 2634 C L HARDY
 Spacing Unit : 57180 OCD Order :
 Sect/Twp/Rng : 20 21S 37E Acreage : 40.00
 Dedicated Land: Simultaneous Dedication:
 Revised C102? (Y/N) :

 S Base U/L Sec Twp Rng Acreage L/W Ownership Lot Idn

 K 20 21S 37E 40.00 N FE

E0005: Enter data to modify or PF keys to scroll
 PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM
 PF07 BKWD PF08 FWD PF09 PF10 LAND PF11 NXTSEC PF12 RECONF

CMD :
OG6IPRD
INGUIRE PRODUCTION BY POOL/WELL

05/25/04 15:33:47
OGOMES -TQCL
Page No: 1

OGRID Identifier : 4323 CHEVRON U S A INC
Pool Identifier : 50350 PENROSE SKELLY;GRAYBURG
API Well No : 30 25 6686 Report Period - From : 01 2003 To : 04 2004

API Well No	Property Name	Prodn. Days MM/YY Prod	Production Volumes Gas Oil Water	Well Stat
30 25	6686 C L HARDY	02 03 16	3403 467 2914	P
30 25	6686 C L HARDY	03 03 31	7583 603 4725	P
30 25	6686 C L HARDY	04 03 30	6294 423 3271	P
30 25	6686 C L HARDY	05 03 13	2515 112 1874	P
30 25	6686 C L HARDY	06 03 30	6964 301 9611	P
30 25	6686 C L HARDY	07 03 14	3372 245 3734	P
30 25	6686 C L HARDY	08 03 31	6763 371 7812	P

Reporting Period Total (Gas, Oil) :

M0025: Enter PF keys to scroll

PF01 HELP PF02 PF03 EXIT PF04 GOTO PF05 PF06 CONFIRM
PF07 BKWD PF08 FWD PF09 PF10 NXTPool PF11 NXTOGD PF12

CMD :
OG6IPRD
INGUIRE PRODUCTION BY POOL/WELL

05/25/04 15:33:49
OGOMES -TQCL
Page No: 2

OGRID Identifier : 4323 CHEVRON U S A INC
Pool Identifier : 50350 PENROSE SKELLY;GRAYBURG
API Well No : 30 25 6686 Report Period - From : 01 2003 To : 04 2004

API Well No	Property Name	Prodn. Days MM/YY	Prod	Production Volumes Gas	Oil	Water	Well Stat
30 25	6686 C L HARDY	09 03	30	8753	486	7103	P
30 25	6686 C L HARDY	10 03	31	10329	526	7505	P
30 25	6686 C L HARDY	11 03	30	11180	555	7710	P
30 25	6686 C L HARDY	12 03	31	11308	568	5854	P
30 25	6686 C L HARDY	01 04	31	17237	741	4123	P
30 25	6686 C L HARDY	02 04	28	9370	390	4603	P
30 25	6686 C L HARDY	03 04	31	12181	400	5738	P
Reporting Period Total (Gas, Oil) :				117252	6188	76577	

E0049: User may continue scrolling.

PF01 HELP PF02 PF03 EXIT PF04 GOTO PF05 PF06 CONFIRM
PF07 BKWD PF08 FWD PF09 PF10 NXTPool PF11 NXTOGD PF12



NEW MEXICO ENERGY, MINERALS and
NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON

Governor

Joanna Prukop

Cabinet Secretary

REC

Lori Wrotenbery
Director
Oil Conservation Division

5/12/04

MAY 11 2004

Oil Conservation Division
1220 S. Francis Drive
Santa Fe, NM 87505

Oil Conservation Division
1220 S. Francis Drive
Santa Fe, NM 87505

RE: Proposed:

MC _____
DHC _____
NSL X _____ + 50
NSP _____
SWD _____
WFX _____
PMX _____

Gentlemen:

I have examined the application for the:

Chevron USA Inc CL Hardy # 6-K, 20-215-37e
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

OK

Yours very truly,

Chris Williams
Chris Williams
Supervisor, District 1