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 N	MANDATORY FOR ALL ADMINISTRATIVE APPL	LICATIONS FOR EXCEPTIONS TO DIVISION R AT THE DIVISION LEVEL IN SANTA FE	ULES AND REGULATIONS
[DHC-Dow [PC-Pd	s: ndard Location] [NSP-Non-Standar nhole Commingling] [CTB-Lease ool Commingling] [OLS - Off-Leas [WFX-Waterflood Expansion] [PI	rd Proration Unit] [SD-Simultaneou Commingling] [PLC-Pool/Lease e Storage] [OLM-Off-Lease Meas MX-Pressure Maintenance Expansi [IPI-Injection Pressure Increase]	Commingling] surement] on]
[1] TYPE OF A]	PPLICATION - Check Those Which Location - Spacing Unit - Simultant NSL NSP SD		
Checl [B]	Cone Only for [B] or [C] Commingling - Storage - Measure DHC CTB PLC		
[C]	Injection - Disposal - Pressure Inc. WFX PMX SWI	rease - Enhanced Oil Recovery D	
[D]	Other: Specify		
[2] NOTIFICAT	TION REQUIRED TO: - Check The Working, Royalty or Override		ply
[B]	Offset Operators, Leaseholde	rs or Surface Owner	
	Application is One Which Re	equires Published Legal Notice	e sensit eşeme e sase e sina tarası
[D]	Notification and/or Concurrer U.S. Bureau of Land Management - Commiss		
[E]	For all of the above, Proof of	Notification or Publication is Attach	ned, and/or,
[F]	☐ Waivers are Attached		
	CURATE AND COMPLETE INF ATION INDICATED ABOVE.	ORMATION REQUIRED TO PR	ROCESS THE TYPE
approval is accurate a application until the re	TION: I hereby certify that the information and complete to the best of my knowledgered information and notifications	ledge. I also understand that no acti are submitted to the Division.	on will be taken on this
Note	: Statement must be completed by an Indiv	ridual with managerial and/or supervisory	capacity.
Print or Type Name	Signature	Title	Date
Cheve	instruce	e-mail Address	

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 0 7 2005

March 2, 2005

ChevronTexaco

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:

Eunice King #29

1340' FNL & 2620' FWL, SE/4 NW/4 of Section 28, T21S, R37E, Unit Letter F 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 SE/4 NW/4 of Section 28 will be simultaneously dedicated in the Penrose Skelly, Grayburg Pool to the proposed well and to the Eunice King #3. The Eunice King #3 was drilled in 1937 and is currently completed 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 four wells that have produced the Grayburg formation in the E/2 NW/4 and the W/2 NE/4 of Section 28. 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 N/2 of Section 28 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) 561-3659 or by email at mrvillalva@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. Thank you for consideration of this matter.

Sincerely,

Michael R. Villalva Petroleum Engineer

Michael R. Wale

Attachments

NMOCD District 1 – Hobbs, NM cc:

> 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:

Eunice King #29 1340' FNL & 2620' FWL Section 28, T21S, R37E, Unit Letter F Lea County, New Mexico

Offset Operators, Working Interest Owners, N/2 Section 28:

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

1					
•					
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



		ADMINISTRATIVE APPLIC	ATION CHECKLIST	•
т	_	MANDATORY FOR ALL ADMINISTRATIVE APPLICATION		
Appli	[DHC-Dow [PC-Po	ndard Location] [NSP-Non-Standard Prora nhole Commingling] [CTB-Lease Comm ool Commingling] [OLS - Off-Lease Stora	ation Unit] [SD-Simultaneous D ingling] [PLC-Pool/Lease Cor age] [OLM-Off-Lease Measurd ssure Maintenance Expansion] ection Pressure Increase]	mmingling] ement]
[1]	TYPE OF AI	PPLICATION - Check Those Which Appl Location - Spacing Unit - Simultaneous I NSL NSP SD SD		
	Checl	k One Only for [B] or [C] Commingling - Storage - Measurement DHC CTB PLC	PC OLS OLM	•
	[C]	Injection - Disposal - Pressure Increase - WFX PMX SWD		
	[D]	Other: Specify		
[2]	NOTIFICAT [A]	TION REQUIRED TO: - Check Those Wh Working, Royalty or Overriding Roy		ly
	[B]	Offset Operators, Leaseholders or S	urface Owner	
	[C]	Application is One Which Requires	Published Legal Notice	
	[D]	Notification and/or Concurrent App U.S. Bureau of Land Management - Commissioner of P		
	[E]	For all of the above, Proof of Notific	cation or Publication is Attached	, and/or,
	[F]	Waivers are Attached		
[3]		CCURATE AND COMPLETE INFORM. ATION INDICATED ABOVE.	ATION REQUIRED TO PRO	CESS THE TYPE
[4] appro applie	oval is accurate a	ATION: I hereby certify that the information and complete to the best of my knowledge, equired information and notifications are sul	I also understand that no action	for administrative will be taken on this
	Note	e: Statement must be completed by an individual w	ith managerial and/or supervisory cap	eacity.
	Michael R. Villalva or Type Name	Signature Mulling	Petroleum Engineer Title	Mar 2, 2009 Date
			mrvillalva@chevrontexa	aco.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:

Eunice King #29

1340' FNL & 2620' FWL Section 28, T21S, R37E, Unit Letter F Lea County, New Mexico

PRIMARY OBJECTIVE: GRAYBURG

SUPPORTING DATA:

- 1. Chevron U.S.A. Inc. (Chevron) is the operator of the proposed Eunice King #29 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 -	Cun	n Prod	Curre	nt Prod	Status	
Operator	Wen	Location		MBO	MMCF	BOPD	MCFPD		
Chevron	Eunice King #3	28-F	Grayburg	119	887	4	90	Producing	
Chevron	Eunice King #7	28-G	Grayburg	38	257			P&A	
Chevron	Eunice King #11	28-B	Grayburg	60	441			P&A - will reenter	
Chevron	Eunice King #19	28-C	Grayburg	7	130	8	266	Producing	

- 3. The proposed Eunice King #29 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.

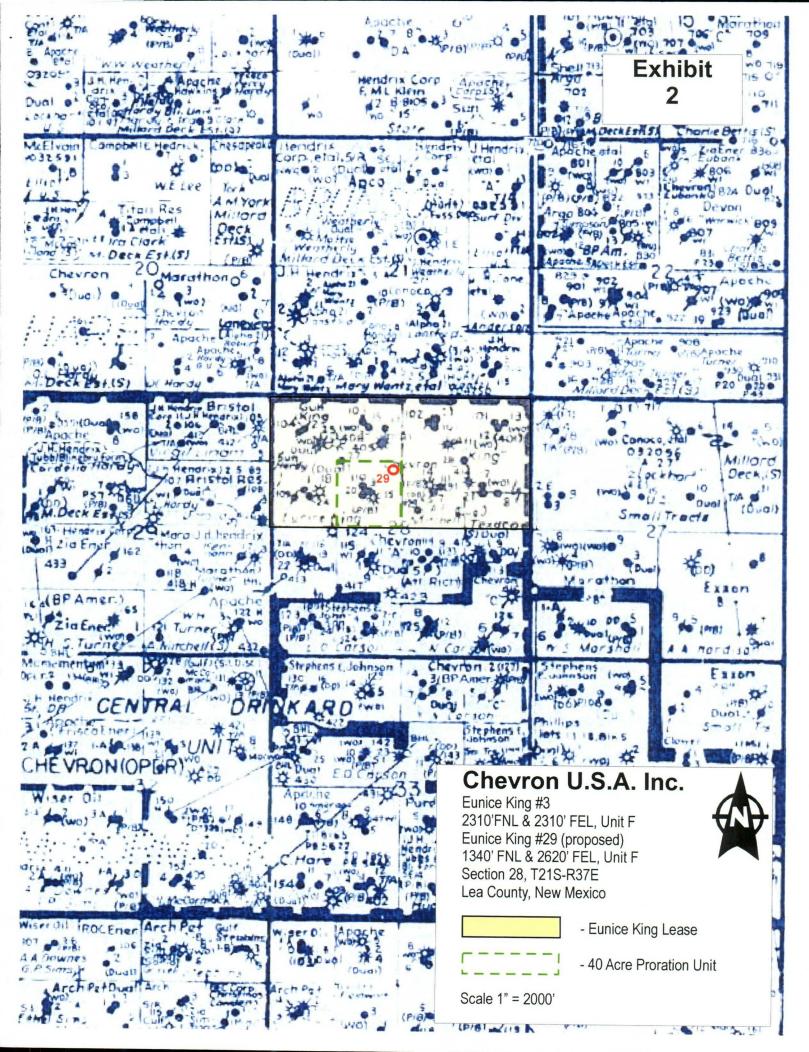
The following table provides drainage areas calculated from the HCPV map and reserves of the offsetting wells.

Operator	Well	Location	Formation	Drainage	EUR		
Operator	W C11	Location	Formation	Acres	MBO	MMCF	
Chevron	Eunice King #3	28-F	Grayburg	31	126	996	
Chevron	Eunice King #7	28-G	Grayburg	8	38	257	
Chevron	Eunice King #11	28-B	Grayburg	12	60	441	
Chevron	Eunice King #19	28-C	Grayburg	6	28	429	

As seen above, the average drainage area of the offsetting locations is only 14 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 14 acre drainage area, and a 15% recovery factor. The results are as follows:

Operator	Well	Location	HCPV	Drainage	EUR	
	AA C11	Location	iici v	Acres	MBO	MMCF
Chevron	Eunice King #29	28-F	5.7	14	67	495

- 4. The N/2 of Section 28 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 Eunice King #29 will share a 40-acre proration unit and will be simultaneously dedicated with the Eunice King #3 (recent Lower Grayburg deepening) as a Penrose Skelly, Grayburg producer in Section 28, Unit Letter F.
- 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

Exhibit 3

DISTRICT I

Energy, Minerals and Satural Sesources Department

DISTRICT II

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

DISTRICT IV 1220 S. ST. PRANCES DR., SANTA FE, NM S	WELL LOCATION AND ACR	EAGE DEDICATION PLAT	AMENDED REPORT
API Number	Pool Code	Pool Name	
Property Code	Property 1 EUNICE		Well Number
OGRID No.	Operator 1 CHEVRON U.S		Elevation 3448

Surface Location

ſ	UL or lot No.	Section	Township	Range	Lot Idn	Peet from the	North/South line	Feet from the	East/West line	County
	F	28	21-S	37-E		1340	NORTH	2620	WEST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section Towns	hip Range	Lot Idn	Feet from the	North/South line	Pect from the	East/West line	County
Dedicated Acres	Joint or Infill	Consolidation		der No.			<u> </u>	<u></u>
		•						

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

1340	OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. Signature
2620'	Printed Name Title Date
	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 uniter my superal son, and that the same is true and correct to the best of my belief. JANUARY 12, 2005
GEODETIC COORDINATES NAD 27 NME Y=530596.7 N X=859600.0 E	Date Surveyed Signature & Seal of Professional Surveyor Data Surveyor Q44111719 Condition No. Gary Edison 12641

Standard 640-Acre Section

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240

State of New Mexico Energy, Minerals & Natural Resources Department

Form C-102 Revised June 10, 2003

<u>District II</u> 1301 W. Grand Avenue, Artesia, NM 88210

OIL CONSERVATION DIVISION Submit to Annuariate District Office

1220 South St. Francis Dr. Santa Fe, NM 87505 Exhibit 3.1

☐ AMENDED REPORT

<u>District III</u> 1000 Rio Brazos Rd., Aztec, NM 87410

<u>District IV</u> 1220 South St. Francis Dr., Santa Fe, NM 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-06839	² Pool Code 50350	² Pool Code ³ Pool Name 50350 Penrose Skelly; Grayburg							
⁴ Property Code 2615		⁵ Property Name Eunice King	e	V 7. 4.		⁶ Well Number 3			
⁷ OGRID No. 4323			⁹ Elevation 3458' GL						
	10	Surface Loc	cation						

UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	28	218	37E		1980	North	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 Acre 40	es ¹³ Joir	nt or Infill 14 (Consolidation	Code 15 Or	der No.				

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