

District I
1625 N French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
RECEIVED
MAY 05 2010
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505
NMOCD ARTESIA

Form C-101
May 27, 2004

Submit to appropriate District Office

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

Operator Name and Address Cimarex Energy Co. of Colorado 600 N. Marienfeld, Ste. 600 Midland, TX 79701		OGRID Number 162683
		API Number 30-015-32806
Property Code 300598	Property Name Crawford 27	Well No 004
Proposed Pool 1 White City; Penn (Gas) - Existing (87280)		Proposed Pool 2 WILDCAT Black River; Wolfcamp, East - Proposed (97489)

Surface Location									
UL or lot no D	Section 27	Township 24S	Range 26E	Lot Idn	Feet from the 660	North/South line North	Feet from the 1310	East/West line West	County Eddy

Proposed 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

Additional Well Information				
Work Type Code P	Well Type Code G	Cable/Rotary	Lease Type Code P	Ground Level Elevation 3341' RDB
Multiple Y	Proposed Depth 11135' (PBDT)	Formation Wolfcamp & Cisco	Contractor N/A	Spud Date When Approved
Depth to Groundwater		Distance from nearest fresh water well		Distance from nearest surface water
Pit	Liner. Synthetic <input type="checkbox"/> mils thick Clay <input type="checkbox"/>	Pit Volume: bbls		Drilling Method:
Closed-Loop System <input checked="" type="checkbox"/>		Flowback Tanks		Fresh Water <input type="checkbox"/> Brine <input type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/>

Proposed Casing and Cement Program					
Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17½"	13¾"	48#	430'	360	Circ
12¼"	9⅝"	36#	3832'	1100	Circ
8¾"	7"	26#	11690'	1450	8500'

Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

Well currently flowing from Cisco perfs 9764-9936' and Morrow perfs 11202-11266' via separate tubing strings. Cimarex proposes to plug Morrow perfs, acidize and frac Cisco, add Wolfcamp perfs, and DHC with current Cisco perfs as shown below.

- NDWH, NUBOP, release pkr & POOH w tbg. Set CIBP @ 11170' and dump 35' cmt on top.
- Acidize/frac Cisco 9764-9936' w/ 5000 gal acid and 359823 gal slick water, 35000# 100 mesh, 250000# 30/50 sand. CBP @ 9700.'
- Perf Wolfcamp 9369-9481' 3 jspf, 60 holes. Acidize and frac Wolfcamp 9369-9481' w/ 5000 gal acid and 240453 gal slick water, 25000# 100 mesh, 150000# 30/50 sand. CBP @ 9350.'
- Perf Wolfcamp 9213-9317' 3 jspf, 60 holes. Acidize and frac Wolfcamp 9213-9317' w/ 5000 gal acid and 230197 gal slick water, 25000# 100 mesh, 150000# 30/50 sand. CBP @ 9200.'

Continued on next page...

I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines ☐, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Signature: *Natalie Krueger*
Printed name: Natalie Krueger

Title: Regulatory

E-mail Address: nkrueger@cimarex.com

Date: May 4, 2010

Phone: 432-620-1936

OIL CONSERVATION DIVISION

Approved by: *[Signature]*

Title: **Geologist**

Approval Date: 5/26/2010

Expiration Date: 5/26/2012

Oil Conservation Division

Conditions of approval: Approval for drilling/workover ONLY-- CANNOT produce Downhole Commingled until DHC is approved in Santa Fe.

Permit Expires 2 Years From Approval Date Unless Drilling Underway Plugback & Add

DHC-4280

C-101 Crawford 27 No. 4

Plug Morrow, Add Wolfcamp, DHC Wolfcamp & Cisco-Canyon

D-27-24S-26E

660 FNL & 1310 FWL

Eddy County, NM

Continued Recompletion Procedure...

- Perf Wolfcamp 9051-9183' 3 jspf, 60 holes. Acidize and frac Wolfcamp 9213-9317' w/ 5000 gal acid and 275102 gal slick water, 30000# 100 mesh, 200000# 30/50 sand. CBP @ 9000.'
- Drill out CBPs. Flow back well and put on production.

C-107A Currently in progress at Santa Fe OCD.

Crawford 27 #4
Wolfcamp Recompletion Procedure

Well Data:

KB	20' above GL
TD	11690'
PBTD	11531'
Casing	13-3/8" 48# H-40 @ 430'. Cmtd w/ 360 sx. Cmt circ. 9-5/8" 36# J-55 @ 3832'. Cmtd w/ 1100 sx. Cmt circ. 7" 26 & 29# P-110 @ 11690'. Cmtd w/ 725 sx. Cmt circ.. DV Tool @ 8014'. Cmtd w/ 725 sx. TOC N.A.
Perfs	Morrow – (11202' – 11266') Cisco Canyon – (9764' – 9936')

Procedure:

1. MIRU pulling unit. If necessary, kill well w/ FW. ND WH, NU BOP, TOO H LAYING DOWN 335 JTS 2 3/8" ULTRA FJ tbg. Release 7" AS-IX packer. POOW laying down w/ 362 JTS 2 3/8" L-80 tbg. Send in the 2 3/8" ULTRA FJ to Midland Warehouse. RU WL. RIW w/ GR to 11190'. Run CIBP and set @ \pm 11170' and dump 35' cmt on top of CIBP. ND BOP, Change out 5K wellhead for 10K wellhead, and RU 10K goat head frac valve. RDMO pulling unit.
2. RU Cudd. Acidize and frac Cisco Canyon perfs (9764' – 9936') down 7" csg w/ 5000 gals acid followed by 359,823 gals slick water containing 35,000# 100 mesh & 250,000# 30/50 sand. Set 10K flow thru composite plug @ 9700'.
3. Perforate Wolfcamp (9369' – 9373', 9404' – 9408', 9424' – 9428', 9447' – 9451', 9477' – 9481') 3 JSPF at 120 degree phasing w/ 4" casing guns. Total of 60 holes. Depth reference log Halliburton Spectral Density Dual Spaced Neutron Log dated September 5, 2003.
4. Acidize and frac Wolfcamp perfs (9369' – 9481') down 7" csg w/ 5000 gals acid followed by 240,453 gals slick water containing 25,000# 100 mesh & 150,000# 30/50 sand. Set 10K flow thru composite plug @ 9350'.
5. Perforate Wolfcamp (9213' – 9216', 9230' – 9233', 9243' – 9246', 9268' – 9271', 9291' – 9295', 9313' – 17') 3 JSPF at 120 degree phasing w/ 3-1/8" casing guns. Total of 60 holes. Depth reference log Halliburton Spectral Density Dual Spaced Neutron Log dated September 5, 2003.
6. Acidize and frac Wolfcamp perfs (9213' – 9317') down 5-1/2" csg w/ 5000 gals acid followed by 230,197 gals slick water containing 25,000# 100 mesh & 150,000# 30/50 sand. Set 10K flow thru composite plug @ 9200'.

Crawford 27 #4

Wolfcamp Recompletion Procedure

Page 2

10. Perforate Wolfcamp (9051' – 9053', 9068' – 9071', 9085' – 9088', 9158' - 9162', 9119' – 9123', 9178' – 9183') 3 JSPF at 120 degree phasing w/ 3-1/8" casing guns. Total of 60 holes. Depth reference log Halliburton Spectral Density Dual Spaced Neutron Log dated September 5, 2003.
11. Acidize and frac Wolfcamp perfs (9051' – 9183') down 7" csg w/ 5000 gals acid followed by 275,102 gals slick water containing 30,000# 100 mesh & 200,000# 30/50 sand. Set 10K composite plug @ 9000'. RD wireline & Cudd.
12. ND goathead frac valve. NU BOP. TIH w/ 6-1/8" bit and pump off bit sub and drill out sand and composite plugs @ 9000', 9200', 9350', and 9700'. FIH w/ bit and CO sand to 11000'. Drop ball and pump off bit. Pick up tbg and set tbg @ 9750'. ND BOP, NU WH.
13. Flow back well until sand production cleans up, put well on production.

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

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III
1000 Rio Hrazos Rd., Artesia, NM 87410

DISTRICT IV
1820 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-32806	Pool Code 97442 97489	Pool Name WILDCAT Black River; Wolfcamp, East
Property Code 300598	Property Name CRAWFORD "27"	Well Number 4
OGRIID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 3341'

Surface Location

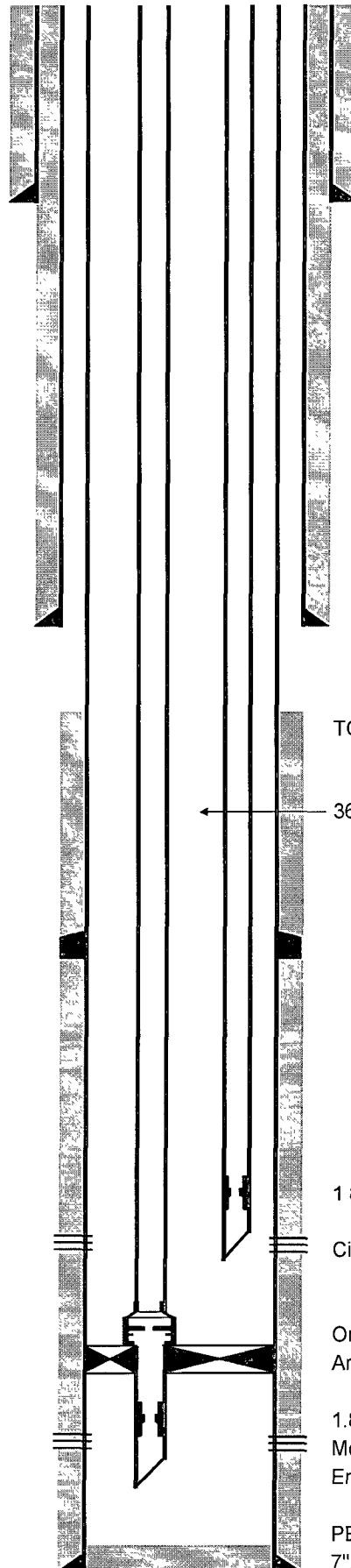
UL or lot No. D	Section 27	Township 24 S	Range 26 E	Lot Idn	Feet from the 660	North/South line NORTH	Feet from the 1310	East/West line WEST	County EDDY
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Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 320	Joint or Infill	Consolidation Code	Order No. DHC Pending						

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>2666' MEASURED</p> <p>1310'</p> <p>1080'</p> <p>Lat - N32°11'37.9" Long - W104°17'07.1" NMSPEC - N 434278.558 E 556195.840 (NAD-83)</p> <p>Fee</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, and that this organization either owns a working interest or released mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the Division.</p> <p>Zeno Farris 5/4/2010 Signature Date</p> <p>Zeno Farris 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>JUNE 20, 2006 Date Surveyed Signature of Surveyor Professional Surveyor Certificate No. 7977 Jones 7977</p> <p>BASIN SURVEYS</p>
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13-3/8", 48# H-40 csg @ 430'
cmtd w/ 360 sx, cmt circ

9-5/8", 36# J-55 csg @ 3832'
cmtd w/ 1100 sx, cmt circ.

TOC NA

← 362 jts 2-3/8" 4.7# L-80 EUE 8rd Tbg

DV Tool @ 8014'
cmtd w/ 725 sx

1.87" XN Profile nipple @ 9926'

Cisco Canyon perfs (9764' - 9936')

On-off tool @ 11155'
Arrowset 1-X pkr @ 11162'

1.87" XN Profile nipple @ 11271'
Morrow perfs (11202' - 11266')
End of tbg @ 11271

PBTD @ 11531'
7", 26&29# P-110 csg @ 11690'. Cmtd w/ 725 sx. Cmt circ.
TD @ 11690'

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State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised October 12, 2005

S OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87506

Submit to Appropriate District Office
State Lease - 4 Copies
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☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-32806	Pool Code	Pool Name White City; Penn (Gas)
Property Code	Property Name CRAWFORD "27"	Well Number 4
OGRID No. 162683	Operator Name CIMAREX ENERGY CO. of COLORADO	Elevation 3341'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	27	24 S	26 E		660	NORTH	1310	WEST	EDDY

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 640	Joint or Infill Y	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

2666'	MEASURED		
1310'	DRY HOLE MARKER Lat - N32°11'37.9" Long - W104°17'07.1" NMSPC - N 434278.558 E 556195.840 (NAD-83)		
Crawford 27 No. 4			
Crawford 27 No. 3 825'		Crawford 27 No. 2 1990'	
2050'		10861'	

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or released mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Zeno Farris 12-06-05
Signature Date

Zeno Farris
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.

JUNE 20, 2006
Date Surveyed
Signature
Professional Surveyor
No. 7977
Certificate No. 7977 Jones

BASIN SURVEYS

FF



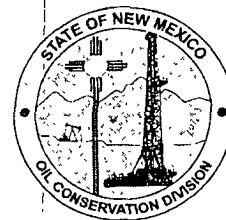
New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson
Governor

Jon Goldstein
Cabinet Secretary

Jim Noel
Deputy Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division



Administrative Order DHC-4280

Order Date: 5/14/2010

Application Reference Number: pTGW1012549727

CIMAREX ENERGY CO. OF COLORADO
600 N. Marienfeld Street, Suite 600
Midland TX 79701

Attention: Zeno Farris

CRAWFORD 27 Well No. 004
API No: 30-015-32806
Unit D, Section 27, Township 24 South, Range 26 East, NMPM
Eddy County, New Mexico

Pool: WHITE CITY; PENN (Cisco Canyon) (GAS) Gas 87280
Names: WILDCAT; WOLFCAMP GAS

Reference is made to your recent application for an exception to Rule 12.9A. of the Division Rules and Regulations to permit the above-described well to commingle production from the subject pools in the wellbore.

It appearing that the subject well qualifies for approval for such exception pursuant to the provisions of Rule 12.11A., and that reservoir damage or waste will not result from such downhole commingling, and correlative rights will not be violated thereby, you are hereby authorized to commingle the production as described above and any Division Order which authorized the dual completion or otherwise required separation of the zones is hereby placed in abeyance.


In accordance with Division 12.11A.(6), the production attributed to any commingled pool within the well shall not exceed the allowable applicable to that pool.

The production allocation percentages of oil and gas between these pools shall be supplied to the Division's Santa Fe office within 60 days following completion of this workover.

REMARKS: The operator shall notify the Division's district office upon implementation of commingling operations.



Pursuant to Rule 12.11B., the commingling authority granted herein may be rescinded by the Division Director if conservation is not being best served by such commingling.



MARK E. FESMIRE, P.E.
Acting Director

MEF/wvjj

cc: Oil Conservation Division – Artesia