Form 3 160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 3 1 ,1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: CONT 145

6. If Indian, Allonee or Tribe Name: Jicarilla

7. If Unit or CA, Agreement Designation:

1. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.: Jicarilla K No. 10E

2. Name of Operator: CONOCO INC.

9. API Well No.: 30-039-25393

3. Address and Telephone No.: 10 DESTA DR. STE. 100W, MIDLAND, TX. 79705-4500 (915) 686-5424

10. Field and Pool, or Exploratory Area: Chacra/MV/Dakota

4. Location of Well (Footage. Sec., T. R. M. or Survey Description)

1370' FSL & 1440' FWL
K Sec. 1, T-25N, R-5W

11. County or Parish, State: Rio Arriba, NM

1a CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
☒ Notice of Intent	☐ Abandonment	☐ Change of Plans
☐ Subsequent Repon	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracrunng
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☒ Other Downhole Commingling	☐ Dispose Water

(Note: Reponresultsof multiplecompitiononWdl Completion or Recompletion Report and Log form.)

13. Describe Proposed or Compieted Operations (Clearly state ail pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Approval is requested to downhole commingle the Chacra, Mesaverde, and Dakota Pools in this well according to the method and allocation formula proposed in the attached C-107-A application to the New Mexico Oil Conservation Division.

RECEIVED
JUL - 1 1997
OIL CON. DIV.
DIST. 3

6/19/97 6/30/97

14. I hereby certify that the foregoing is true and correct
Signed Jerry W. Hoover Title Sr. Conservation Coordinator Date 6/19/97

(This space for Federal or State office use)
Approved by for Chief, Lands and Mineral Resources Title Date JUN 3 0 1997
Conditions of approval if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its junsdiction.

*See Instruction on Reverse Side

DISTRICT I
PO Box 1980, Hobbs, NM 88241-1980

DISTRICT II
811 South First St. Artesia NM 88210 2835

DISTRICT III
1000 Rio Brazos Rd. Aztec, NM 87410 1693

RECEIVED
JUL - 1 1997
OIL CON. DIV.
DIST. 3

State of New Mexico
Energy, Minerals and Natural Rasources Department

OIL CONSERVATION DIVISION
2040 S. Pacheco
Santa Fe, New Mexico 87505-6429

Form C-107-A
New 3-12-96

APPROVAL PROCESS:
☒ Administrative ☐ Hearing

EXISTING WELLBORE
☒ YES ☐ NO

APPLICATION FOR DOWNHOLE COMMINGLING

Conoco Inc. (Operator) — 10 Desta Dr. Ste 100W, Midland, Tx. 79705-4500 (Address)

Jicarilla K (Lease) — 10E (Well No) — K - 1 - 25N - 5W (Unit Ltr Sec Twp Rge) — Rio Arriba (County)

OGRID NO. 005073 Property Code 18023 API NO. 30-039-25393

Spacing Unit Lease Types: (check 1 or more) Federal ☒, State ☐ (and/or) Fee ☐

The following facts ate submitted in support of downhole commingilng:	Upper Zone	intermediate Zone	Lower Zone
1. Pool Name and Pool Code	Otero Chacra - 82329	Blanco Mesaverde - 72319	Basin Dakota - 71599
2. TOP and Bottom of Pay Section (Perforations)	4172-4207	5297-5535	7611-7671
3. Type of production (Oil or Gas)	Gas	Gas	Gas
4. Method of Production (Flowing or Artificial Lilt)	Flow	Flow	Flow
5. Bottomhole Pressure Oil Zones - Artilicial Lift: Estimated Current Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated Or Measured Original	a (Current) 869 BHP psia	a. 754 BHP psia	a. 718 BHP psia
	b(Original) 966 psia	b. 1321 psia	b. 2775 psia
6. Oil Gravity (°API) or Gas BT Content	1193 BTU	1363 BTU	1219 BTU
7. Producing or Shut-In?	to be completed	to be completed	to be completed
Production Marginal? (yes or no)	Yes	Yes	YEs
• If Shut-In give date and oil/gas/ water rates of lsst production Note For new zones with no production hIStorv applicant shad be required to attach production estimates and supporting dara	Date Rates: Incremental Production by Subtraction -- See attached data	Date Rates: Incremental Production by Subtraction -- See attched data	Date Rates
• If Producing, date and oil/gas/ water rates of recent test (within 60 days)	Date Rates	Date Rates	Date Rates: Mid-Year Average Producing Rates -- See Attached Table
8. Fixed Percentage Allocation Formula -% or each zone	oil: NA % Gas NA %	oil: NA % Gas NA %	Oil: NA % Gas NA

9. If allocation formula is based upon something other than current or past production, or is based upon some other method, submit attachments with supporting data and/or explaining method and providing rate projections or other required data.

10. Are all working, overriding, and royalty interests identical in all commingled zones? X Yes ___ No
If not, have all working, overriding, and royalty interests been notified by certified mail? ___ Yes ___ No
Have all offset operators been given written notice of the proposed downhole commingling? X Yes ___ No

11. Will cross-flow occur? X Yes ___ No If yes, are fluids compatible, will the formations not be damaged, will any cross-flowed production be recovered, and will the allocation formula be reliable. X Yes ___ No (If No, attach explanation)

12. Are all produced fluids from all commingled zones compatible with each others X Yes ___ No

13. Will the value of production be decreased by commingling? ___Yes X No (If Yes, attach explanation)

14. If this well is on, or communitized with, state or federal lands, either the Commissioner of Public Lands or the United States Bureau of Land Management has been notified in writing of this application. X Yes ___ No

15. NMOCD Reference Cases for Rule 303(D) Exceptions: ORDER NO(S). _____

16. ATTACHMENTS
* C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
* Production curve for each zone for at least one year. (If not available, attach explanation.)
* For zones with no production history, estimated production rates and supporting data.
* Data to support allocation method or formula.
* Notification list of all offset operators.
* Notification list of working, overriding and royalty interests for uncommon interest cases.
* Any additional statements, data, or documents required to support commingling.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Jerry W. Hoover TITLE Sr. Conservation Coord DATE 6/19/97

TYPE OR PRINT NAME Jerry W. Hoover TELEPHONE NO. (915) 686-6548

ALLOCATION METHOD FOR COMMINGLING

DAKOTA, MESAVERDE, & CHACRA

Proposed Method:

(a) Dakota production projected and furnished in the table of mid-year average producing rates.

(b) Mesaverde to be completed and rate established with approximately one week of testing.

(c) Chacra to be completed and rate established with approximately one week of testing.

(d) Mesaverde and Chacra fixed percentage allocation to be determined from test results of (b) and (c) above.

(e) Mesaverde plus Chacra combined production volume to be determined by subtracting Dakota production from actual total monthly production volume.

(f) This incremental (Mesaverde plus Chacra) production would then be allocated by the fixed percentage formula derived from the Mesaverde and Chacra test results in (d) above.

(g) When the Mesaverde and Chacra test results are available, a final percentage formula will be submitted to the Aztec District Office for approval.

Supporting Data:

1. Normalized Mesaverde production from 17 offset wells.

2. Normalized Chacra production from 13 offset wells.

Discussion:

The IP's for the 17 offset Mesaverde completions are shown on the normalized plots to have averaged only 130 mcfpd while the IP's for the 13 offset Chacra completions averaged only 172 mcfpd. Therefore, the initial rates for their completions in the Jicarilla K #10E well are expected to be similarly marginal. The two normalized plots for these zones illustrate that they have similar production decline profiles. Both begin with a 60 % decline during the first year of production, change hyperbolically during the second year, and reach a steady decline of only 3.5 % by the third year.

Based on these two history matching models constructed from offset wells, it is assumed that as soon as a good initial rate can be obtained from both the Mesaverde and Chacra completions that it will be valid to set a fixed percentage allocation formula for these two zones that will be maintained throughout their production history.

The monthly Dakota production is predetermined by the attached table. The incremental production remaining after this established Dakota production is subtracted from each month's actual total production can then be allocated by the fixed percentage split for the Mesaverde and Chacra. When test results are available to determine this correct percentage split they will be reported to the Aztec District Office for approval.

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

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

Form C-102
Revised February 10, 1994
Instructions on back
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
30-039-23393 ? 25513	71599	Basin Dakota

⁴ Property Code	⁵ Property Name	⁶ Well Number
013592	Jicarilla K	10E

⁷ OGRID No.	⁸ Operator Name	⁹ Elevation
014591	Merit Energy Company	6930'

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	1	25N	5W		1370	South	1440	West	Rio Arriba

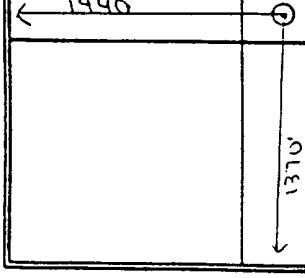
¹¹ Bottom Hole Location If Different From Surface

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	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
319.69	N		

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



¹⁷ OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

Signature
Sheryl J. Carruth
Printed Name
Regulatory Manager
Title
6-29-94
Date

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 belief.

Date of Survey

Signature and Seal of Professional Surveyer:

Certificate Number

JICARILLA K 10E DAKOTA PRODUCTION

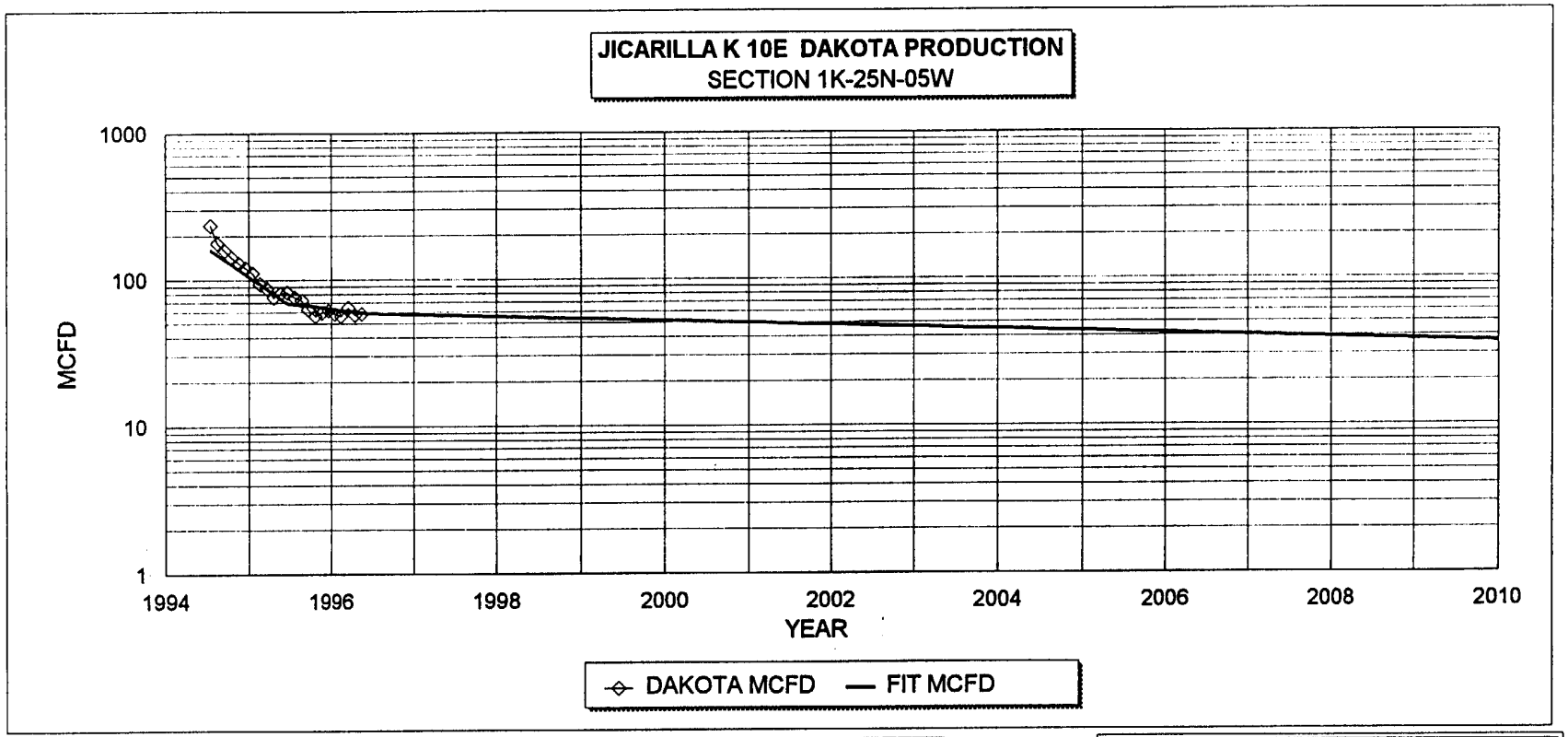
Unit K, Sec. 1, T-25N, R-5W

ANNUAL MID-YEAR DAKOTA PRODUCTION RATES TO ABANDONMENT

@ 3.5 % Annual Decline

YEAR	Mid-Year Avg. MCFGPD	Mid-Year Avg. BOPD
1996	58	0.24
1997	56	0.23
1998	54	0.22
1999	52	0.21
2000	50	0.21
2001	49	0.20
2002	47	0.19
2003	45	0.19
2004	44	0.18
2005	42	0.17
2006	41	0.17
2007	39	0.16
2008	38	0.16
2009	36	0.15
2010	35	0.14
2011	34	0.14
2012	33	0.13
2013	32	0.13
2014	31	0.13
2015	29	0.12
2016	28	0.12
2017	27	0.11
2018	26	0.11
2019	26	0.10
2020	25	0.10
2021	24	0.10
2022	23	0.09
2023	22	0.09
2024	21	0.09
2025	21	0.08

PREPARED BY: PDB



DAKOTA HISTORICAL DATA:	1ST PROD: 7/94
OIL CUM:	0.27 MBO
GAS CUM:	66.1 MMCF
OIL YIELD:	0.0041 BBL/MCF

DAKOTA PROJECTED DATA	
9/1/96 Qi:	58 MCFD
DECLINE RATE:	3.5% (EXPONENTIAL)

*1996 AVG IS FOR 2ND HALF OF YEAR

YEAR	MID-YEAR AVG. MCFD	MID-YEAR AVG. BOPD
1996*	58	0.24
1997	56	0.23
1998	54	0.22
1999	52	0.21
2000	50	0.21

CONTINUE DECLINE UNTIL ABANDONMENT

PREPARED BY: PDB

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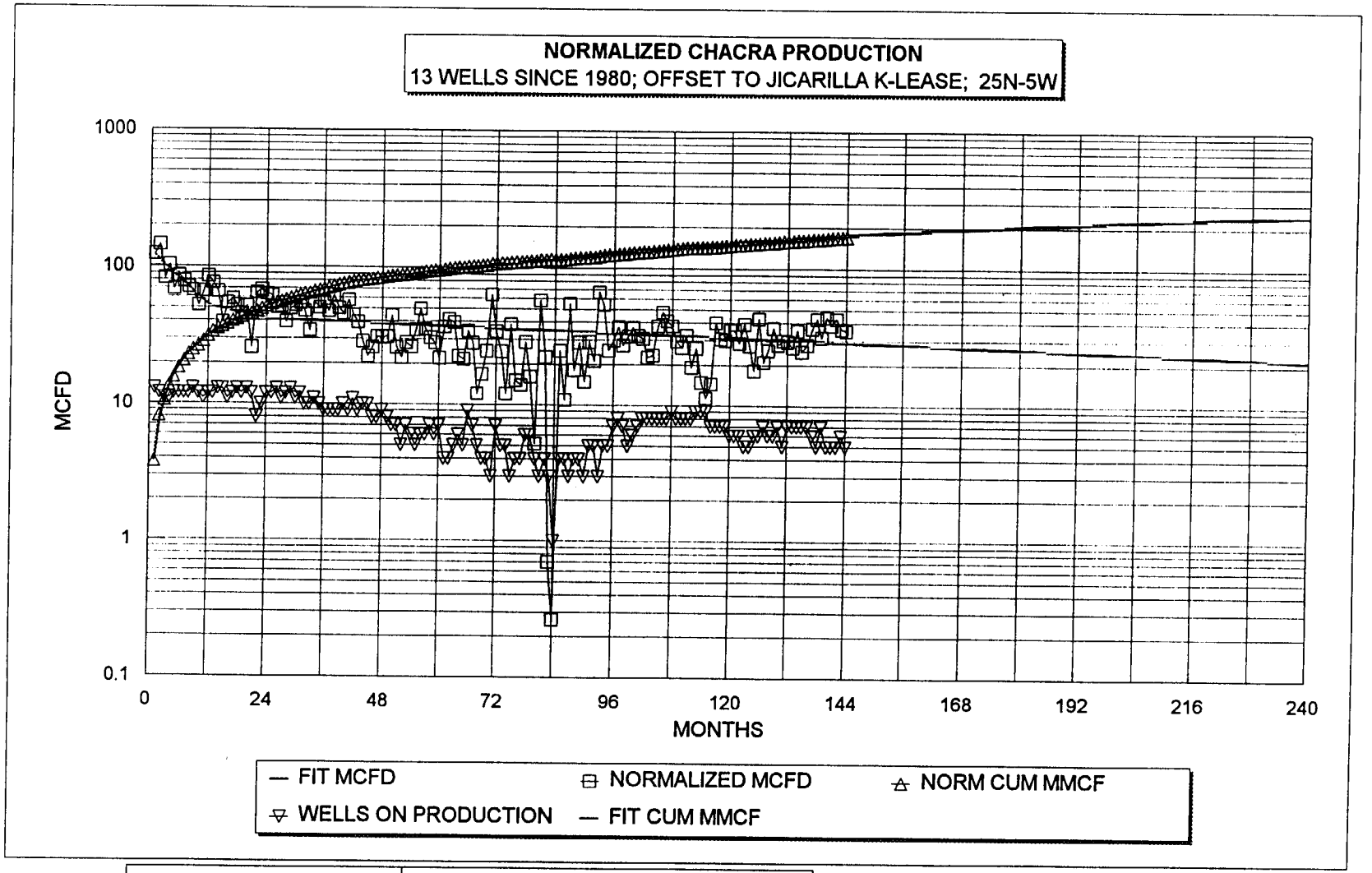

NORMALIZED AVG:	
321 MMCF EUR	130 MCFD IP
251 MMCF IN 20 YRS	60.0% DECLINE, 1ST 12 MONTHS
15 MCFD E.L.	20.0% DECLINE, NEXT 12 MONTHS
0.00 BBL/MCF OIL YIEL	3.5% FINAL DECLINE

PRODUCTION DATA THROUGH 9/95

PREPARED BY: PDB

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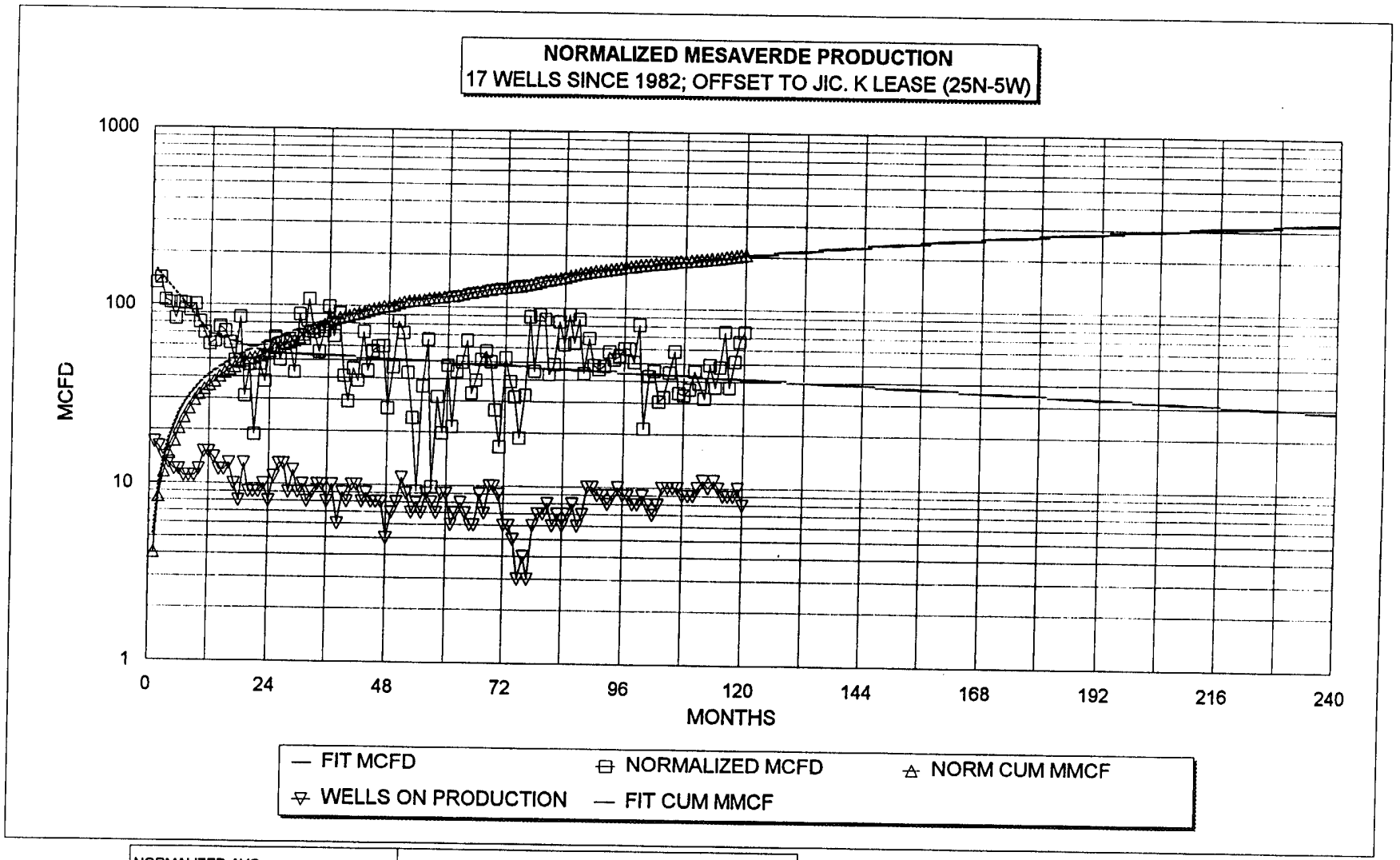

NORMALIZED AVG:	
423 MMCF EUR	172 MCFD IP
331 MMCF IN 20 YRS	60.0% DECLINE, 1ST 12 MONTHS
20 MCFD E.L.	20.0% DECLINE, NEXT 12 MONTHS
0.05 BBL/MCF OIL	3.5% FINAL DECLINE

PRODUCTION DATA THROUGH 9/95

JICARILLA "K" 10E

OFFSET OPERATORS