

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

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]

1605

[1] **TYPE OF APPLICATION - Check Those Which Apply for [A]**

[A] Location - Spacing Unit - Directional Drilling

- NSL NSP DD SD

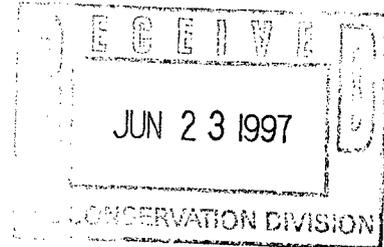
Check One Only for [B] and [C]

[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.

Jerry W. Hoover
Print or Type Name

Jerry W. Hoover
Signature

Sr. Conservation Coordinator
Title

6/19/97
Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 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

1. Type of Well

Oil Well Gas Well Other

2. Name of Operator

CONOCO INC.

3. Address and Telephone No.

10 DESTA DR. STE. 100W, MIDLAND, TX. 79705-4500 (915) 686-5424

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

850' FNL & 1880' FEL
Sec. 2, T-25N, R-5W

5. Lease Designation and Serial No.

CONT 145

6. If Indian, Allonee or Tribe Name

Jicarilla

7. If Unit or CA, Agreement Designation

8. Well Name and No.

Jicarilla K No. 11E

9. API Well No.

30-039-25395

10. Field and Pool, or Exploratory Area

Chacra/MV/Dakota

11. County or Parish, State

Rio Arriba, NM

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- Notice of Intent
 Subsequent Report
 Final Abandonment Notice

TYPE OF ACTION

- Abandonment
 Recompletion
 Plugging Back
 Casing Repair
 Altering Casing
 Other Downhole Commingling
 Change of Plans
 New Construction
 Non-Routine Fracruning
 Water Shut-Off
 Conversion to Injection
 Dispose Water

(Note: Report result of multiple completion on Wdi Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all 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

14. I hereby certify that the foregoing is true and correct

Signed Jerry W. Hoover

Jerry W. Hoover

Title Sr. Conservation Coordinator

Date 6/19/97

(This space for Federal or State office use)

Approved by [Signature]

for Chief, Lands and Mineral Resources

Date JUN 30 1997

Conditions of approval if any:

DISTRICT I
 P.O. 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

State of New Mexico
 Energy, Minerals and Natural Resources Department

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

OIL CONSERVATION DIVISION

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

APPROVAL PROCESS:
 Administrative Hearing

EXISTING WELLBORE
 YES NO

APPLICATION FOR DOWNHOLE COMMINGLING

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

Lease Jicarilla K Well No 11E Unit Ltr Sec Twp Rge B - 2 - 25N - 5W County Rio Arriba

OGRID NO. 005073 Property Code 18023 API NO. 30-039-25395 Spacing Unit Lease Types: (check 1 or more)
 Federal State (and/or) Fee

The following facts are submitted in support of downhole commingling:	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)	4059-4085	5150-5551	7380-7546
3. Type of production (Oil or Gas)	Gas	Gas	Gas
4. Method of Production (Flowing or Artificial Lift)	Flow	Flow	Flow
5. Bottomhole Pressure Oil Zones - Artificial Lift: Gas & Oil - Flowing: All Gas Zones: Estimated Current Measured Current Estimated Or Measured Original	a (Current) 867 psia	a. 753 psia	a. 817 psia
	b(Original) 964 psia	b. 1319 psia	b. 2764 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	producing
Production Marginal? (yes or no)	Yes	Yes	Yes
• If Shut-in give date and oil/gas/water rates of last production <small>Note For new zones with no production history applicant should be required to attach production estimates and supporting data</small> • If Producing, date and oil/gas/water rates of recent test (within 60 days)	Date Rates Incremental Production by Subtraction -- See attached data	Date Rates Incremental Production by Subtraction -- See attached data	Date Rates Mid-Year Average Producing Rates -- See Attached Table
	Date Rates	Date Rates	Date Rates
8. Fixed Percentage Allocation Formula - % for 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? 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? Yes No
11. Will cross-flow occur? 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. Yes No (If No, attach explanation)
12. Are all produced fluids from all commingled zones compatible with each others Yes No
13. Will the value of production be decreased by commingling? Yes 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. 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 #11E 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 1988, Hobbs, NM 88241-1988
 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 APT. Number 30-039-25395		2 Pool Code 71599		3 Pool Name Basin Dakota	
4 Property Code 013592		5 Property Name Jicarilla K			6 Well Number 11E
7 OGRID No. 014591		8 Operator Name Merit Energy Company			9 Elevation 6808'

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
B	2	25N	5W		850	North	1800	East	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 318.80	13 Joint or Infill N	14 Consolidation Code	15 Order No.
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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>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</i> Signature <u>Sheryl J. Carruth</u> Printed Name Regulatory Manager Title 6-29-94 Date
	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>			
	Date of Survey			
	Signature and Seal of Professional Surveyor:			

JICARILLA K 11E DAKOTA PRODUCTION

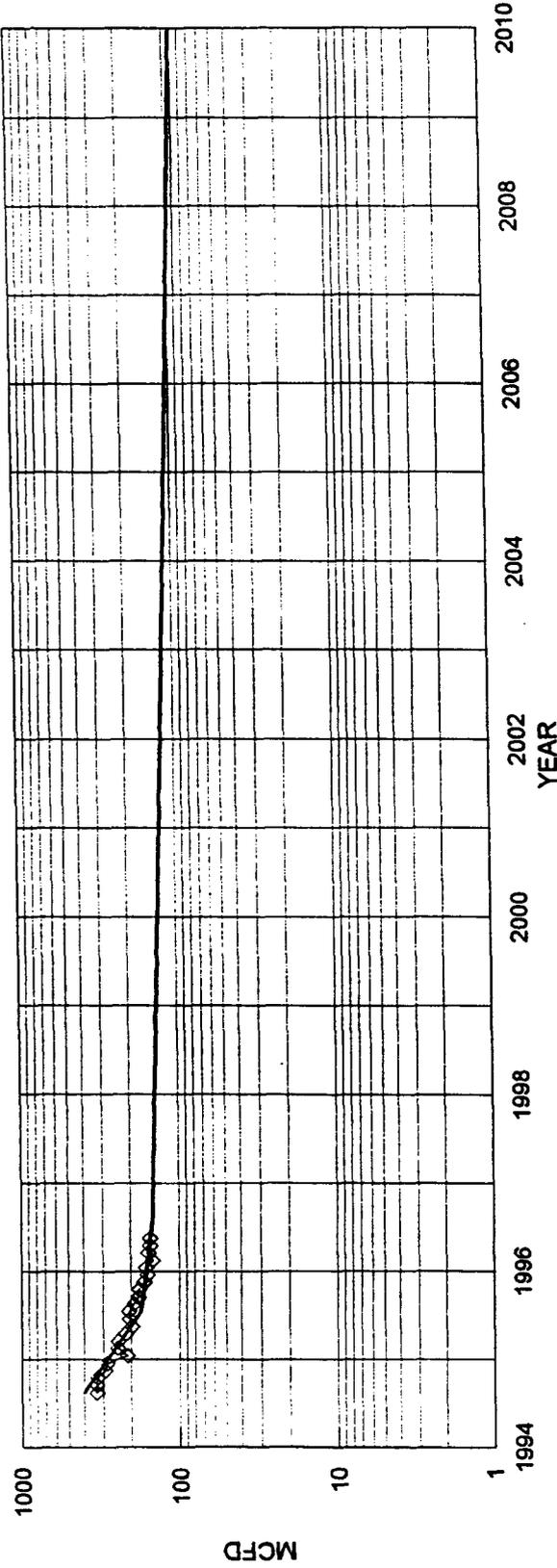
Unit B, Sec. 2, T-25N, R-5W

ANNUAL MID-YEAR DAKOTA PRODUCTION RATES TO ABANDONMENT

@ 3.5 % Annual Decline

YEAR	Mid-Year Avg. MCFGPD	Mid-Year Avg. BOPD
1996	145	0.65
1997	140	0.63
1998	135	0.61
1999	130	0.59
2000	126	0.57
2001	121	0.55
2002	117	0.53
2003	113	0.51
2004	109	0.49
2005	105	0.47
2006	102	0.46
2007	98	0.44
2008	95	0.43
2009	91	0.41
2010	88	0.40
2011	85	0.38
2012	82	0.37
2013	79	0.36
2014	76	0.34
2015	74	0.33
2016	71	0.32
2017	69	0.31
2018	66	0.30
2019	64	0.29
2020	62	0.28
2021	60	0.27
2022	57	0.26
2023	55	0.25
2024	53	0.24
2025	52	0.23
2026	50	0.22
2027	48	0.22
2028	46	0.21
2029	45	0.20
2030	43	0.19
2031	42	0.19
2032	40	0.18
2033	39	0.17
2034	37	0.17
2035	36	0.16
2036	35	0.16
2037	34	0.15
2038	32	0.15
2039	31	0.14
2040	30	0.14

**JICARILLA K 11E DAKOTA PRODUCTION
SECTION 2B-25N-05W**



◇ DAKOTA MCFD — FIT MCFD

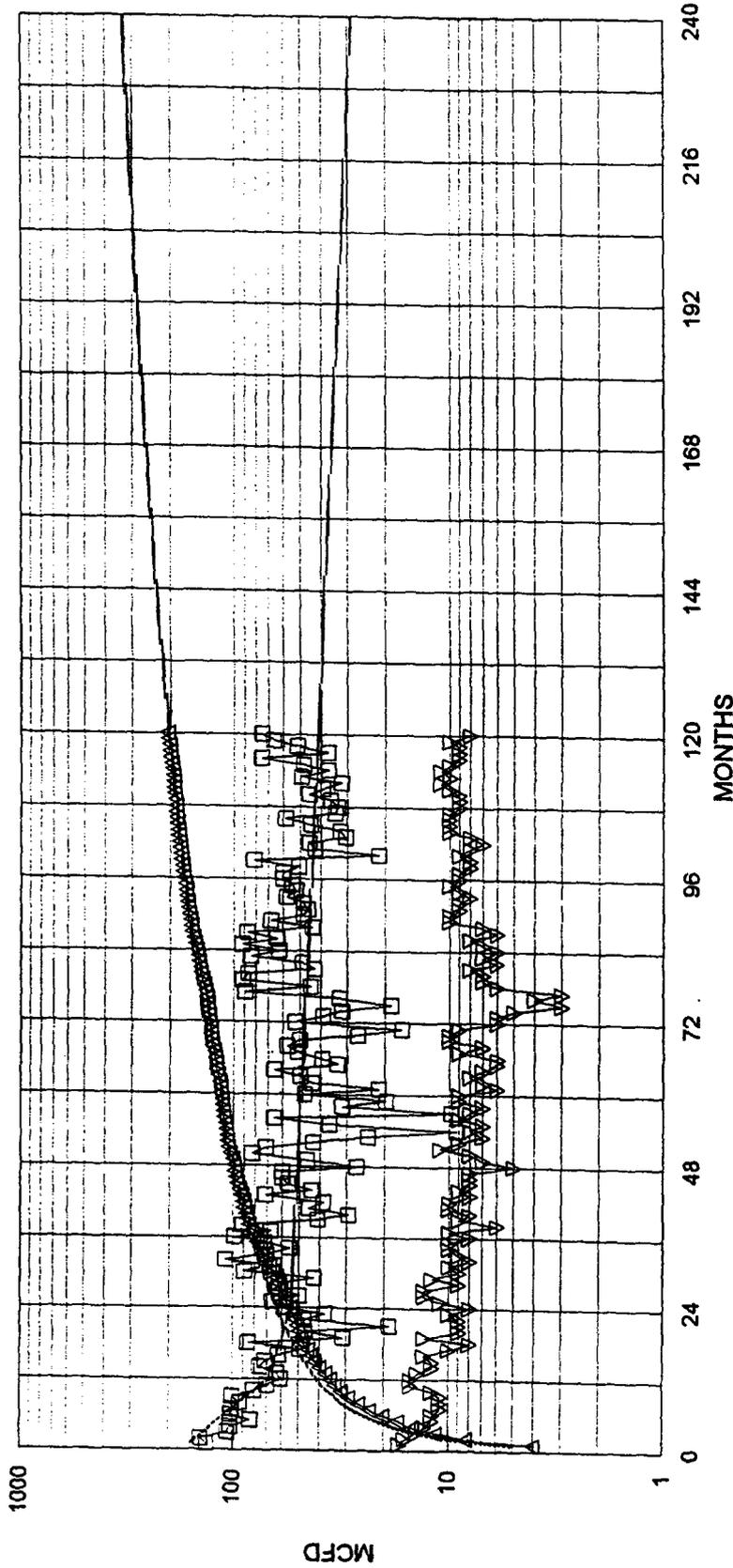
DAKOTA HISTORICAL DATA:	1ST PROD: 7/94	DAKOTA PROJECTED DATA
OIL CUM: 0.64 MBO	8/1/96 QI: 146 MCFD	
GAS CUM: 143.4 MMCF	DECLINE RATE: 3.6% (EXPONENTIAL)	
OIL YIELD: 0.0046 BBL/MCF		

*1996 AVG IS FOR 2ND HALF OF YEAR

YEAR	MID-YEAR AVG. MCFD	MID-YEAR AVG. BOPD
1996*	146	0.66
1997	140	0.63
1998	136	0.60
1999	130	0.58
2000	126	0.56

CONTINUE DECLINE UNTIL ABANDONMENT

NORMALIZED MESAVERDE PRODUCTION
17 WELLS SINCE 1982; OFFSET TO JIC. K LEASE (25N-5W)

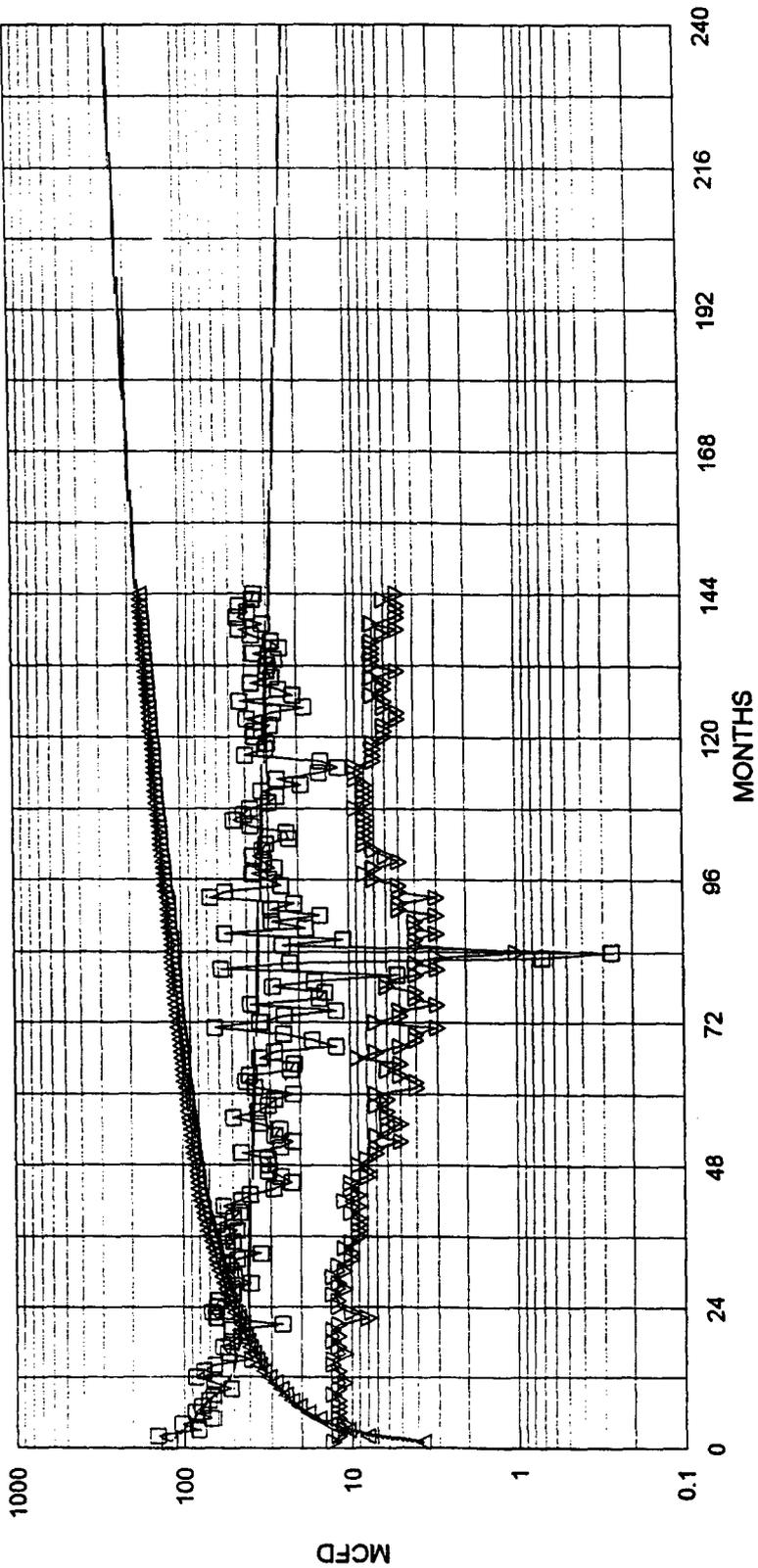


— FIT MCFD ◻ NORMALIZED MCFD ▲ NORM CUM MMCF
 ▣ WELLS ON PRODUCTION - - FIT CUM MMCF

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

NORMALIZED CHACRA PRODUCTION
13 WELLS SINCE 1980; OFFSET TO JICARILLA K-LEASE; 25N-5W



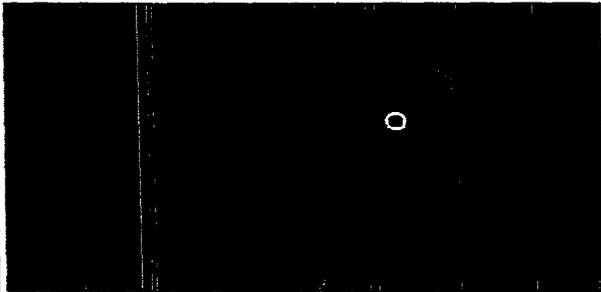
— FIT MCFD ◻ WELLS ON PRODUCTION ◉ NORMALIZED MCFD ◈ NORM CUM MMCF
 - - - FIT CUM MMCF

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 YIELD	3.5% FINAL DECLINE

PRODUCTION DATA THROUGH 9/85

JICARILLA "K" 11E

OFFSET OPERATORS

<p>34</p> <p>Burlington Resources</p> <p>T-26N, R-5W</p>	<p>35</p> <p>Burlington Resources</p>	<p>36</p> <p>Burlington Resources</p>
<p>3</p> <p>Conoco</p>	 <p>Conoco</p>	<p>1</p> <p>Conoco</p>