

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**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 <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other	5. Lease Designation and Serial No. <b>CONT 145</b>
2. Name of Operator <b>CONOCO INC.</b>	6. If Indian, Allottee or Tribe Name <b>Jicarilla</b>
3. Address and Telephone No. <b>10 DESTA DR. STE. 100W, MIDLAND, TX. 79705-4500 (915) 686-5424</b>	7. If Unit or CA, Agreement Designation
4. Location of Well (Footage, Sec., T. R. M. or Survey Description) <b>850' FNL &amp; 1880' FEL B Sec. 2, T-25N, R-5W #</b>	8. Well Name and No. <b>Jicarilla K No. 11E</b>
	9. API Well No. <b>30-039-25395</b>
	10. Field and Pool, or Exploratory Area <b>Chacra/MV/Dakota</b>
	11. County or Parish, State <b>Rio Arriba, NM</b>

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

TYPE OF SUBMISSION	TYPE OF ACTION	
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment	<input type="checkbox"/> Change of Plans
<input type="checkbox"/> Subsequent Repon	<input type="checkbox"/> Recompletion	<input type="checkbox"/> New Construction
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back	<input type="checkbox"/> Non-Routine Fracrunng
	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Conversion to Injection
	<input checked="" type="checkbox"/> Other <b>Downhole Commingling</b>	<input type="checkbox"/> Dispose Water

(Note: Repon result of multiple completion on Wdl 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 <u>Jerry W. Hoover</u>	Title <u>Sr. Conservation Coordinator</u>	Date <u>6/19/97</u>
(This space for Federal or State official use)	for <u>Chief, Lands and Mineral Resources</u>	Date <u>JUN 30 1997</u>
Approved by <u>[Signature]</u>	Title	Date
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 jurisdiction.

\*See Instruction on Reverse Side

## DISTRICT I

P.O. Box 1980, Hobbs, NM 88241-1980

## DISTRICT II

811 South First St. Artesia, NM 88210-2825

## DISTRICT III

1000 Rio Brazos Rd. Aztec, NM 87410-1693

RECEIVED  
JUL - 1 1997State of New Mexico  
Energy, Minerals and Natural Resources Department

## OIL CONSERVATION DIVISION

OIL CON. DIV.

2040 S. Pacheco  
Santa Fe, New Mexico 87505-6429Form C-107-A  
New 3-12-96

## APPROVAL PROCESS:

☒ Administrative ☐ Hearing

## EXISTING WELLBORE

☒ YES ☐ NO

Conoco Inc.

10 Desta Dr. Ste 100W, Midland, Tx. 79705-4500

Operator

Address

Jicarilla K

11E

B - 2 - 25N - 5W

Rio Arriba

Lease

Well No

Unit Ltr Sec Twp Rge

County

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	a. (Current)	a.	a.
Oil Zones - Artificial Lift: Estimated Current	867 psia	753 psia	817 psia
Gas & Oil - Flowing: Measured Current	b. (Original)	b.	b.
All Gas Zones: Estimated Or Measured Original	964 psia	1319 psia	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	Date Rates Incremental Production by Subtraction -- See attached data	Date Rates Incremental Production by Subtraction -- See attached data	Date Rates
Note For new zones with no production history applicant shall be required to attach production estimates and supporting data			
• 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 - % 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?

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 ☐ No11. 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 ☐ No13. 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:

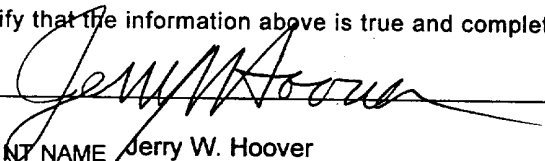
ORDER NO(S):

## 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



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 1900, Hobbs, NM 88241-1900  
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

API Number 30-039-25395		Pool Code 71599	Pool Name Basin Dakota
Property Code 013592	Property Name Jicarilla K		Well Number 11E
OGRID No. 014591	Operator Name Merit Energy Company		Elevation 6808'

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Ida	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 Ida	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 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 Surveyor:

# JICARILLA K 11E DAKOTA PRODUCTION

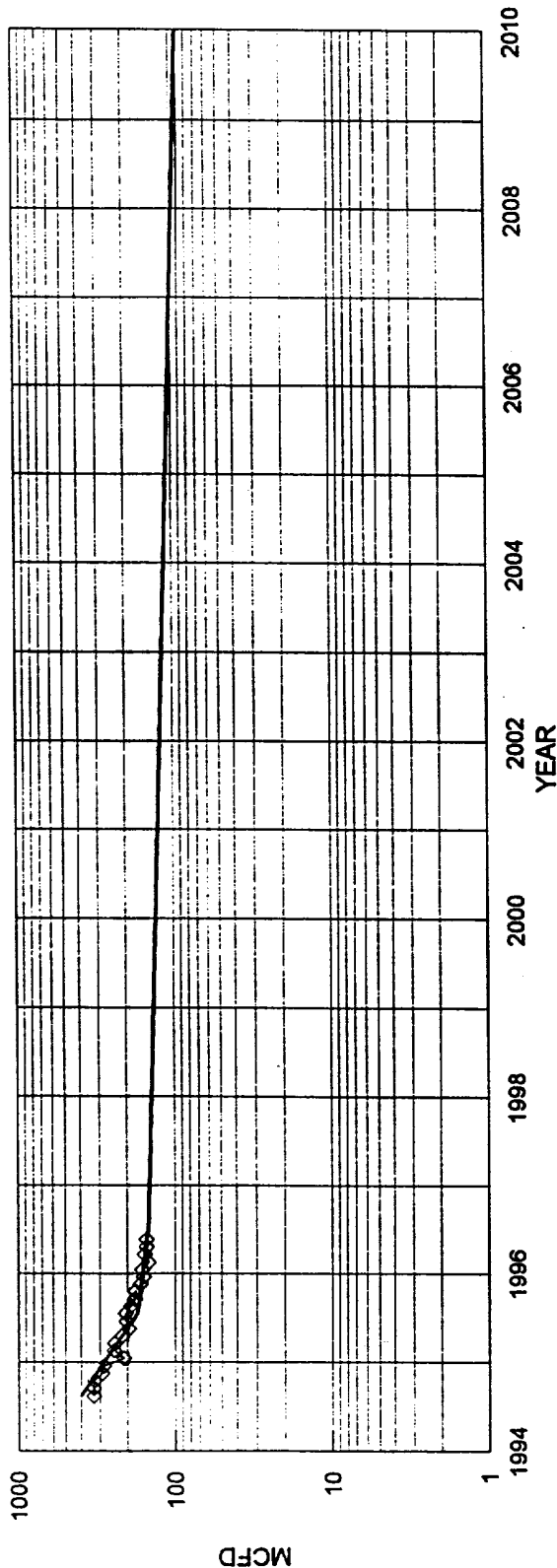
Unit B, Sec. 2, T-25N, R-5W

## 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

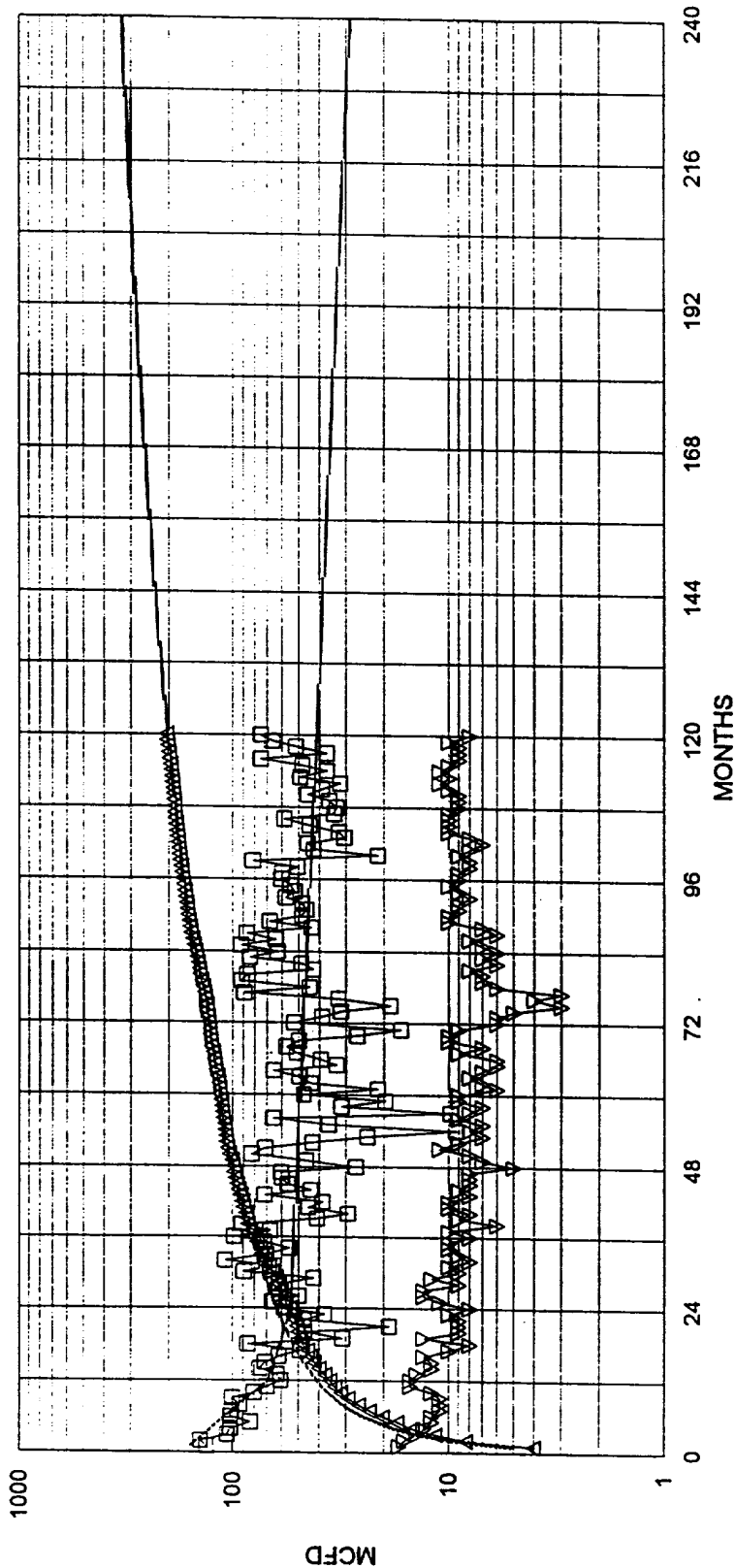
<b>DAKOTA HISTORICAL DATA:</b>		<b>DAKOTA PROJECTED DATA</b>	
OIL CUM:	0.64 MBO	9/1/96 Qi:	146 MCFD
GAS CUM:	143.4 MMCF	DECLINE RATE:	3.5% (EXPONENTIAL)
OIL YIELD:	0.0046 BBL/MCF		

\*1998 AVG IS FOR 2ND HALF OF YEAR

YEAR	MID-YEAR AVG. MCFD	MID-YEAR AVG. BOPD
1996*	146	0.65
1997	140	0.63
1998	135	0.60
1999	130	0.58
2000	125	0.56

CONTINUE DECLINE UNTIL ABANDONMENT

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



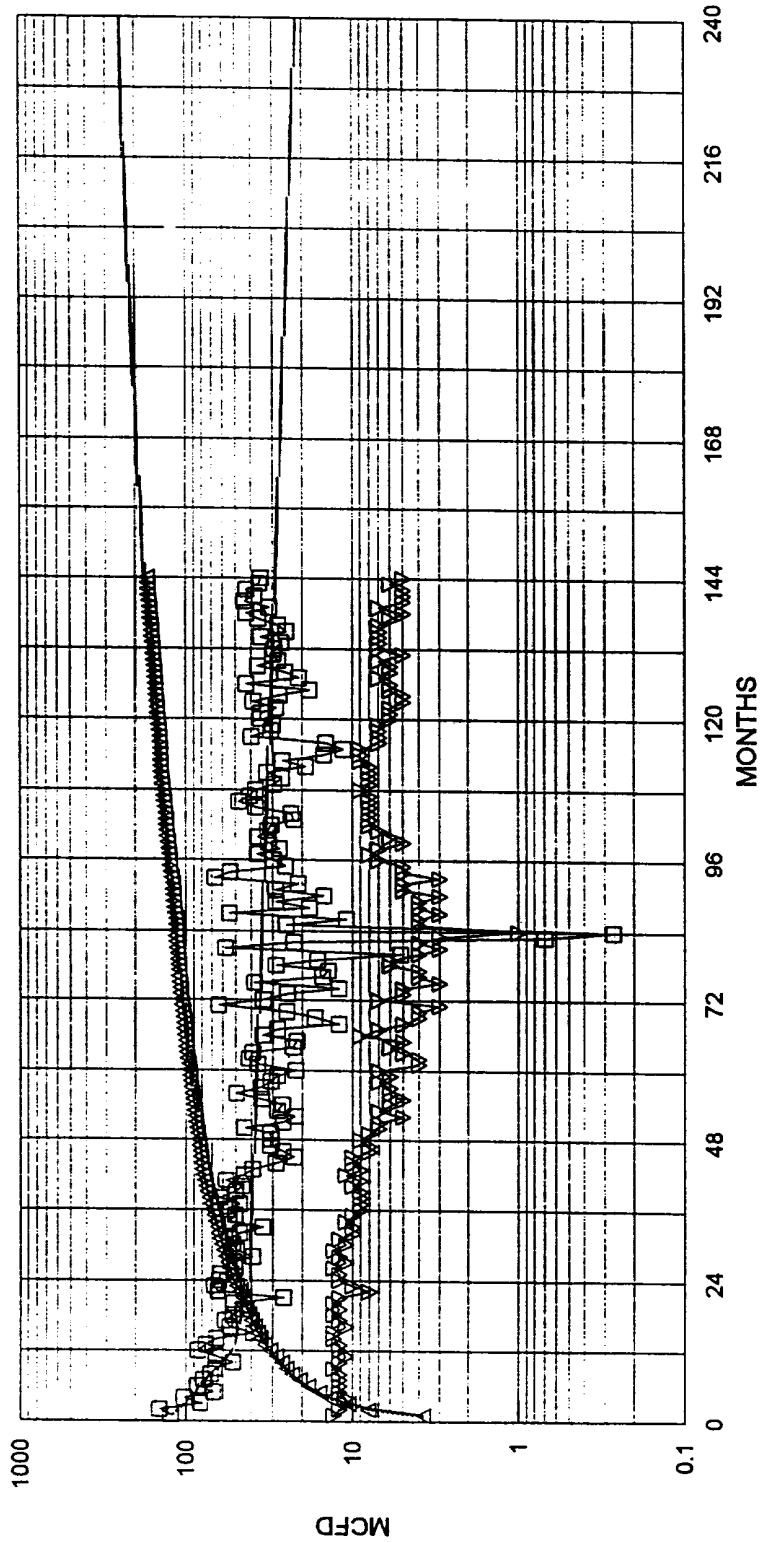
**NORMALIZED AVG:**

423 MMCF EUR  
331 MMCF IN 20 YRS  
20' MCFD E.L.  
0.05 BBL/MCF OIL

172 MCFD IP  
60.0% DECLINE, 1ST 12 MONTHS  
20.0% DECLINE, NEXT 12 MONTHS  
3.5% FINAL DECLINE

PRODUCTION DATA THROUGH 9/95

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

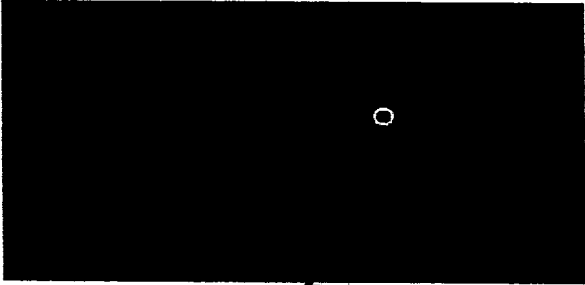


— FIT MCFD    ▨ NORMALIZED MCFD    ▴ NORM CUM MMCF  
▴ WELLS ON PRODUCTION    — FIT CUM MMCF

NORMALIZED AVG:		PRODUCTION DATA THROUGH 9/95	
321 MMCF EUR	130 MCFD IP	60.0% DECLINE, 1ST 12 MONTHS	
251 MMCF IN 20 YRS		20.0% DECLINE, NEXT 12 MONTHS	
15 MCFD E.L.		3.5% FINAL DECLINE	
0.00 BBL/MCF OIL YIELD			

# JICARILLA "K" 11E

## OFFSET OPERATORS

<p>34</p> <p><i>Burlington Resources</i></p> <p>T-26N, R-5W</p>	<p>35</p> <p><i>Burlington Resources</i></p>	<p>36</p> <p><i>Burlington Resources</i></p>
<p>T-25N, R-5W</p> <p>3</p> <p>Conoco</p>	 <p>Conoco</p>	<p>1</p> <p>Conoco</p>