

DATE IN 6/20/97	SUSPENSE 7/10/97	ENGINEER DC	LOGGED BY MW	TYPE DHC
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ABOVE THIS LINE FOR DIVISION USE ONLY

**NEW MEXICO OIL CONSERVATION DIVISION**  
- Engineering Bureau -

**ADMINISTRATIVE APPLICATION COVERSHEET** JUN 20 1997

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]

**[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 6-13-97  
 Title Date

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

**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**

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

Lease Jicarilla K Well No 11 Unit Ltr Sec Twp Rge E-2-T25N-R5W County Rio Arriba

Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 005073 Property Code 18023 API NO. 30039-20284 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 Mesa Verde 72319	Basin Dakota 71599
2. TOP and Bottom of Pay Section (Perforations)	Proposed 3873-3899'	Proposed 5008-5299' OA	Current 7186-7408'-OA
3. Type of production (Oil or Gas)	Gas	Gas	Gas
4. Method of Production (Flowing or Artificial Lift)	To Flow	To Flow	Flowing
5. Bottom hole Pressure	a (Current)	a.	a.
Oil Zones - Artificial Lift: Estimated Current	857 PSIA	870 PSIA	695 PSIA
Gas & Oil - Flowing: Measured Current	b (Original)	b.	b.
All Gas Zones: Estimated Or Measured Original	960 PSIA	1123 PSIA	2273 PSIA
6. Oil Gravity (*API) or Gas BTU Content	1192-BTU (Jic. K 18,2M-25N-5W)	1265 - BTU (Jic. K-22,2M-25N-5W)	1266-BTU
7. Producing or Shut-In?	To be completed	To Be Completed	Producing
Production Marginal? (yes or no)	Expected to be	Expected To Be	Yes
• If Shut-In give date and oil/gas/water rates of last production	Date Rates	Date Rates:	Date Rates
Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data.			
• If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date Rates Split Chacra & Mesa Verde by percentages below after subtraction	Date Rates Split Chacra & Mesa Verde by percentages below after subtraction	Date Rates Mid-year average rates - see table
8. Fixed Percentage Allocation Formula -% for each zone	Oil 0 % Gas 43 %	Oil 100 % Gas 57 %	Oil % Gas %

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 6/13/97

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

**NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACERAGE DEDICATION PLAT**

All distances must be from the outer boundaries of the Section

Operator <b>SOUTHERN UNION PRODUCTION COMPANY</b>			Lease <b>JICARILLA "K"</b>		Well No. <b>11</b>
Unit Letter <b>E</b>	Section <b>2</b>	Township <b>25 NORTH</b>	Range <b>5 WEST</b>	County <b>RIO ARriba</b>	
Actual Footage Location of Well: <b>1455</b> feet from the <b>NORTH</b> line and <b>1045</b> feet from the <b>WEST</b> line					
Ground Level Elev. <b>6634.0</b>	Producing Formation <b>DAKOTA</b>		Pool <b>BASIN DAKOTA</b>		Dedicated Acreage: <b>(318.8)</b> <b>N/2 Sec. 2</b> Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty),
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?  
( ) Yes ( ) No If answer is "yes," type of consolidation \_\_\_\_\_

If answer is "no," list the owners and tract descriptions which have actually consolidated. (Use reverse side of this Form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non standard unit, eliminating such interests, has been approved by the Commission.

**CERTIFICATION**

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

ORIGINAL SIGNED BY  
**B. R. VANDERSLICE**

Name  
**Bill Vanderslice**

Position  
**Area Superintendent**

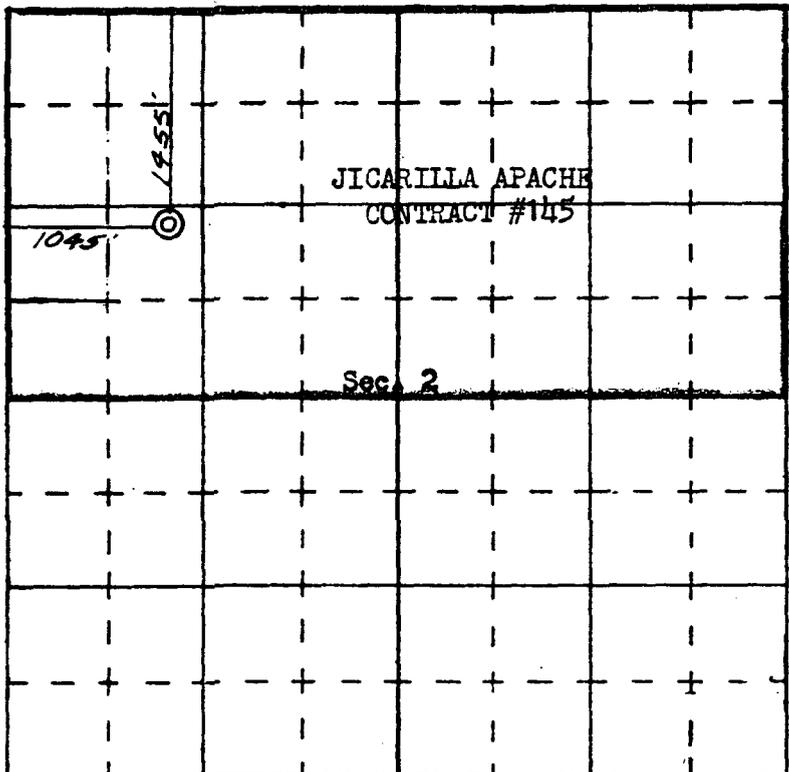
Company  
**Southern Union Production Co.**

Date  
**October 9, 1969**

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 knowledge and belief.

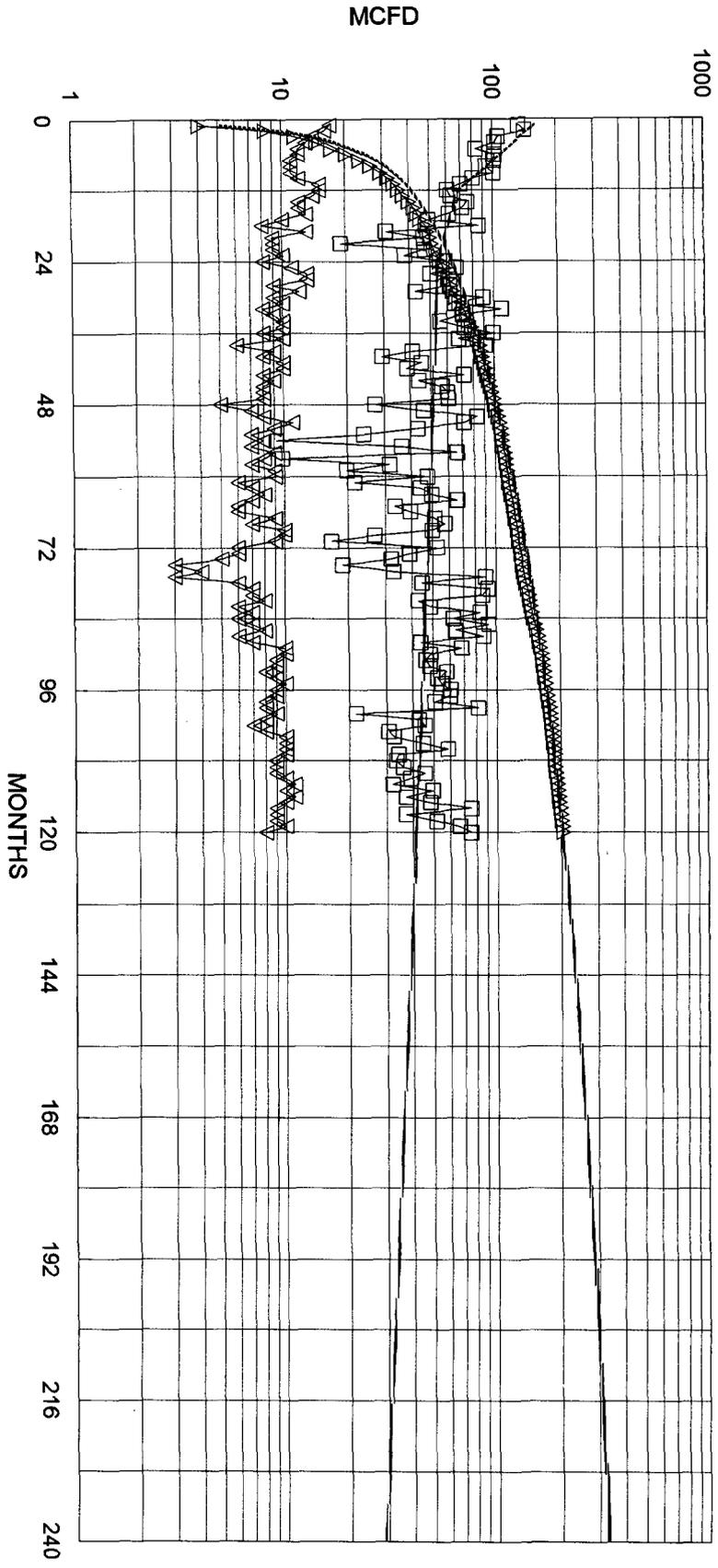
**October 7, 1969**

Date Surveyed  
*[Signature]*  
Registered Professional Engineer  
and/or Land Surveyor  
**JAMES P. LEESE**  
**1463**  
Certificate No.



SCALE—4 INCHES EQUALS 1 MILE

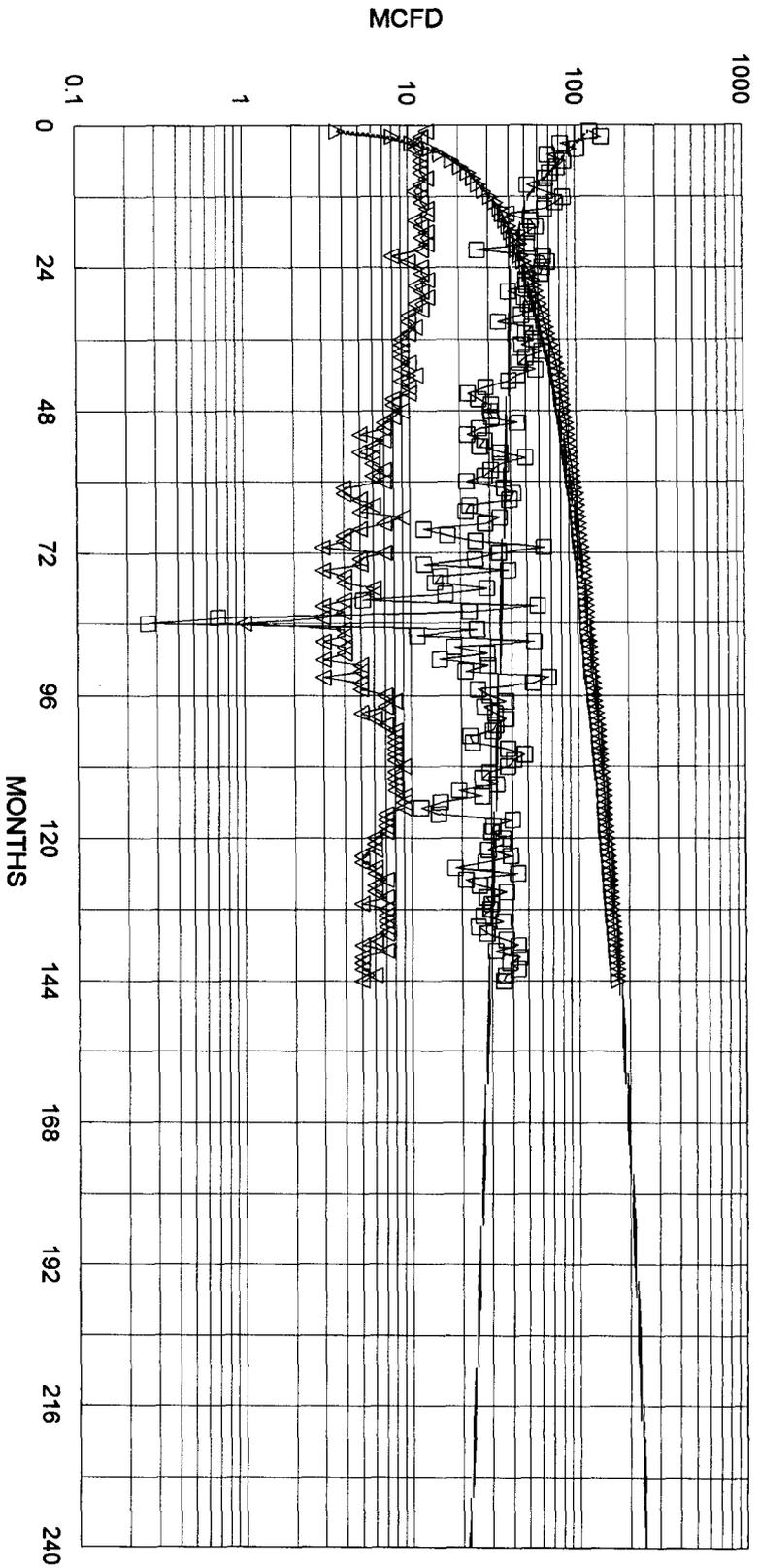
**NORMALIZED MESAVERDE PRODUCTION**  
17 WELLS SINCE 1982; OFFSET TO JIC. K LEASE (25N-5W)



— FIT MCFD      □ NORMALIZED MCFD      ▲ NORM CUM MMCF  
△ WELLS ON PRODUCTION      — FIT CUM MMCF

<b>NORMALIZED AVG:</b>	
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

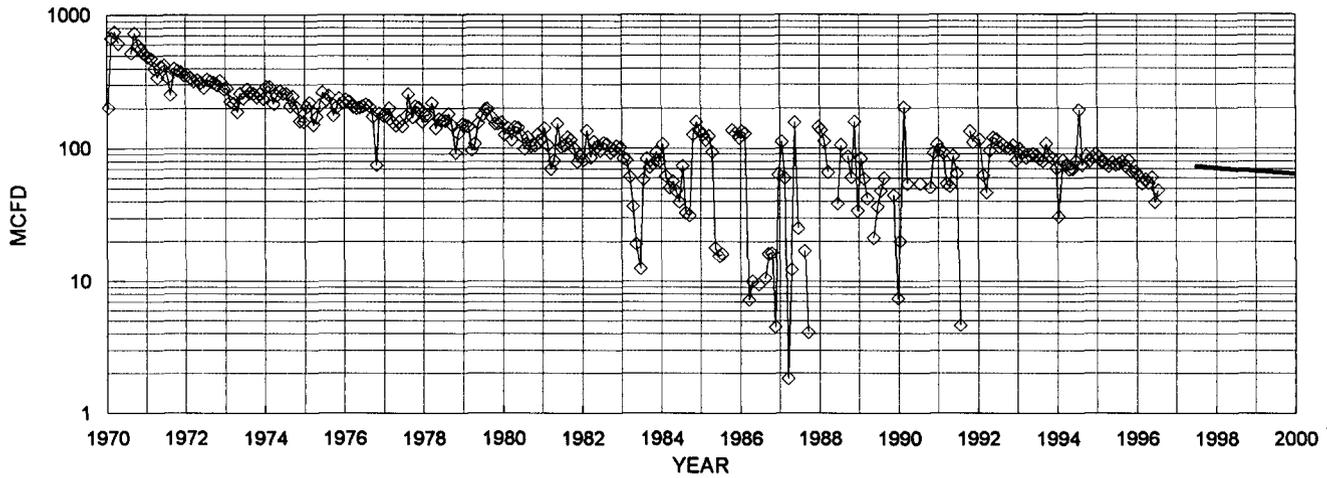
**NORMALIZED CHACRA PRODUCTION**  
 13 WELLS SINCE 1980; OFFSET TO JICARILLA K-LEASE; 25N-5W



— FIT MCFD      □ NORMALIZED MCFD      ▲ NORM CUM MMCF  
 ▽ WELLS ON PRODUCTION      — FIT CUM MMCF

<b>NORMALIZED AVG:</b>	
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

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



◇ DAKOTA MCFD    — FIT MCFD

<b>DAKOTA HISTORICAL DATA:</b>	<b>1ST PROD: 1/70</b>	<b>DAKOTA PROJECTED DATA</b>
OIL CUM:	12.89 MBO	6/1/97 QI: 73 MCFD
GAS CUM:	1353.1 MMCF	DECLINE RATE: 5.0% (EXPONENTIAL)
CUM OIL YIELD	0.0095 BBL/MCF	
OIL YIELD:	0.0023 BBL/MCF, LAST 3 YRS	
AVG. USED:	0.0059 BBL/MCF	

YEAR	MID-YEAR	
	AVG. MCFD	AVG. BOPD
1996	72	0.4
1997	69	0.4
1998	65	0.4
1999	62	0.4
2000	59	0.3
2001	56	0.3
2002	53	0.3
2003	51	0.3
2004	48	0.3
2005	46	0.3
2006	43	0.3
2007	41	0.2
2008	39	0.2
2009	37	0.2
2010	35	0.2
2011	34	0.2
2012	32	0.2
2013	30	0.2
2014	29	0.2
2015	27	0.2
2016	26	0.2
2017	25	0.1
2018	23	0.1
2019	22	0.1
2020	21	0.1
2021	20	0.1
2022	19	0.1
2023	18	0.1
2024	17	0.1
2025	16	0.1
2026	16	0.1
2027	15	0.1
2028	14	0.1
2029	13	0.1
2030	13	0.1

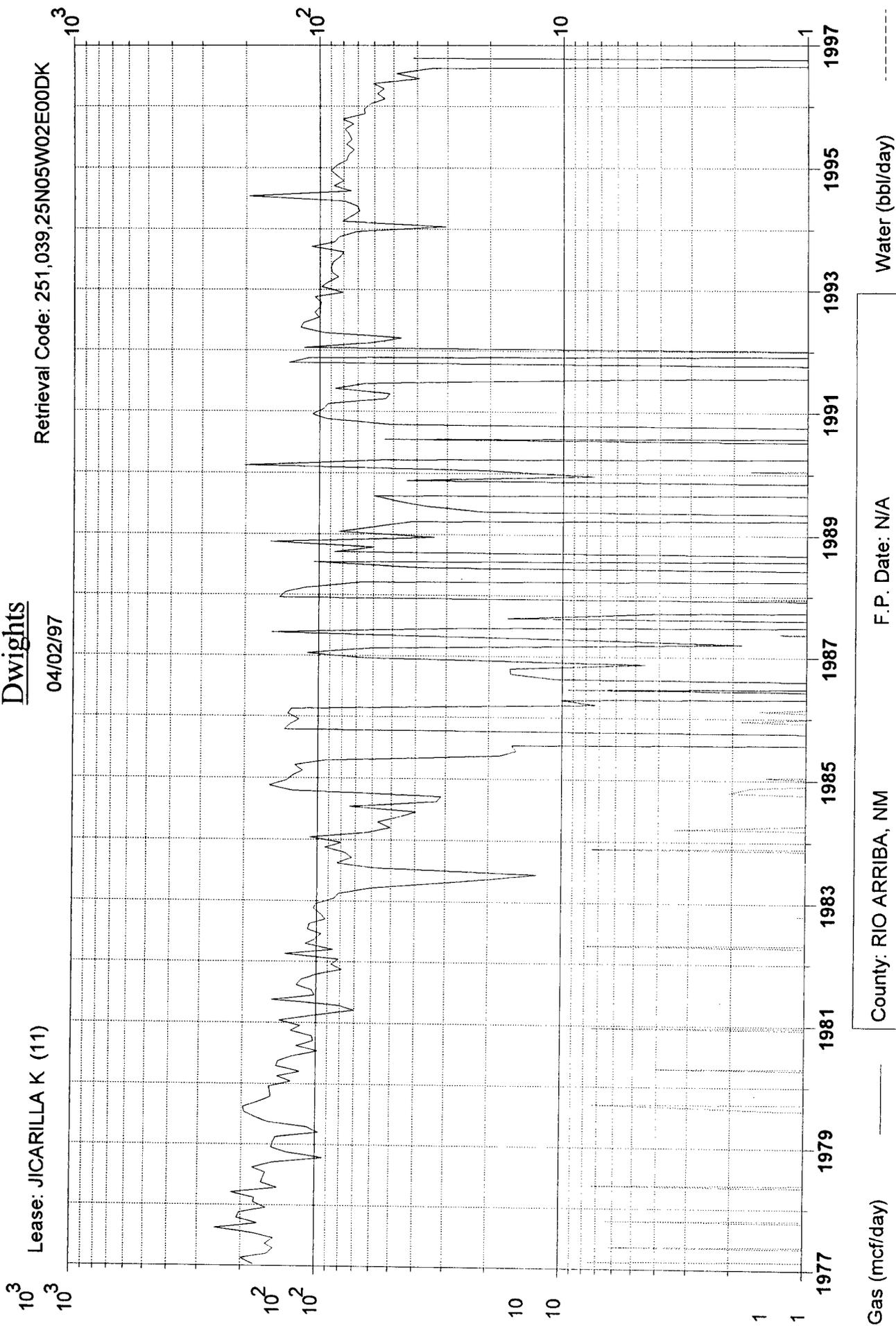
**PRODUCTION FORECAST FOR SUBTRACTION METHOD COMMINGLE ALLOCATION**

# Dwights

04/02/97

Lease: JICARILLA K (11)

Retrieval Code: 251,039,25N05W02E00DK



Gas (mcf/day)

Oil (bbl/day)

Water (bbl/day)

County: RIO ARRIBA, NM	F.P. Date: N/A
Field: BASIN (DAKOTA) DK	Oil Cum: 12.89 mmbbl
Reservoir: DAKOTA	Gas Cum: 1353 mmcf
Operator: CONOCO INC	Location: 2E 25N 5W

**JICARILLA K #11  
OFFSET OPERATORS**

<p>MARATHON OIL CO</p> <p align="center"><b>34</b></p>	<p align="center">BURLINGTON RESOURCES</p> <p align="center"><b>35</b></p> <p align="center">T26N R5W</p>	<p align="center">BURLINGTON RESOURCES          UNION TEXAS PETR.</p> <p align="center"><b>36</b></p>
<p>AMOCO PROD.</p> <p align="center"><b>3</b></p>	<p align="center">T25N R5W</p> <p align="center">K #11          O</p> <p align="center"><b>2</b></p>	<p align="center">CONOCO, INC.</p> <p align="center"><b>1</b></p>
<p>AMOCO PROD.</p> <p align="center"><b>10</b></p>	<p align="center">CONOCO, INC.          MERIT ENERGY CORP.</p> <p align="center"><b>11</b></p>	<p align="center">CONOCO, INC.</p> <p align="center"><b>12</b></p>

**Township 25N --- Range 5W**

Conoco, Inc.  
Form C-107-A, Application for Downhole Commingling  
Filing date: June 13, 1997

Offset Operators for Wells as listed below:

Jicarilla K, Well #11  
Marathon Oil Co.  
Burlington Resources  
Amoco Production Co.

Jicarilla K, Well #17  
Burlington Resources  
Amoco Production

Jicarilla K, Well #16  
Burlington Resources  
Amoco Production

Newsom, Well #17E  
Amoco Production  
~~Snyder Oil Co.~~  
Robert R. Glick

Jicarilla K, Well #15E  
Burlington Resources

Jicarilla E, Well #10  
Burlington Resources

Jicarilla E, Well #12  
Burlington Resources

Federal, Well #13E  
Burlington Resources  
Caulkins Oil Co.

AXI Apache J, Well #18A  
Amoco Production  
Elm Ridge Resources

Federal, Well #11E  
Caulkins Oil Co.  
Amoco Production  
Burlington Resources

Reames COM, Well #2  
Caulkins Oil Co.  
Burlington Resources

Conoco, Inc.  
Form C-107-A, Application for Downhole Commingling  
Filing Date: June 13, 1997  
Address List for Offset Operators

RE: Jicarilla K, Well #11, Jacarilla K, Well #17, Jicarilla K, Well #16, Newsom, Well #17E, Jicañilla K, Well #15E, Jicarilla E, Well #10, Jicarilla E, Well #12, Federal, Well 313E, AXI Apache J, Well #18A, Federal, Well #11E, Reames COM, Well #2

Marathon Oil Co., Box 552, Midland, Texas 79702

Burlington Resources, c/o Meridian Oil, Inc., Box 51810, Midland, Texas 79710-1810

Amoco Production Co., Exploration & Production Sector, Box 4891, Houston, Texas 77210

Caulkins Oil Co., Box 340, Bloomfield, NM 87413

Elm Ridge Resources, Box 3946, Farmington, NM 87499

Snyder Oil Co., no longer an operator in the New Mexico Aztec District as per District Office.

Robert R. Click, no longer an operator in the New Mexico Aztec District as per District Office.

P 497 368 595

US Postal Service  
**Receipt for Certified Mail**

Amoco Production Co.  
Expl. & Prod. Sector  
Box 4891  
Houston, Texas 77210

Postage	\$ 1.93
Certified Fee	1.35
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	1.10
Return Receipt Showing to Whom, Date, & Addressee's Address	
<b>TOTAL Postage &amp; Fees</b>	<b>\$ 4.38</b>
Postmark or Date	6-18-97

PS Form 3800, April 1995

P 497 368 594

US Postal Service  
**Receipt for Certified Mail**

Burlington Resources  
c/o Meridian Oil, Inc.  
Box 51810  
Midland, Texas 79710-1810

Postage	\$ 2.90
Certified Fee	1.35
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	1.10
Return Receipt Showing to Whom, Date, & Addressee's Address	
<b>TOTAL Postage &amp; Fees</b>	<b>\$ 5.35</b>
Postmark or Date	6-18-97

PS Form 3800, April 1995

P 497 368 593

US Postal Service  
**Receipt for Certified Mail**

Marathon Oil Co.  
Box 552  
Midland, Texas 79702

Postage	\$ .78
Certified Fee	1.35
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	1.10
Return Receipt Showing to Whom, Date, & Addressee's Address	
<b>TOTAL Postage &amp; Fees</b>	<b>\$ 3.23</b>
Postmark or Date	6-18-97

PS Form 3800, April 1995

P 497 368 597

US Postal Service  
**Receipt for Certified Mail**

Elm Ridge Resources  
Box 3946  
Farmington, NM 87499

Postage	\$ .78
Certified Fee	1.35
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	1.10
Return Receipt Showing to Whom, Date, & Addressee's Address	
<b>TOTAL Postage &amp; Fees</b>	<b>\$ 3.23</b>
Postmark or Date	6-18-97

PS Form 3800, April 1995

P 497 368 596

US Postal Service  
**Receipt for Certified Mail**

Caulkins Oil Co.  
Box 340  
Bloomfield, NM 87413

Postage	\$ 1.24
Certified Fee	1.35
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	1.10
Return Receipt Showing to Whom, Date, & Addressee's Address	
<b>TOTAL Postage &amp; Fees</b>	<b>\$ 3.69</b>
Postmark or Date	6-18-97

PS Form 3800, April 1995

Conoco, Inc.  
Form C-107-A, Application for Downhole Commingling  
Filing date: June 13, 1997

**Offset Operators for Wells as listed below:**

Jicarilla K, Well #1  
Marathon Oil Co.  
Burlington Resources  
Amoco Production Co.

Jicarilla K, Well #7  
Burlinton Resources  
Amoco Production

Jicarilla K, Well #6  
Burlington Resources  
Amoco Production

Newsom, Well #7E  
Amoco Production  
Snyder Oil Co. *(no longer an operator in Aztec District)*  
Robert R. Click *(no longer an operator in Aztec District)*

Jicarilla K, Well #5E  
Burlington Resources

Jicarilla E, Well #10  
Burlington Resources

Jicarilla E, Well #12  
Burlington Resources

Federal, Well #13E  
Burlington Resources  
Caulkins Oil Co.

AXI Apache J, Well #18A  
Amoco Production  
Elm Ridge Resources

Federal, Well #11E  
Caulkins Oil Co.  
Amoco Production  
Burlington Resources

Reames COM, Well #2  
Caulkins Oil Co.  
Burlington Resources