



COMMERCIAL RESOURCES  
(505)-827-5724

SURFACE RESOURCES  
(505)-827-5793

MINERAL RESOURCES  
(505)-827-5744

ROYALTY  
(505)-827-5772

PUBLIC AFFAIRS  
(505)-827-5765

ADMINISTRATIVE MGMT.  
(505)-827-5700

LEGAL  
(505)-827-5713

PLANNING  
(505)-827-5752

State of New Mexico  
Commissioner of Public Lands

Ray Powell, M.S., D.V.M.  
310 Old Santa Fe Trail, P. O. Box 1148  
Santa Fe, New Mexico 87504-1148  
Phone (505)-827-5760, Fax (505)-827-5766

October 5, 1999

Conoco, Inc.  
P.O. Box 2197  
DU 3066  
Houston, Texas 77252-2197

Attn: Ms. Deborah Moore

Re: Downhole Commingling Application  
San Juan 28-7 Unit Well No. 155  
Unit Letter K, Section 22-27N-07W  
Otera Chacra and Blanco Pictured Cliffs South Pools  
Rio Arriba County, New Mexico

Dear Ms. Moore:

Your application to downhole commingle the Otera Chacra and Blanco Pictured Cliffs South production from within the wellbore of the above-captioned well was received on September 15, 1999.

Since it appears that all the New Mexico Oil Conservation Division's rules and regulations have been complied with, and there will be no loss of revenue to the State of New Mexico as a result of your proposed operation, your request for downhole commingling is hereby approved. Any deviation from the substance of your request will be sufficient grounds for rescinding our approval. Our approval is subject to like approval by the New Mexico Oil Conservation Division and the Bureau of Land Management.

Please submit your \$30.00 dollar filing fee.

Also, please submit the appropriate approvals from the New Mexico Oil Conservation Division and the Bureau of Land Management.

If you have any questions or if we may be of further help, please contact Pete Martinez at (505) 827-5791.

Very truly yours,

RAY POWELL, M.S., D.V.M.  
COMMISSIONER OF PUBLIC LANDS

BY:  
JAMI BAILEY, Director  
Oil, Gas and Minerals Division  
(505) 827-5744

RP/JB/cpm  
Enclosure  
xc: Reader File

OCD--Attention: David Catanach, Ben Stone  
"WE WORK FOR EDUCATION"

BLM

ABOVE THIS LINE FOR DIVISION USE ONLY

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

2513

**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]

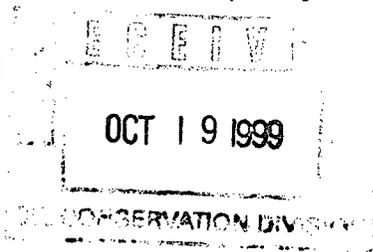
[1] **TYPE OF APPLICATION - Check Those Which Apply for [A]**

- [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.

Deborah Moore (281) 293-1005 Deborah Moore Regulatory Analyst 9/18/99  
 Print or Type Name Signature Title Date

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

DISTRICT II  
811 South First St., Artesia, NM 88210

DISTRICT III  
1000 Rio Brazos Rd, Aztec, NM 87410

DISTRICT IV  
2040 S. Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

APPLICATION FOR DOWNHOLE COMMINGLING

Form C-107-A  
Revised March 17, 1999

APPROVAL PROCESS:  
 Administrative  
 Hearing

EXISTING WELLBORE  
 YES  NO

Conoco Inc. P.O. Box 2197 DU 3066 Houston, TX 77252-2197

Operator **San Juan 28-7** #155 Address **K. Sec. 22, T-27N, R-7W** Rio Arriba

Lease Well No. Unit Ltr. - Sec - Twp - Rge Spacing Unit Lease Types: (check 1 or more) County

OGRID NO. 005073 Property Code 016608 API NO. 30-039-20430 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	Blanco P.C. South 72439		Otera Chacra 82329
2. Top and Bottom of Pay Section (Perforations)			
3. Type of production (Oil or Gas)	Gas		Gas
4. Method of Production (Flowing or Artificial Lift)	To Flow		To Flow
5. Bottomhole Pressure Oil Zones - Artificial Lift: Estimated Current Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated Or Measured Original	a. (Current) 381	a.	a. 540
	b. (Original) 1227	b.	b. 1251
6. Oil Gravity (EAPI) or Gas BTU Content	1189		1148
7. Producing or Shut-In?	To be completed		To be completed
Production Marginal? (yes or no)  * If Shut-In, give date and oil/gas/water rates of last production  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:	Date:	Date:
	Rates: Est. 250 mcf/d	Rates:	Rates: Est. 125 mcf/d
	Date: Rates:	Date: Rates:	Date: Rates:
8. Fixed Percentage Allocation Formula -% for each zone (total of %'s to equal 100%)	Oil: % Gas: %	Oil: % Gas: %	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 other?  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 Deborah Moore TITLE Regulatory Analyst DATE 08/12/99

TYPE OR PRINT NAME Deborah Moore TELEPHONE NO. (281) 293-1005

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

State of New Mexico  
Energy, Minerals & Natural Resources

Form C-102  
Revised March 17, 1999

District II  
811 South First, Artesia, NM 88210

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

District III  
1000 Rio Brazos Rd., Aztec, NM 87410

District IV  
2040 South Pacheco, Santa Fe, NM 87505

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-039-20430		<sup>2</sup> Pool Code 72439/82329		<sup>3</sup> Pool Name Blanco S. Pictured Cliff / Otero Chacra	
<sup>4</sup> Property Code 016608		<sup>5</sup> Property Name San Juan 28-7 Unit			<sup>6</sup> Well Number #155
<sup>7</sup> OGRID No. 005073		<sup>8</sup> Operator Name Conoco Inc.			<sup>9</sup> Elevation 6581'

<sup>10</sup> 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	22	27N	7W		1650'	South	1650	West	Rio Arriba

<sup>11</sup> Bottom Hole Location If Different From Surface

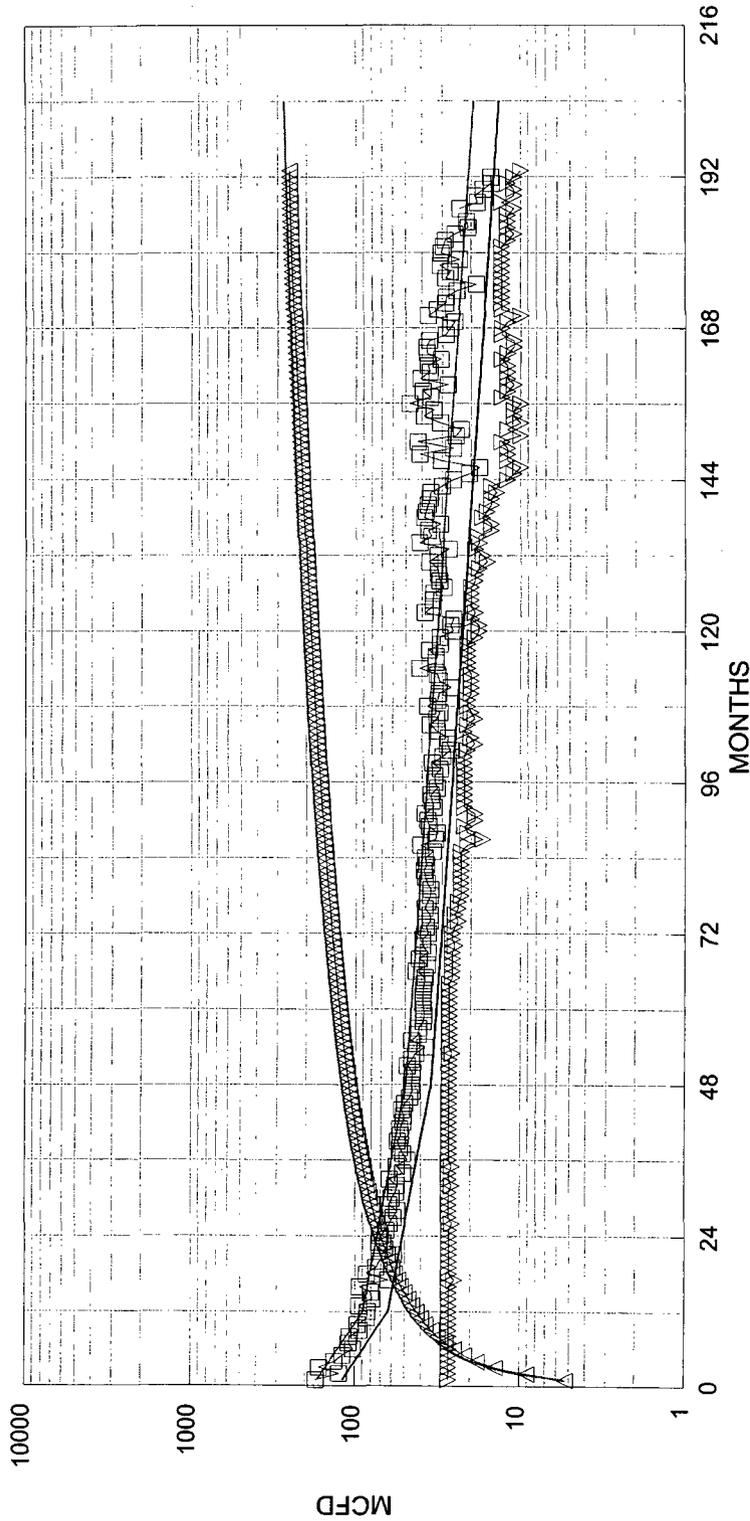
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

<sup>12</sup> Dedicated Acres 160/320	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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

	<p><sup>17</sup> OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p>
	<p>Signature <i>Deborah Moore</i></p> <p>Printed Name Deborah Moore</p> <p>Title Regulatory Analyst</p> <p>Date 08/12/99</p>
	<p><sup>18</sup> 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>Date of Survey</p> <p>Signature and Seal of Professional Surveyer:</p>
<p>Certificate Number</p>	

**NORMALIZED CHACRA PRODUCTION**  
**PROD. SINCE 1980; 27 CH WELLS LOCATED IN 28N-7W**

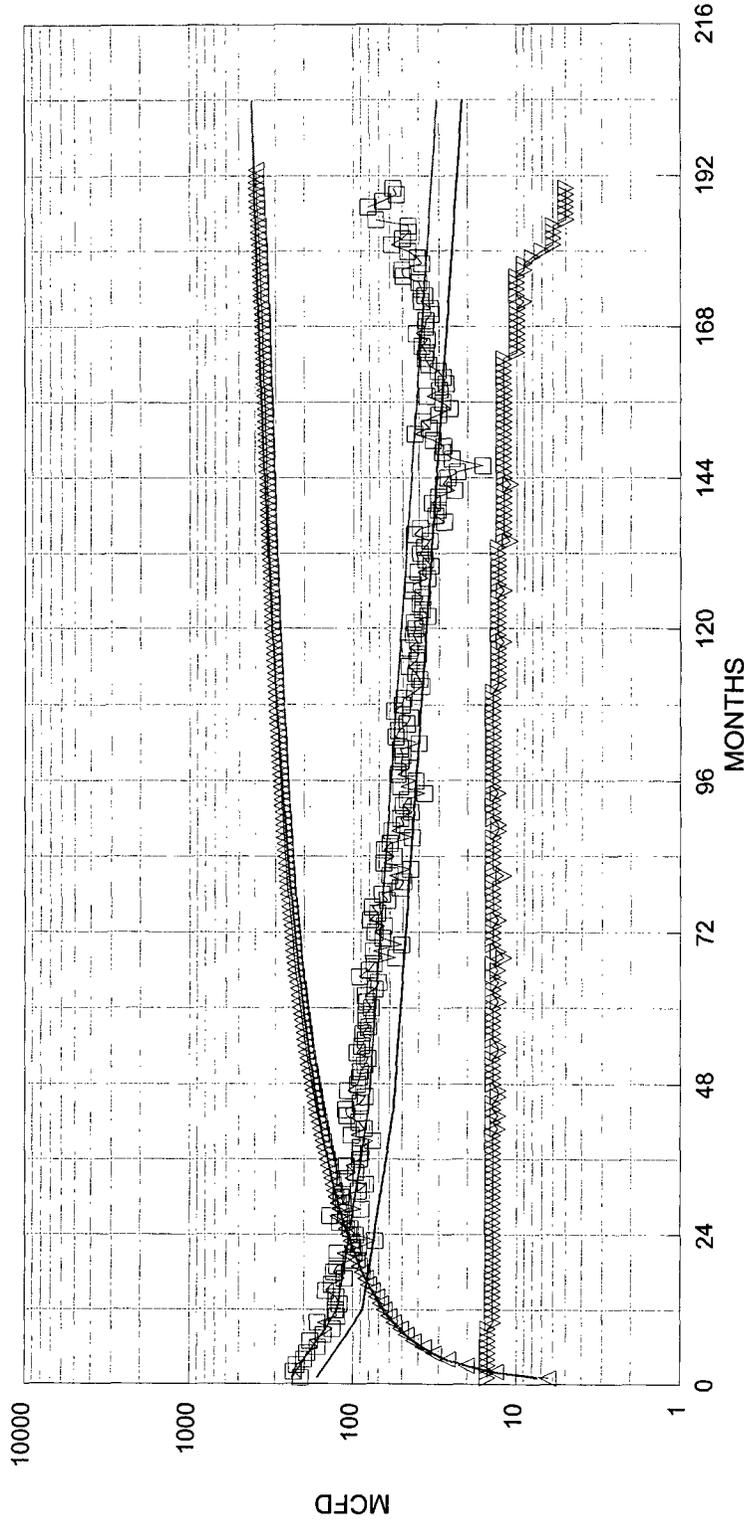


— FIT MCFD    □ NORMALIZED MCFD    △ NORM CUM MMCF  
 ▽ WELLS ON PRODUCTION    — FIT CUM MMCF    — RISKED MCFD

Normalized plot for supporting future SJ 28-7 CH recompletions

<p><b>NORMALIZED AVG:</b></p> <p>321 MMCF EUR                  321 MMCF/ 25.4YRS                  10 MCFD E.L.                  0.000012 bbl/mcf oil yield</p>	<p><b>RISKED AVG:</b></p> <p>180 MCFD IP                  50% DECLINE, 1ST 12 MONTHS                  18% DECLINE, NEXT 36 MONTHS                  7% FINAL DECLINE</p>	<p><b>30% RISK</b></p> <p>210 MMCF EUR                  210 MMCF/ 20.5 YRS                  10 MCFD E.L.                  0.000012 bbl/mcf oil yield</p>	<p>126 MCFD IP                  50% DECLINE, 1ST 12 MONTHS                  18% DECLINE, NEXT 36 MONTHS                  7% FINAL DECLINE</p>
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**NORMALIZED PICTURED CLIFFS PRODUCTION**  
**PROD. SINCE 1980; 15 PC WELLS LOCATED IN 28N-7W AND 27N-7W (Secs. 1:12)**

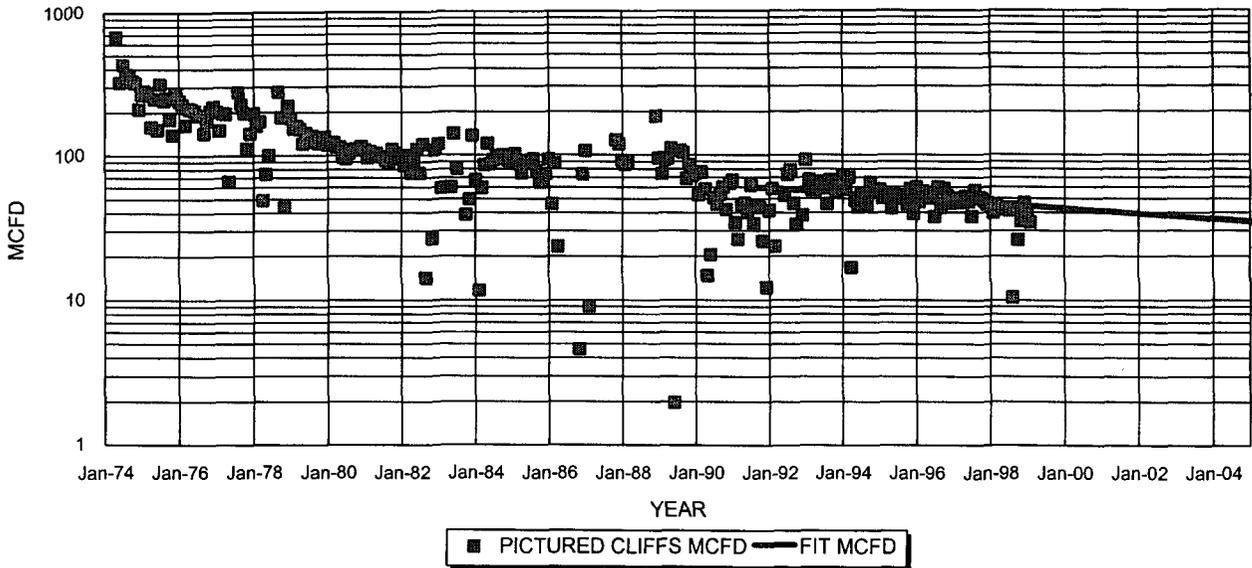


— FIT MCFD    □ NORMALIZED MCFD    △ NORM CUM MMCF  
 ▽ WELLS ON PRODUCTION    — FIT CUM MMCF    — RISKED MCFD

Normalized plot for supporting SJ 28-7 PC recompletions

<p>NORMALIZED AVG:</p> <p>522 MMCF EUR</p> <p>524 MMCF/ 33.5YRS</p> <p>10 MCFD E.L.</p> <p>0.000158 bbl/mcf oil yield</p>	<p>250 MCFD IP</p> <p>50% DECLINE, 1ST 12 MONTHS</p> <p>15% DECLINE, NEXT 36 MONTHS</p> <p>7% FINAL DECLINE</p>	<p>30% RISK</p> <p>350 MMCF EUR</p> <p>349 MMCF/ 27.8 YRS</p> <p>10 MCFD E.L.</p> <p>0.000158 bbl/mcf oil yield</p>	<p>175 MCFD IP</p> <p>50% DECLINE, 1ST 12 MONTHS</p> <p>15% DECLINE, NEXT 36 MONTHS</p> <p>7% FINAL DECLINE</p>
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**SJ 28-7 #180 PICTURED CLIFFS PRODUCTION  
SECTION 190-27N-07W, RIO ARRIBA COUNTY, NEW MEXICO**



<b>PICTURED CLIFFS PRODUCTION</b>		<b>1ST PROD: 05/74</b>	<b>PICTURED CLIFFS PROJECTED DATA</b>	
OIL CUM:	0.00	MBO	Oct.99 QI:	43
GAS CUM:	808.2	MMCF	DECLINE RATE:	4.0%
OIL YIELD:	0.0000	BBL/MCF		MCFD (EXPONENTIAL)

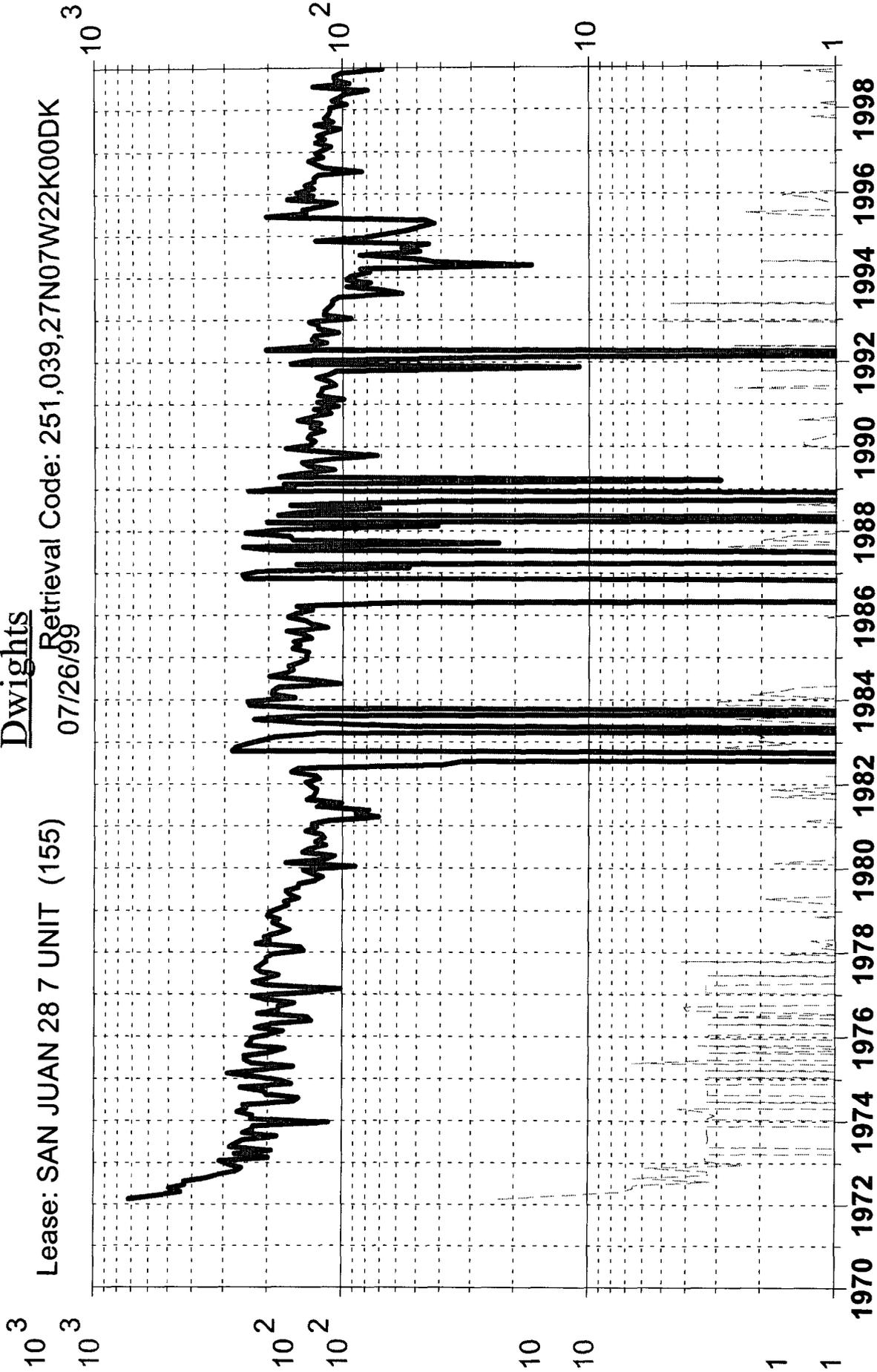
PRODUCTION FORECAST FOR SUBTRACTION METHOD COMMINGLE ALLOCATION

YEAR	MID-YEAR AVG. MCFD	MID-YEAR AVG. BOPD
2000	42	0
2001	40	0
2002	39	0
2003	37	0
2004	36	0
2005	34	0
2006	33	0
2007	31	0
2008	30	0
2009	29	0
2010	28	0
2011	27	0
2012	26	0
2013	25	0
2014	24	0
2015	23	0
2016	22	0
2017	21	0
2018	20	0
2019	19	0
2020	18	0
2021	18	0
2022	17	0
2023	16	0
2024	16	0
2025	15	0
2026	14	0
2027	14	0

# Dwights

Lease: SAN JUAN 28 7 UNIT (155)

Retrieval Code: 251,039,27N07W22K00DK  
07/26/99



Oil (bbl/day)

Water (bbl/day)

Gas (mcf/day)

Operator: CONOCO INC

F.P. Date: 02/72

Location: 22K 27N 7W

Oil Cum: 11.72 mbbl

Field: BASIN (DAKOTA) DK

Gas Cum: 1457 mmcf

Upper Perf: 7292 ft

L.P. Date: 02/99