



CDX Gas, LLC
4801 N. Butler Avenue, Suite 2000
Farmington, NM 87401
Main: 505-326-3003
Fax: 505-325-4007

2005 APR 15 AM 11 36

April 4, 2005

Mr. William Jones
New Mexico Oil Conservation Division
Engineering Bureau
1220 S. St. Francis Dr.
Santa Fe, New Mexico 87505

Re: Application for Exception to Rule 303-A
Downhole Commingling
Jicarilla B #4
API No.: 30-0397-82260
Basin Dakota/ Tapicito Gallup/ Blanco Mesa Verde
1640' FNL, 990 FEL, Unit H, Sec. 21, T26N-R5W
Rio Arriba County, New Mexico

DHC-1137-A
(adding MVAD)

Dear Mr. Jones:

The Jicarilla B #4 well was completed on May 24, 1966 in the Basin Dakota and Tapicito Gallup formations and presently produces approximately 130 MCFD. CDX RIO, LLC is making plans to recompleate the captioned well in the Mesaverde formation and hereby requests administrative approval to downhole commingle production from the Basin Dakota, Tapicito Gallup, and Blanco Mesa Verde pools.

To avoid waste CDX is proposing to use the existing well bore and thereby capture the additional reserves. Adding the Mesaverde production will have no detrimental effects and the fluids have no abnormal components that would prohibit commingling or promote the creation of emulsions or scale.

As an analogy CDX Gas, LLC operates the Jicarilla B #5E (API No.: 30-039-22899) located 1,850' FNL and 870' FWL of Section 21, T26N-R5W, being less than one mile from our proposed location. This well was originally completed as a Mesaverde/Dakota producer in May of 1982, with the Gallup being added in August 1992. This well has been producing as a Gallup/Dakota downhole commingled producer since December of 1993 with no apparent production problems or loss of value. The Mesaverde has not produced since June of 1993.

CDX RIO, LLC is the operator and owns 100% working interest in all zones of interest in the subject well and spacing units, with identical ownership in all formations to be commingled. When the Dakota, Gallup, and Mesa Verde formations are completed they will be isolated and separately tested thru tubing. The subtraction method will be used to determine the new allocation for the commingled production.

After the recompletion we are estimating production from the Dakota to be 150 mcf/d and .8 bopd, from the Gallup 25 mcf/d and .2 bopd and from the Mesa Verde 100 mcf/d and .5 bopd. Allocations after the recompletion are estimated at:

Dakota	Oil	54%	Gas	54%
Gallup	Oil	14%	Gas	10%
Mesa Verde	Oil	33%	Gas	36%

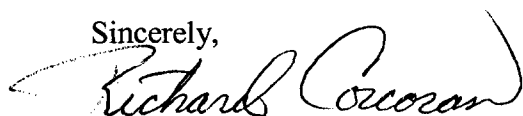
Actual allocation amounts will be provided after testing the respective zones.

Attached to aid in your review are plats showing the location of the captioned well and offset analogy well in the same formations, a recent production plot for the commingled zones in both the analogy well (Jicarilla B #5E) and the captioned well, historical plots for the Gallup, Mesaverde, and Dakota production, and C-102 forms showing the location and spacing units.

Since the spacing unit for our proposed well consist of the E/2 of Section 21, T26N-R5W, and is located on Jicarilla lease #109, a copy of this application package will be sent to both the Bureau of Land Management and the Jicarilla Tribe.

Thank you and should you have any questions concerning this application please call me at (505) 326-3003 ext. 2817 or e-mail me at rich.corcoran@cdxgas.com.

Sincerely,



Richard Corcoran
Land Manager

cc: Steve Wells, Bureau of Land Management
Fred Vigil, Jicarilla Oil and Gas Administration

District IV
1220 S. St. Francis Dr. Santa Fe, NM 87505

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-107A
Revised June 10, 2003

APPLICATION TYPE
☒ Single Well
☐ Pre-Approved Pools
 EXISTING WELLBORE
☒ Yes ☐ No

APPLICATION FOR DOWNHOLE COMMINGLING

JICARILLA CONTRACT B	#4	H - 21 - T26N - R5W	RIO ARriba
Lease	Well No.	Unit Letter-Section-Township-Range	County

OGRID No 222374 Property Code API No. 30-039-82260 Lease Type: x Federal State Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	BLANCO MESAVERDE	TAPACITO GALLUP ASSOC.	BASIN DAKOTA
Pool Code	72319	58090	71599
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	4,675 – 5,340 (To be confirmed after logs)	6,702 – 6,724	7,204 – 7,446
Method of Production (Flowing or Artificial Lift)	Plunger Lift	Plunger Lift	Plunger Lift
Bottomhole Pressure (Note: Pressure data will not be required if the bottom perforation in the lower zone is within 150% of the depth of the top perforation in the upper zone)	545 psi (estimated)	440 psi	440 psi
Oil Gravity or Gas BTU (Degree API or Gas BTU)	1200 BTU	1270 BTU	1210 BTU
Producing, Shut-In or New Zone	NEW ZONE	PRODUCING	PRODUCING
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.)	Date: 100 mcf/d (estimated) Rates: 0.5 bopd (est) 3 bwpd (est)	Date: 3/25/05 25 mcf/d Rates: 0.2 bopd 0 bwpd	Date: 3/25/05 150 mcf/d Rates: 0.8 bopd 1 bwpd
Fixed Allocation Percentage (Note: If allocation is based upon something other than current or past production, supporting data or explanation will be required.)	Oil 33% Gas 36%	Oil 14% Gas 10%	Oil 54% Gas 54%

ADDITIONAL DATA

Are all working, royalty and overriding royalty interests identical in all commingled zones? Yes X No

If not, have all working, royalty and overriding royalty interest owners been notified by certified mail? Yes No

Are all produced fluids from all commingled zones compatible with each other? Yes ☒ No ☐

Will commingling decrease the value of production?	Yes	No	X
1. Will commingling decrease the value of production?			X

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

NMOCD Reference Case No. applicable to this well:

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 working, royalty and overriding royalty interests for uncommon interest cases.
Any additional statements, data or documents required to support commingling.

PRE-APPROVED POOLS

If application is to establish Pre-Approved Pools, the following additional information will be required:

List of other orders approving downhole commingling within the proposed Pre-Approved Pools
List of all operators within the proposed Pre-Approved Pools
Proof that all operators within the proposed Pre-Approved Pools were provided notice of this application.
Bottomhole pressure data.

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

SIGNATURE TITLE Production Engineer DATE 8/19/04

TYPE OR PRINT NAME David C. Smith TELEPHONE NO. (505) 326-3003

E-MAIL ADDRESS dave.smith@cdxgas.com

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised June 10, 2003
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-08098		² Pool Code 72319	³ Pool Name BLANCO MESAVERDE
⁴ Property Code	⁵ Property Name JICARILLA B		⁶ Well Number 4
⁷ OGRID No. 222374	⁸ Operator Name CDX RIO, LLC		⁹ Elevation 6555' GR

¹⁰ Surface Location

UL or lot no. H	Section 21	Township 26N	Range R5W	Lot Idn	Feet from the 1650	North/South line NORTH	Feet from the 990	East/West line EAST	County RIO ARRIBA
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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
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¹² Dedicated Acres	¹³ Joint or Infill	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

<p>Section 21</p>				<p>¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p>Signature _____</p> <p>Printed Name David C. Smith</p> <p>Title and E-mail Address Production Engineer, dave.smith@cdxgas.com</p> <p>Date 3/31/05</p>
				<p>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.</p> <p>4/4/66</p> <p>Date of Survey _____</p> <p>Signature and Seal of Professional Surveyor: _____</p> <p>ON FILE</p> <p>2463</p> <p>Certificate Number _____</p>

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

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

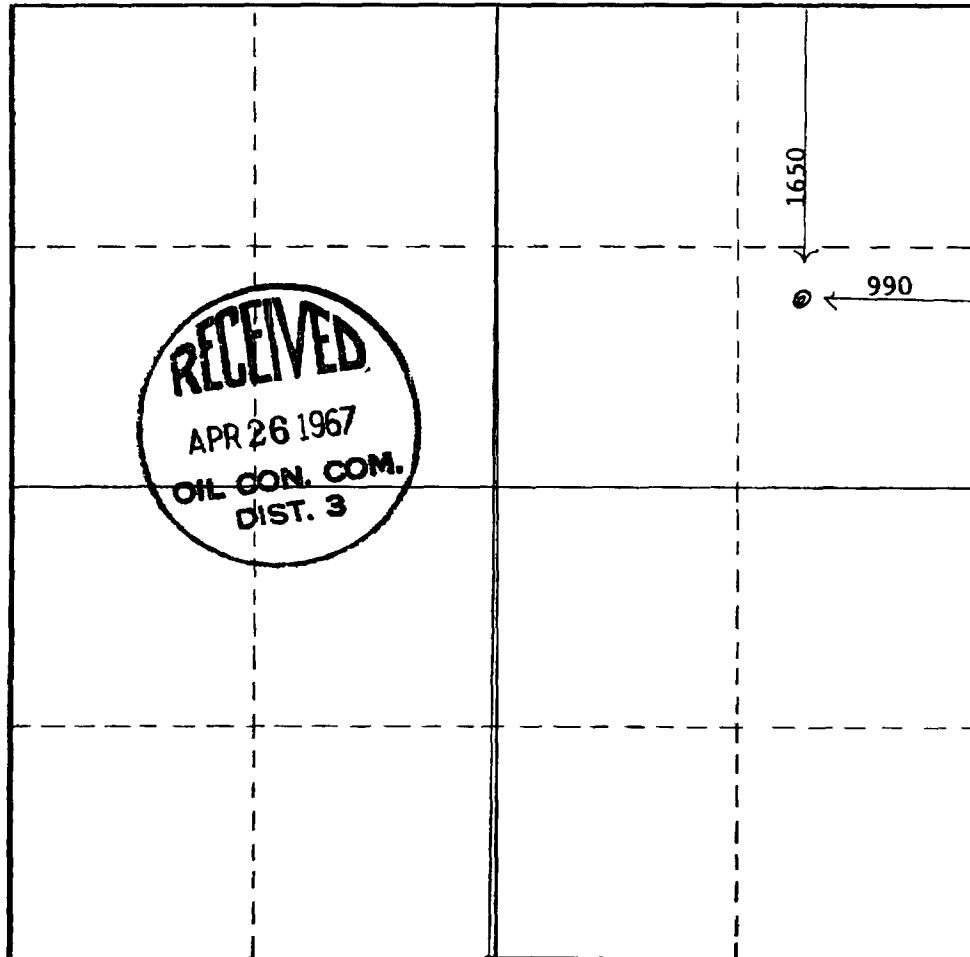
Operator Tenneco Oil Company			Lease Jicarilla "B"		Well No. 4
Unit Letter H	Section 21	Township 26N	Range 5W	County Rio Arriba	
Actual Footage Location of Well: 1650 feet from the North line and 990 feet from the East line					
Ground Level Elev: 6555 UnGr.	Producing Formation Tapacito Gallup		Pool Gallup		Dedicated Acreage: E/2 320 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 been 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.

Name **G. A. Ford**
Position **Senior Production Clerk**

Company **Tenneco Oil Company**

Date **April 25, 1967**

Date

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.

Date Surveyed

Registered Professional Engineer and/or Land Surveyor

Certificate No.

0 330 660 990 1320 1650 1980 2310 2640 2970 3300 3630 0

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

All distances must be from the outer boundaries of the Section

Operator TENNECO OIL COMPANY			Lease JICARILLA "B"		Well No. 4
Unit Letter H	Section 21	Township 26 North	Range 5 West	County Rio Arriba	
Actual Footage Location of Well: 1650 feet from the North line and 990 feet from the East line					
Ground Level Elev. 6555 Ungraded	Producing Formation Undesignated Gallup and Basin Dakota		Pool Undesignated Gallup and Basin Dakota		Dedicated Acreage 320 E/2 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure 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.

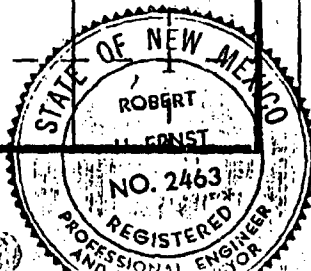
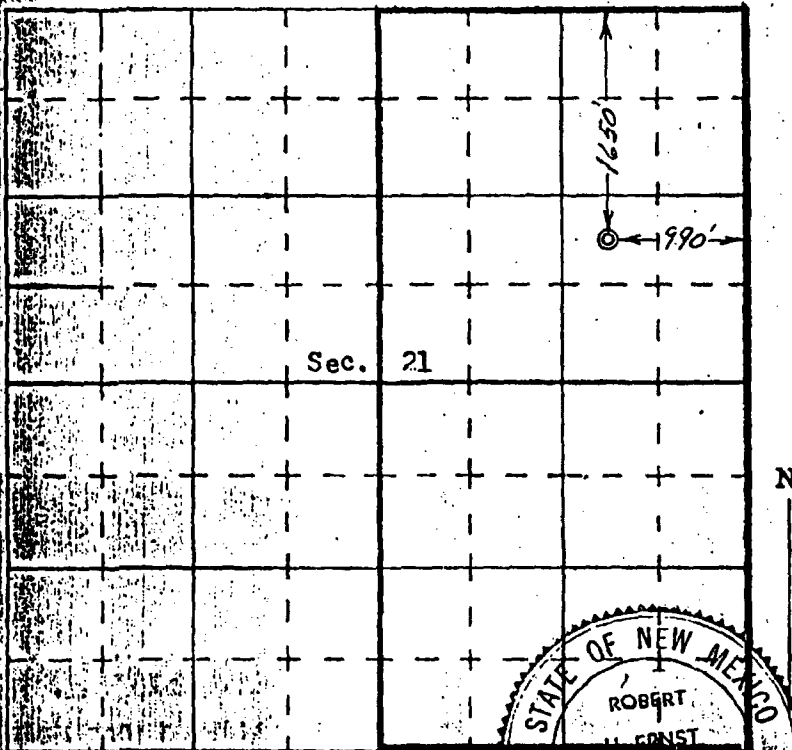
CERTIFICATION

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

Harold C. Nichols
 Name Harold C. Nichols
 Position Senior Production Clerk
 Company Tenneco Oil Company
 Date May 9, 1966

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.

4 April 1966
 Date Surveyed
Robert H. Ernst
 Registered Professional Engineer
 and/or Land Surveyor
Robert H. Ernst
N. Mex. PE & LS 2463
 Certificate No. _____



ERNST ENGINEERING CO.
DURANGO, COLORADO

PI/Dwights PLUS on CD Map Report

ME SA/6000

Jic B-4

	5	4	3		
	8	9	10		
7E	17 8E	16	8M 8		
CDX	9	5E	26N 5W		
	20	11E	22		
33A	33	11E	8E 27		
CDX	20 29 32	11 28E			
	32	33	34		
	5	4	3		
	8	9	10		

PI/Dwights PLUS on CD Map Report

DAKOTA

Sec B-4

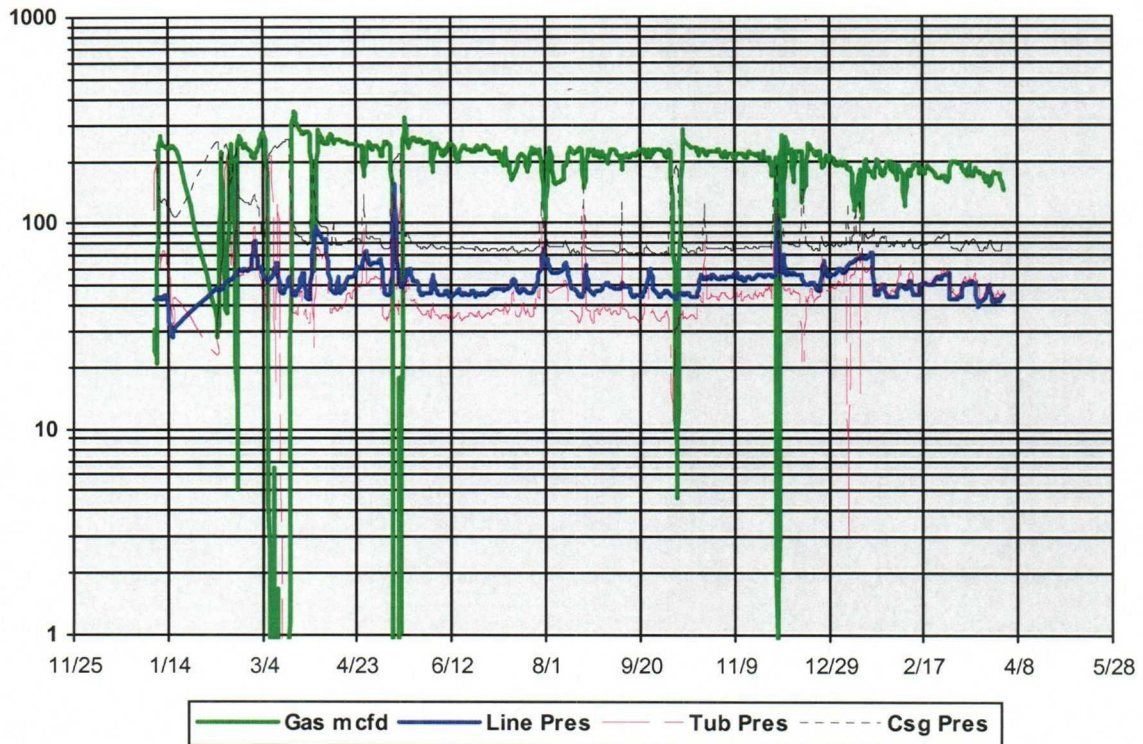
	5	4	3		
	8	9	10		
	7E	7E	8M 8		
CDX	7	8	3	15	3E
	17 8E	16E	2	3	1
	6E	5E	5E	6F	1
	6	5	5	6	1E
	20E	19	11E	10E	10
CDX	20 19E	11 28E	8E 27	8	
	32	33	34		
		XTD			
	5	4	3		
	8	9	10		

PI/Dwights PLUS on CD Map Report

Gallup
Tic B-4

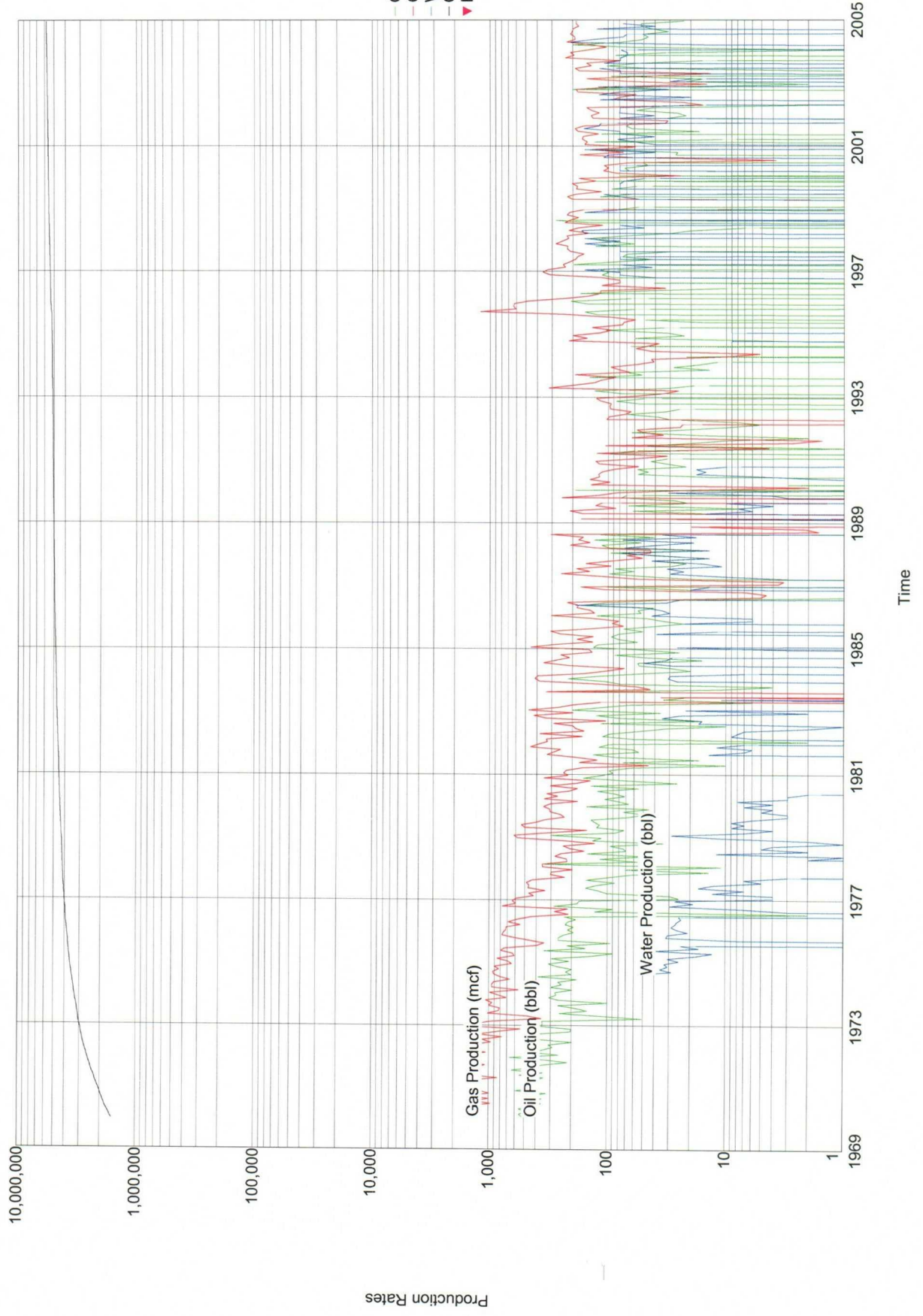
	5	4	3		
	8	9	10		
CDL	17	8	15	CDL	
	20	21	22		
A	5	5E	B-26N 5W	10	
	29	28	27		
CDL	32	33	34		
155	5	4	3		
	8	9	10		

'JICARILLA B 004-DK/GP API: 30-039-82260' (1/6/04 - 3/31/05)



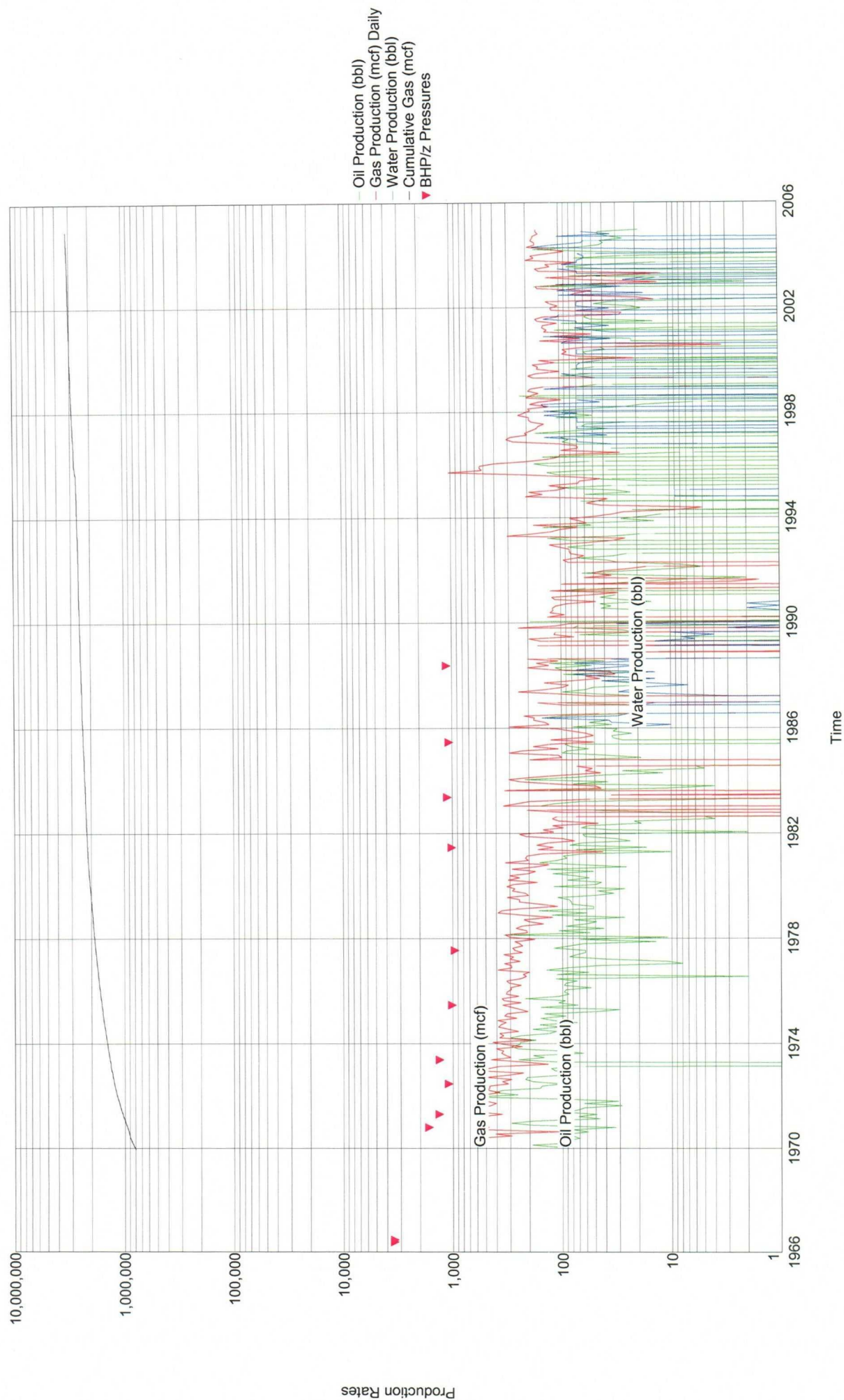
Lease Name: JICARILLA B
County, State: RIO ARBA, NM
Operator: CDX RIO LIMITED LIABILITY CORPORATIO
Field: MULTIPLE
Reservoir: MULTIPLE
Location:

JICARILLA B - (MULTIPLE) B-4 (DK/GP)



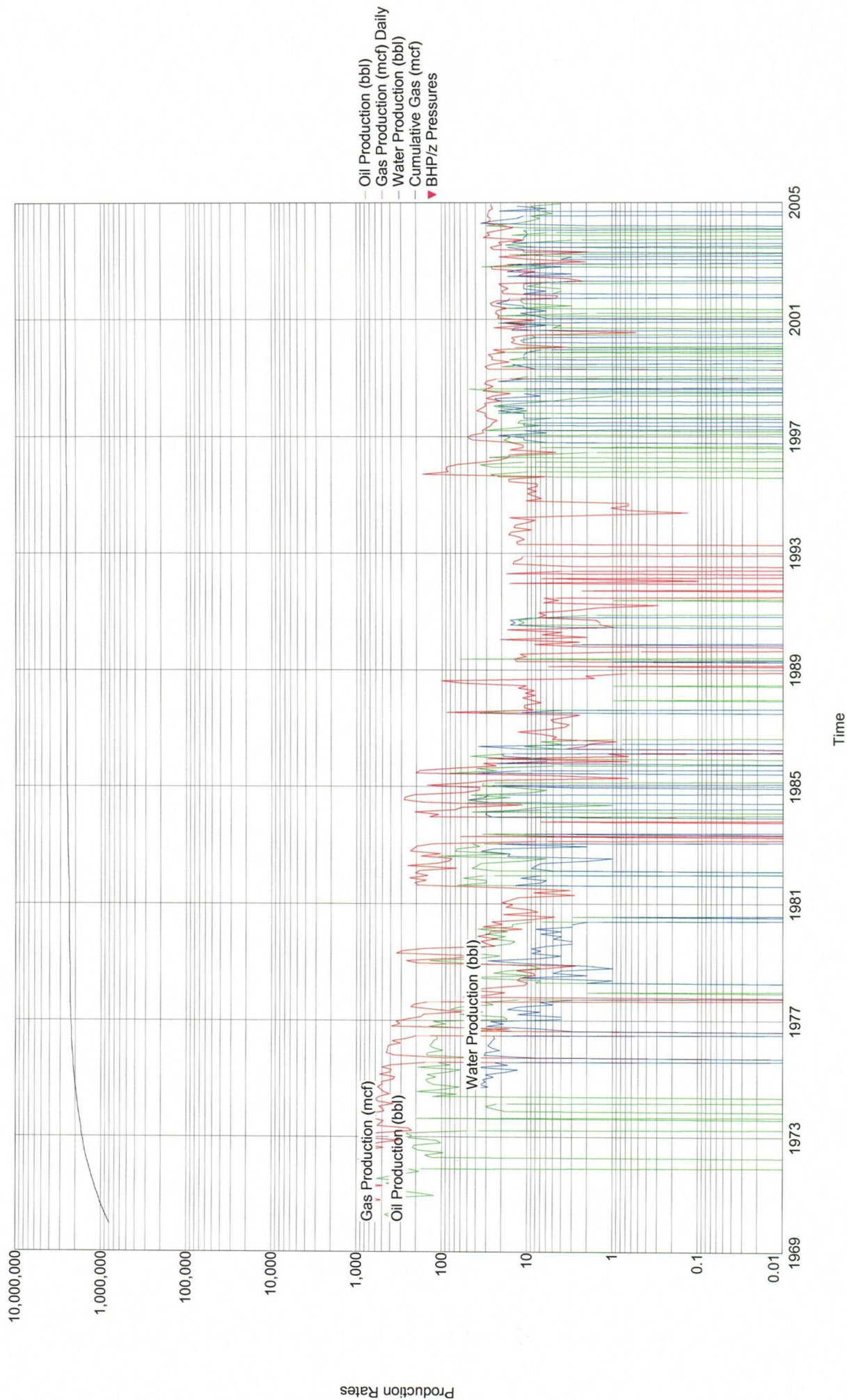
Lease Name: JICARILLA B
 County, State: RIO ARBA, NM
 Operator: CDX RIO LIMITED LIABILITY CORPORATIO
 Field: BASIN
 Reservoir: DAKOTA
 Location: 21 26N 5W SE NE

JICARILLA B - 4 (DAKOTA)



Lease Name: JICARILLA B
County, State: RIO ARBA, NM
Operator: CDX RIO LIMITED LIABILITY CORPORATIO
Field: TAPACITO
Reservoir: GALLUP
Location: 21 26N 5W SE NE

JICARILLA B - 4 (GALLUP)





BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION



POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

RECEIVED
OCT 25 1993
OIL CON. DIV.
DIST. 3

COMMINGLING ORDER PC-871

Amoco Production Company
P.O. Box 800
Denver, CO 80201

Attention: J.W. Hawkins

LEASE NAME: *Jicarilla "B" Well No. 4*
DESCRIPTION: *Tapacito Gallup Pool: E/2 and, Basin Dakota Pool: E/2 of Section 21, Township 26 North, Range 5 West, Rio Arriba County, New Mexico.*

The above-named company is hereby authorized to commingle Tapacito Gallup Pool and Basin Dakota Pool production in a common separator and meter run, and to determine the production from each pool by well tests to be conducted on a bi-annual basis. (All commingled production must be of marginal nature; further, the operator shall notify the Santa Fe office of the Division in the event any well in the commingled battery becomes capable of top allowable production, at which time the Division will amend this order or take such other action as may be appropriate.

FURTHER: The operator shall notify the Aztec District Office of the Division upon implementation of the commingling process.

NOTE: This installation shall be installed and operated in accordance with the applicable provisions of Rule 303 of the Division Rules and Regulations and the Division "Manual for the Installation and Operation of Commingling Facilities." It is the responsibility of the producer to notify the transporter of this commingling authority.

REMARKS: Production may be allocated based on historical percentages for individual pools until no later than June 1994 at which time the bi-annual well tests will commence.

DONE at Santa Fe, New Mexico, on this 20th day of October, 1993.

WILLIAM J. LEMAY,
Director

cc: Oil Conservation Division- Aztec
US Bureau of Land Management - Farmington (Attention: John Keller)

AD: *[Handwritten initials]*



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

ADMINISTRATIVE ORDER DHC-1137

Amoco Production Company
P.O. Box 800
Denver, Colorado 80201-0800

Attention: Ms. Pamela W. Staley

RECEIVED
JUN 21 1985
OIL CON. DIV.
DIST. 3

*Jicarilla Contract "B" Well No. 4
Unit H, Section 21, Township 26 North, Range 5 West,
NMPM, Rio Arriba County, New Mexico.
Basin Dakota (Prorated Gas) Pools and Tapacito Gallup (Associated) Pools*

Dear Ms. Staley:

Reference is made to your recent application for an exception to Rule 303-A of the Division Rules and Regulations to permit the subject well to commingle production from both pools in the wellbore.

It appearing that the subject well qualifies for approval for such exception pursuant to the provisions of Rule 303-C, and that reservoir damage or waste will not result from such downhole commingling, and correlative rights will not be violated thereby, you are hereby authorized to commingle the production as described above and any Division Order which authorized the dual completion and required separation of the two zones is hereby placed in abeyance.

In accordance with the provisions of Rule 303-C-4., total commingled oil production from the subject well shall not exceed 40 barrels per day, and total water production shall not exceed 80 barrels per day. The maximum amount of gas which may be produced daily from the well shall be determined by Division Rules and Regulations or by the gas allowable for each respective prorated pool as printed in the Division's San Juan Basin Gas Proration Schedule.

Assignment of allowable to the well and allocation of production from the well shall be on the following basis:

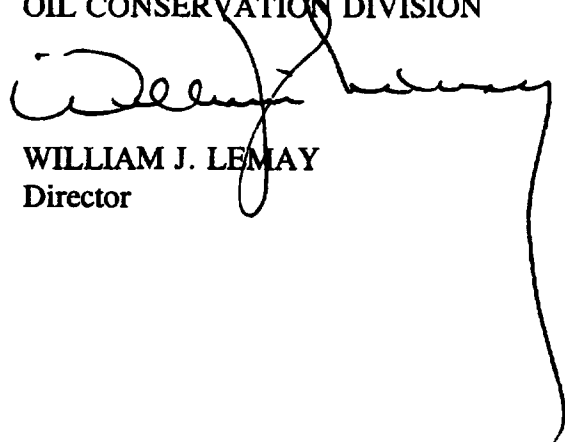
Basin Dakota (Prorated Gas)	Oil 83%	Gas 86%
Tapacito Gallup (Associated)	Oil 17%	Gas 14%

FURTHER: The operator shall notify the Aztec District Office of the Division upon implementation of the commingling process.

Pursuant to Rule 303-C-5, the commingling authority granted by the order may be rescinded by the Division Director if, in his opinion, conservation is not being best served by such commingling.

Approved at Santa Fe, New Mexico on this 20th day of June, 1995.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY
Director

S E A L

WJL/BES

cc: Oil Conservation Division - Aztec ✓
Bureau of Land Management - Farmington



1115 FARMINGTON AVE. - FARMINGTON, NM 87401

(505) 325-6622

ANALYSIS NO. AMO30289

WELL/LEASE INFORMATION

COMPANY: AMOCO PRODUCTION COMPANY PRESSURE: 245 PSIG
WELL NAME: JICARILLA B #5E SAMPLE TEMP.: DEG. F
LOCATION: DATE SAMPLED: 8/2/93
FORMATION: GALLUP SAMPLE SRC:
COUNTY: RIO ARRIBA, NM SAMPLED BY: CLEVE J NOBLE JR
STATION NO.: TEST E-153 PROD FOREMAN: JAKE NUNEZ
REMARKS:

ANALYSIS

COMPONENT	MOLE %	GPM**	B.T.U.*	SP. GR.*
NITROGEN	3.234	0.0000	0.00	0.0313
CO2	0.737	0.0000	0.00	0.0112
METHANE	72.253	0.0000	731.41	0.4002
ETHANE	13.929	3.7175	247.07	0.1446
PROPANE	6.230	1.7130	157.11	0.0949
I-BUTANE	0.858	0.2799	27.96	0.0172
N-BUTANE	1.637	0.5150	53.53	0.0329
I-PENTANE	0.465	0.1698	18.65	0.0116
N-PENTANE	0.349	0.1263	14.04	0.0087
HEXANE	0.308	0.1341	15.84	0.0099
TOTAL	100.000	6.6556	1265.61	0.7625

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

** @ 14.696 & 60 DEG. F

COMPRESSIBILITY FACTOR (1/2) 1.0038

BTU/CU.FT. (DRY) CORRECTED FOR (1/2) 1267.5

BTU/CU.FT. (WET) CORRECTED FOR (1/2) 1245.4

REAL SPECIFIC GRAVITY 0.7649

ANALYSIS RUN AT 14.696 PSIA & 60 DEGREES F

CYLINDER PRESSURE: 236 PSIG

CYLINDER NO.: GAS-AZT040

DATE RUN: 8/4/93

SENT BY NWP-SALT LAKE FAX 801 584 4881 8-8-83 110:08AM
T50M630

NWP-SALT LAKE-508

P.2/2
F.1: # 1/
SCREEN NBR: _

QUALITY DATA SCREEN
14.73 8 60 F

TRAN CODE: I

METER NBR:

85786 - 01 P

CHECK DIGIT: _

METER NAME:

JICARILLA B #5E COMG

SEG CREATE DATE: 070293

SEG EFFECT DATE: 063093

SEG EFFECT TIME: 1800

DATE PULLED: 062393

MOL %

GPM

MOL %

GPM

CH4 METHANE: 82 . 824

11.783

C2 ETHANE :

10 . 792

2.885

C3 PROPANE: 03 . 503

.964

IC4 ISO BUT :

00 . 429

.140

NC4 BUTANE : 00 . 681

.215

IC5 ISO PEN :

00 . 158

.061

NC5 PENTANE: 00 . 133

.048

C6 HEXANE :

00 . 177

.077

C7 HEPTANE: 00 . 000

.000

C8 OCTANE :

00 . 000

.000

C9 NONANE : 00 . 000

.000

C10 DECANE :

00 . 000

.000

N2 NITROGEN: 00 . 451

.000

CO2 CARBON

00 . 841

.142

SPECIFIC GRAV: 0 . 578

DRY BTU (1178

MOL %

GRAINS/CCF

MOL %

#/MCCF

H2S SULFUR : 00 . 000

.00

H2O WATER : 000

00

01701 - INQUIRY SUCCESSFULLY COMPLETED

Post-It [®] brand fax transmittal memo 7671		# of pages <u>2</u>
To <u>Laura Kwartin</u>	From <u>John Broken</u>	
Co. <u>Amoco</u>	Co. <u>Haliburton</u>	
Dept.	Phone #	
Fax #	Fax #	

SERVICES
LABORATORY
REA
ANALYSIS

To: Mr. Jake NunezDate: August 4, 1993AMOCO PRODUCTION

Submitted by: _____

Date Rec. 8-3-1993Well No. Jicarilla B #5F

Location: _____

Sample Markings Gallup FormationAPI Oil Gravity 58 at 60°FSpecific Gravity 1.006pH 6.25Resistivity 0.684 at 80.7°FIron(Fe) 16

Milligrams per Liter

Potassium(K) _____

" "

Sodium(Na) 3.006

" "

Calcium(Ca) 350

" "

Magnesium(Mg) 71

" "

Chlorides(Cl) 3,850

" "

Sulfates(SO₄) 3,000

" "

Carbonates(CO₃) _____

" "

Bicarbonates(HCO₃) 468

" "

Total Dissolved Solids 10,761

" "

By Mike UlrichTitle Lab TechLocation Farmington, NM**NOTICE:**

This report is limited to the described sample tested. Any person using or relying on this report agrees that Halliburton shall not be liable for any loss or damage whether due to act or omission resulting from such report or its use.

M.U.

HALLIBURTON DISTRICT LABORATORY WATER ANALYSIS DATA SHEET

Test Date: 8-6-93

Report No. _____

AMOCO

Tested By _____ Date Received _____

Number JICARILLA B #5E

Location _____ Formation DAKOTA

Data for Report

Specific Gravity 1.005

pH 7.72

Ion or Anion	Ion	Calculation	ppm
	Fe Log		<u>6</u>
	K & T		<u><10</u>
	Na & T		<u>3042</u>
	Ca		<u>117</u>
	Mg		<u>7</u>
	Cl		<u>1656</u>
	SO4 Log		<u>3400</u>
	CO3		
	HCO3		<u>1317</u>
	TDS		<u>9545</u>

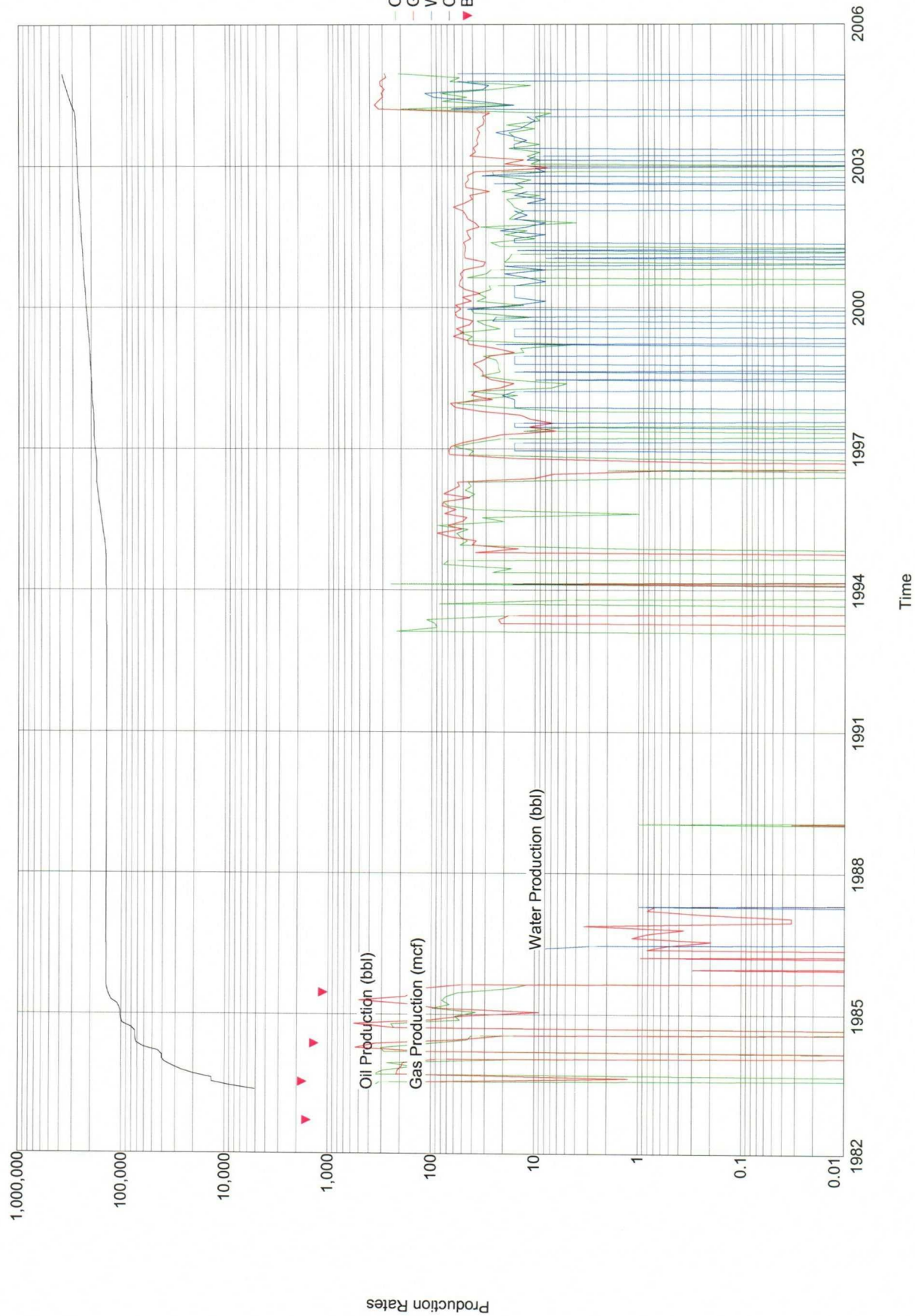
Rw .95 @ 80.5°F

Notes

Report is based on sound engineering practices, but because of variable well conditions and other information which must be relied upon, Halliburton makes no warranty, express or implied, as to the accuracy of the data or of any calculations or opinions expressed herein. You agree that Halliburton be liable for any loss or damage whether due to negligence or otherwise arising out of or in connection with such data, calculations or opinions.

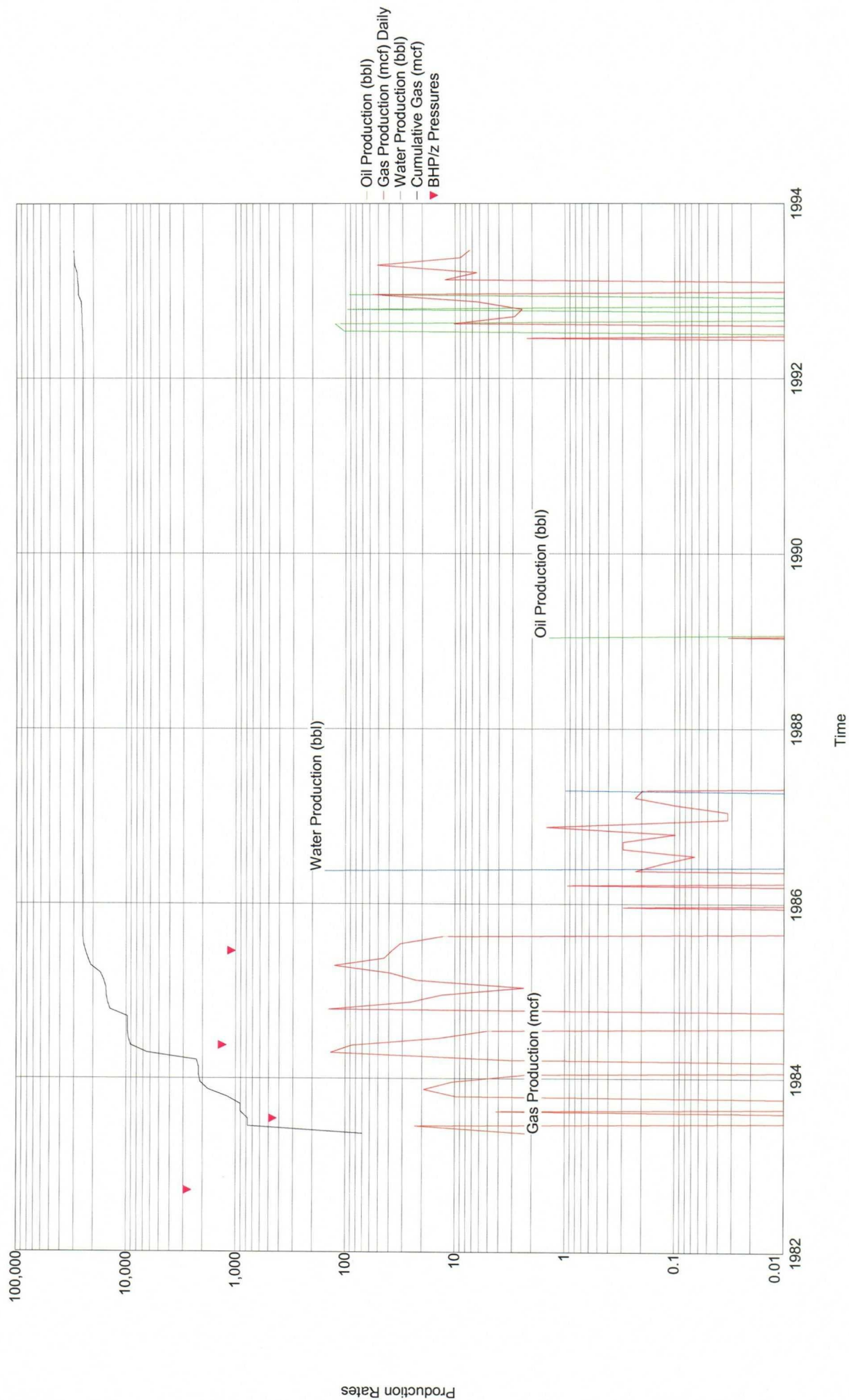
Lease Name: JICARILLA B
County, State: RIO ARBA, NM
Operator: CDX RIO LIMITED LIABILITY CORPORATIO
Field: BASIN
Reservoir: DAKOTA
Location: 21 26N 5W NE SW NW

JICARILLA B - 5E (DAKOTA)



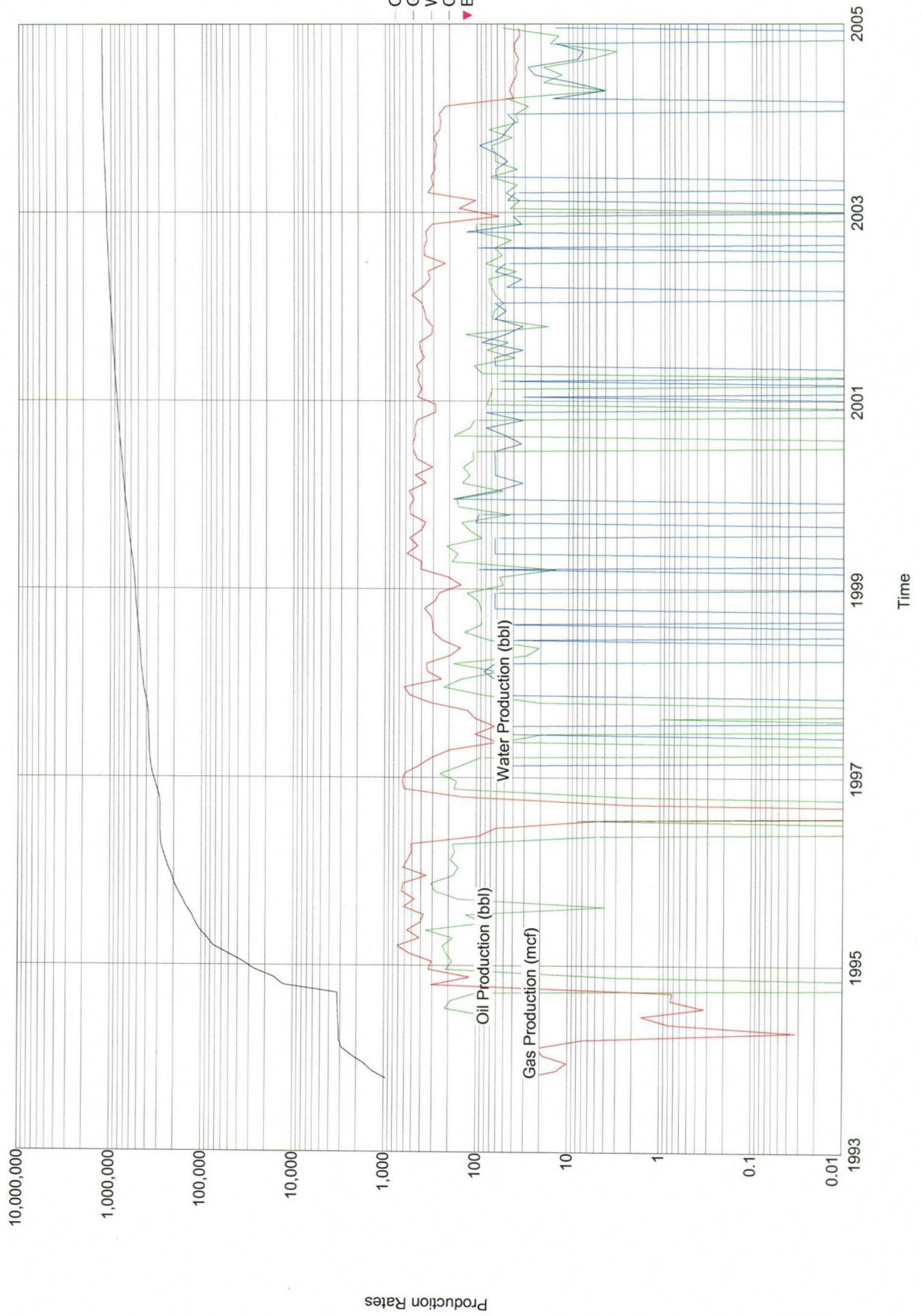
Lease Name: JICARILLA B
County, State: RIO ARBA, NM
Operator: BP AMERICA PRODUCTION COMPANY
Field: BLANCO
Reservoir: MESAVERDE
Location: 21 26N 5W NE SW NW

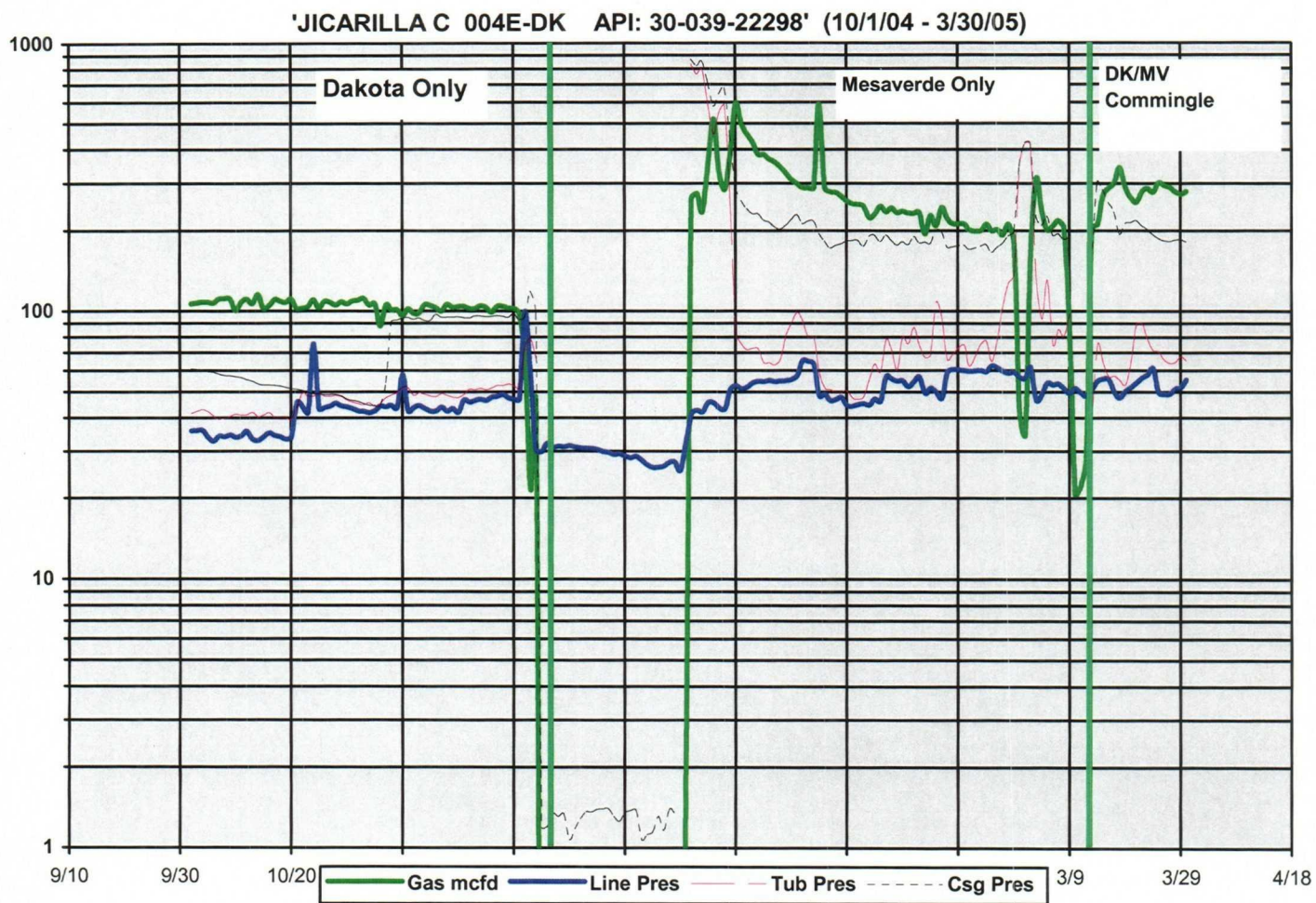
JICARILLA B - 5E (MESAVERDE)



Lease Name: JICARILLA B
County, State: RIO ARBA, NM
Operator: CDX RIO LIMITED LIABILITY CORPORATIO
Field: TAPACITO
Reservoir: GALLUP
Location: 21 26N 5W NE SW NW

JICARILLA B - 5E (GALLUP)





Jicarilla C-4E Section 24 T26N, R5W.
CDX Gas, LLC. most recent Mesaverde pay-add.