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7/14/03	7/14/03	DHC	DHC
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-RECEIVED

ABOVE THIS LINE FOR DIVISION USE ONLY

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

JUL 14 2003

**OIL CONSERVATION  
DIVISION**

**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] or [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 further verify that all applicable API Numbers are included. 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.

Charlie Donahue  
Print or Type Name

Chad Imel  
Signature

District Engineer  
Title

7/10/03  
Date



July 10, 2003

Ms. Lori Wrotenbery  
NMOCD  
2040 South Pacheco  
Santa Fe, New Mexico 87505

RE: Administrative Approval to Down-hole Commingle  
Energen Resources Corporation  
Carson #2  
1470' FSL, 810' FWL, Sec. 7, T30N, R4W, N.M.P.M.  
Rio Arriba County, New Mexico  
API # 30-039-22083

Dear Ms. Wrotenbery,

Energen Resources Corporation requests Administrative Approval to add the East Blanco Pictured Cliffs and down-hole commingle it with the Blanco Mesaverde/Wildcat Gallup in the subject well. The Mesaverde/Gallup was previously commingled in accordance with DHC-2740. Open hole logs show potential in the Pictured Cliffs similar to offset producing wells. Since the Pictured Cliffs is marginal in this area, it is felt that commingling is the most economical way to produce the Pictured Cliffs reserves in this proration unit.

To comply with New Mexico Oil Conservation rules, Energen Resources Corporation is submitting the following data for your approval of the proposed commingling.

1. Form C107A – Application for Downhole Commingle
2. C102 – Location plat showing each spacing unit and dedicated acreage
3. Production type curves for the Pictured Cliffs, Gallup and Dakota
4. Offset Operator Plat
5. Well location plat
6. Proposed allocation method
7. Supporting pressure data

In accordance to New Mexico Oil Conservation Division Rule 303C, all offset operators are being notified of this application by certified mail. As an offset operator, if you have no objection to this application, you do not have to respond to this notification.

If additional information is needed, please contact me.

Sincerely

A handwritten signature in cursive script, appearing to read "Charlie Donahue".

Charlie Donahue  
District Engineer

CD/vd

cc: NMOCD – Aztec, BLM – Farmington, Offset Operators

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, 200  
Submit to Appropriate District Office  
State Lease - 4 Copie  
Fee Lease - 3 Copie

☒ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number 30-039-22083	<sup>2</sup> Pool Code 72400/72319/96426	<sup>3</sup> Pool Name East Blanco Pictured Cliffs Gallup/Blanco Mesaverde/
<sup>4</sup> Property Code 21185	<sup>5</sup> Property Name Carson	<sup>6</sup> Well Number 2
<sup>7</sup> OGRID No. 162928	<sup>8</sup> Operator Name Energen Resources Corporation	<sup>9</sup> Elevation 6692'

**<sup>10</sup> Surface Location**

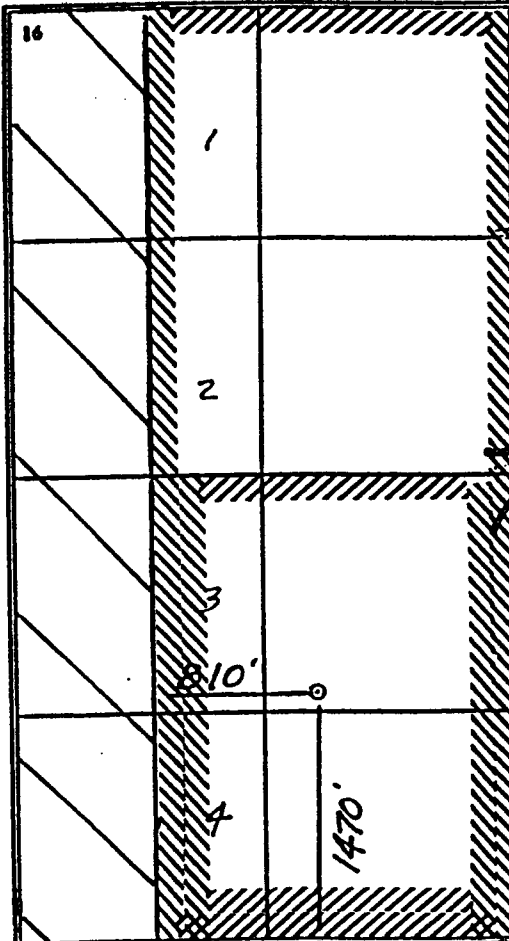
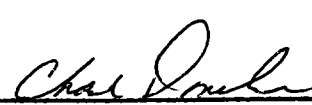

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	07	30N	04W		1470	South	810	West	Rio Arriba

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

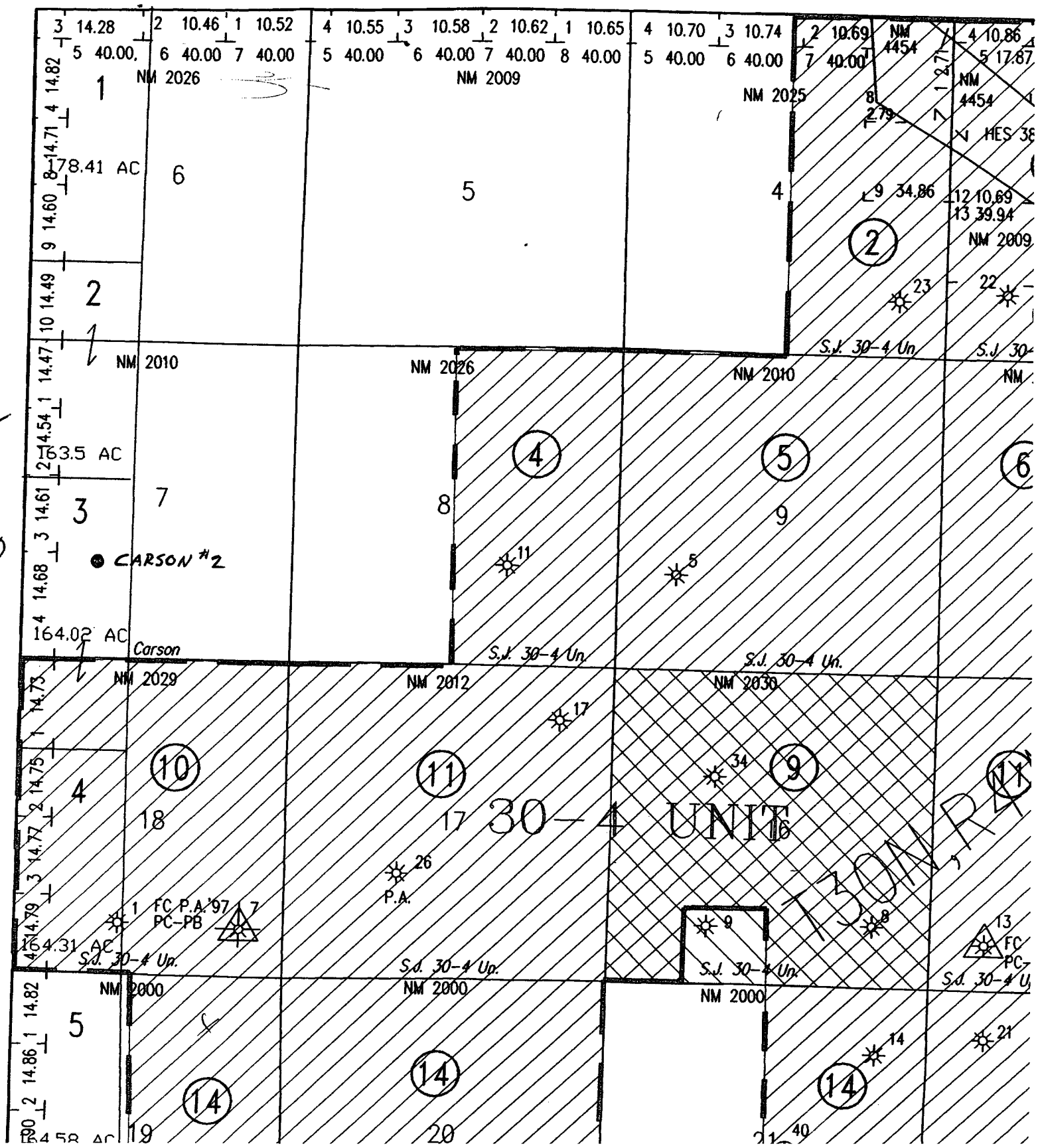
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

<sup>12</sup> Dedicated Acres 164.02 109.29 W/218.30	<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>Not re-surveyed prepared from plat: Dated: Oct. 27, 1979 By: Fred B. Kerr Jr.</p> <p>PC proration unit includes Section 7: Lot 1, 2 E/2 SW/4 Section 18: Lot 1 &amp; NE/4 NW/4 Containing 164.02 acres</p>	<p><b><sup>17</sup> OPERATOR CERTIFICATION</b> <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</i></p> <p> Signature Charlie Donahue Printed Name District Engineer Title 07/10/03 Date</p> <p><b><sup>18</sup> SURVEYOR CERTIFICATION</b> <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 knowledge and belief</i></p> <p> Date of Survey Signature and Seal of Registered Surveyor 6857 Certificate Number</p>
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30  
N



## DISTRICT I

1625 N. French Dr., Hobbs, NM 88240

## DISTRICT II

811 S. First St., Artesia, NM 88210-2835

## DISTRICT III

1000 Rio Brazos Rd, Aztec, NM 87410-1693

## DISTRICT IV

2040 S. Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources

## OIL CONSERVATION DIVISION

2040 S. Pacheco  
Santa Fe, New Mexico 875054-6429Form C-107-A  
Revised March 17, 1999

## APPROVAL PROCESS:

☒ Administrative ☐ Hearing

## EXISTING WELLBORE

☒ YES ☐ NO

## APPLICATION FOR DOWNHOLE COMMINGLING

ENERGEN RESOURCES CORPORATION

2198 Bloomfield Highway, Farmington, NM 87401

Operator

Address

Carson

2

K

7

30N

4W

Rio Arriba

Lease

Well No.

Unit Ltr. - Sec - Twp - Rge

County

Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 162928

Property Code 21185

API NO. 30-039-22083

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	<i>Und.</i> East Blanco PC 72400	Blanco MV 72319	Wildcat Gallup 96426
2. Top and Bottom of Pay Section (Perforations)	3455 - 3690'	5624 - 6095'	7099 - 7512'
3. Type of production (Oil or Gas)	Gas	Gas	Gas
4. Method of Production (Flowing or Artificial Lift)	Not Completed	Flowing	Flowing
5. Bottomhole Pressure Oil Zones - Artificial Lift: Gas & Oil - Flowing: All Gas Zones: Estimated Current Measured Current Estimated Or Measured Original	a. (Current) Not Completed b. (Original) 1075 Est.	a. 895 Calc. b. 1089 Calc.	a. 895 Calc. b. 2607 Calc.
6. Oil Gravity (° API) or Gas BTU Content)	1020 BTU Est.	1036 BTU	1036 BTU
7. Producing or Shut-In?	Not Completed	Producing	Producing
Production Marginal? (yes or no)	Yes	Yes	Yes
* 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	Date: Rates:	Date: Rates:	Date: Rates:
* If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date: Rates: Not Completed	Date: 7/07/03 Rates: 0/41/1	Date: 7/07/03 Rates: 0/84/2
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?  
If not, have all working, overriding, and royalty interests been notified by certified mail?  
Have all offset operators been given written notice of the proposed downhole commingling?☒ Yes ☐ No  
☐ Yes ☐ No  
☒ 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 other? ☒ Yes ☐ No13. Will the value of production be decreased by commingling? ☐ Yes ☒ No (If Yes, attach explanation)14. If this well in on, or communited 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:

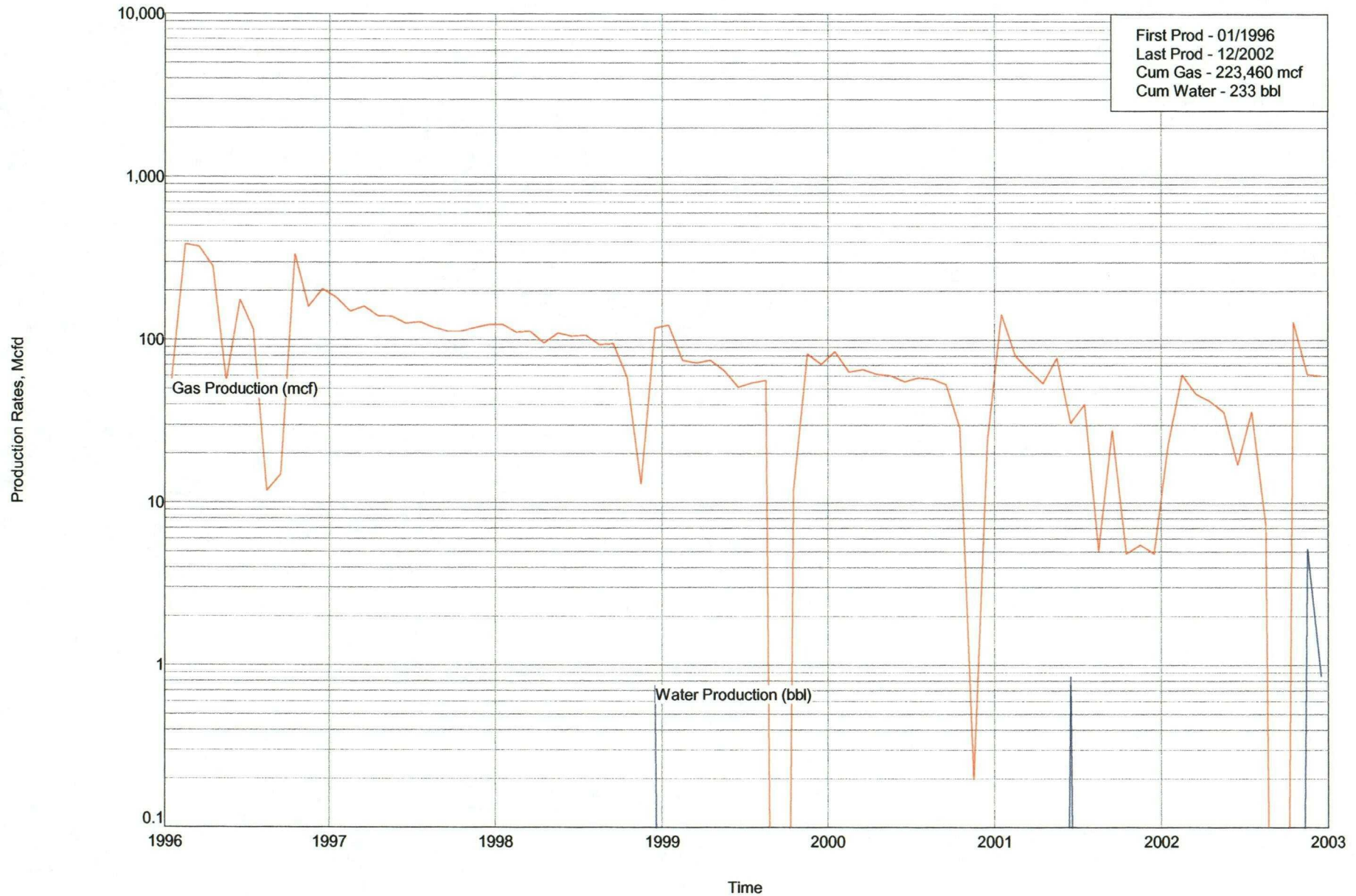
- \* C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
- \* Production curve for each zone for at least one year. (If not available, attach explanation.)
- \* For zones with no production history, estimated production rates and supporting data.
- \* Data to support 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 Charlie Donahue TITLE District Engineer DATE 7/10/2003TYPE OR PRINT NAME Charlie Donahue TELEPHONE NO( 505 ) 325-6800

Lease Name: CARSON  
County, State: RIO ARBA, NM  
Operator: ENERGEN RESOURCES CORPORATION  
Field: BLANCO  
Reservoir: MESAVERDE  
Location: 7 30N 4W SE NW SW

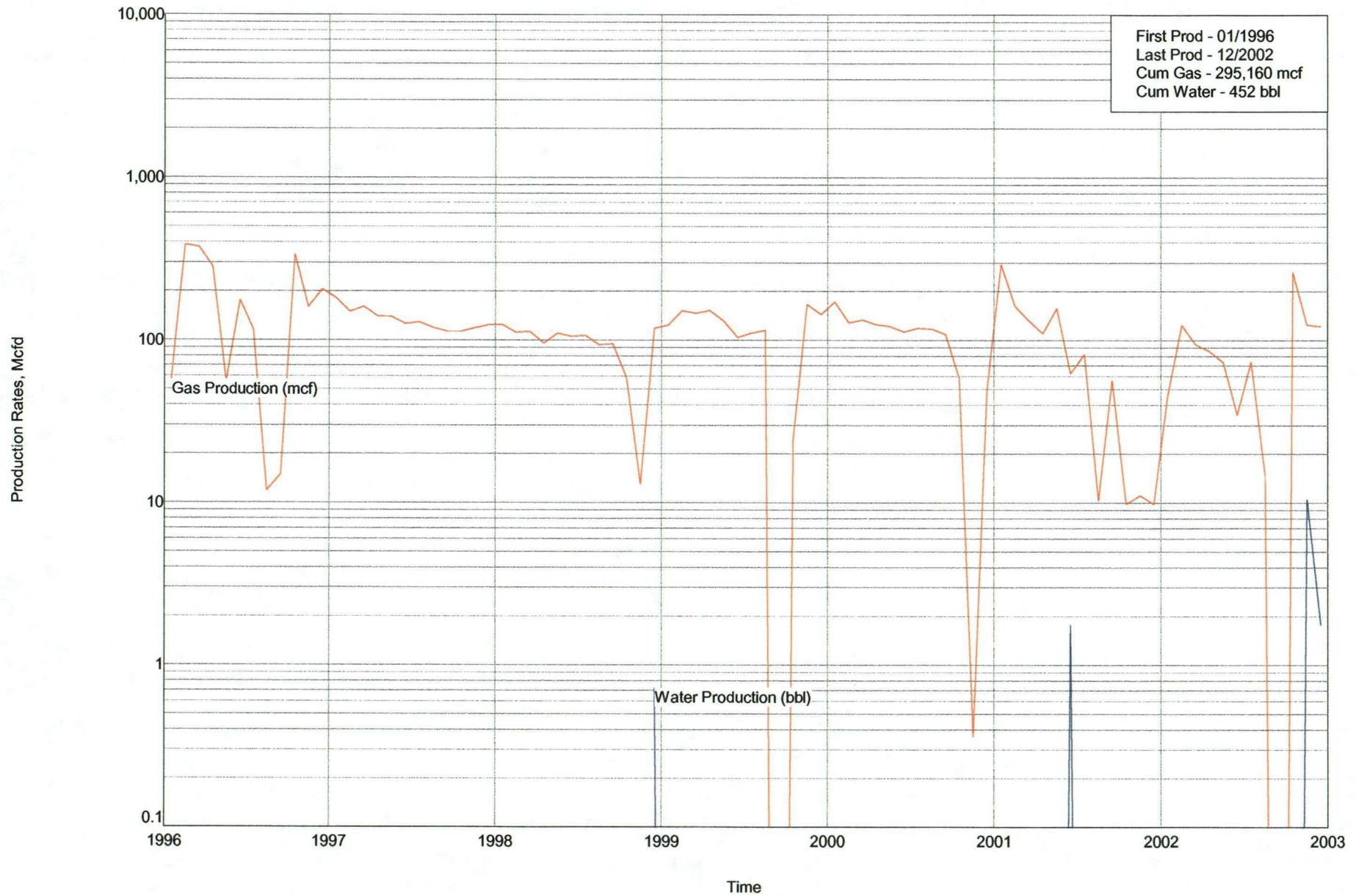
CARSON #2





Lease Name: CARSON  
County, State: RIO ARBA, NM  
Operator: ENERGEN RESOURCES CORPORATION  
Field: WILDCAT 30N04W07K  
Reservoir: GALLUP  
Location: 7 30N 4W SE NW SW

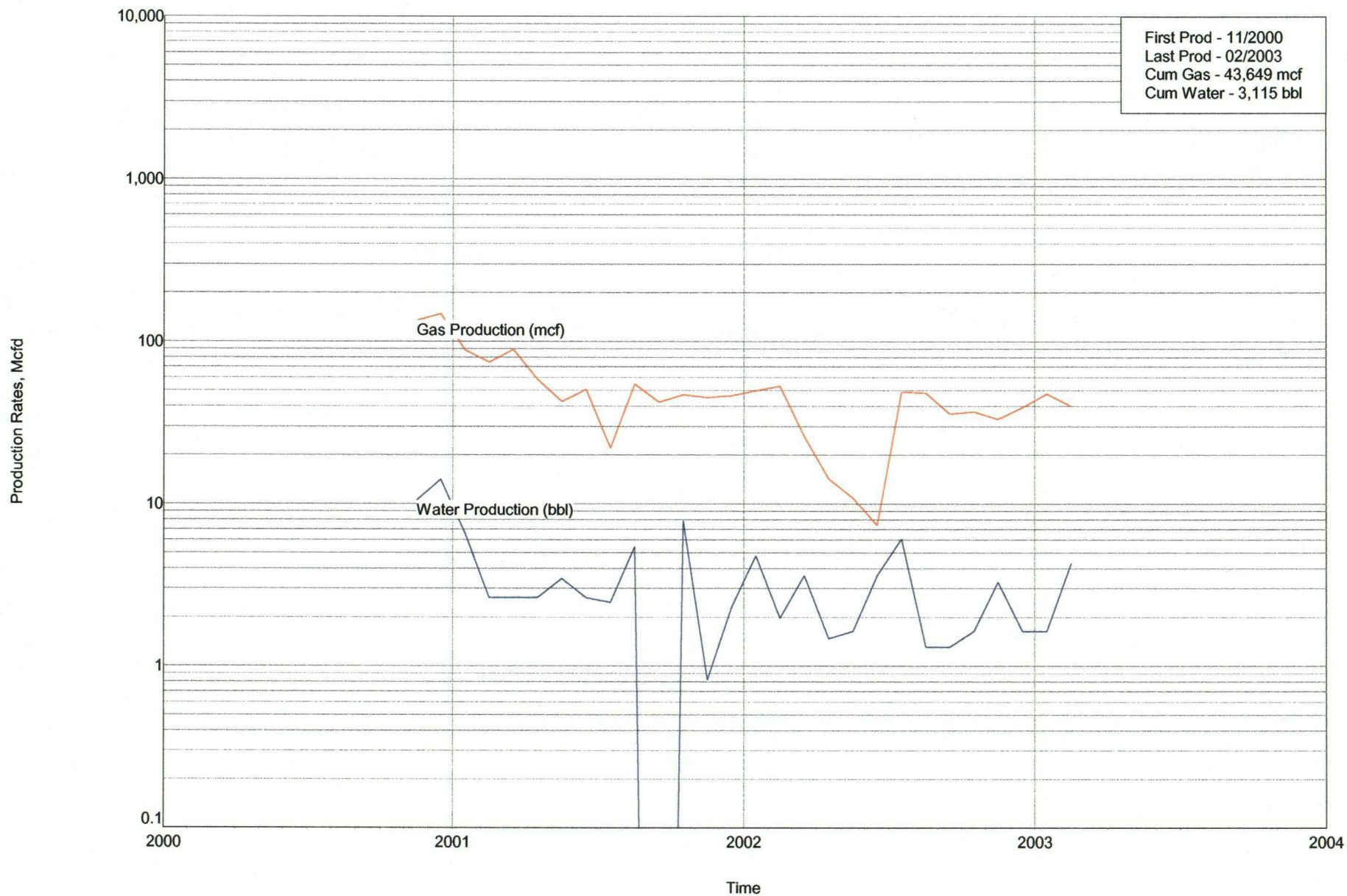
### CARSON #2



Lease Name: SAN JUAN 30 4 UNIT  
County, State: RIO ARBA, NM  
Operator: ENERGEN RESOURCES CORPORATION  
Field: BLANCO EAST  
Reservoir: PICTURED CLIFFS  
Location: 8 30N 4W NW SE NE

PC TYPE CURVE

SAN JUAN 30 4 UNIT #46

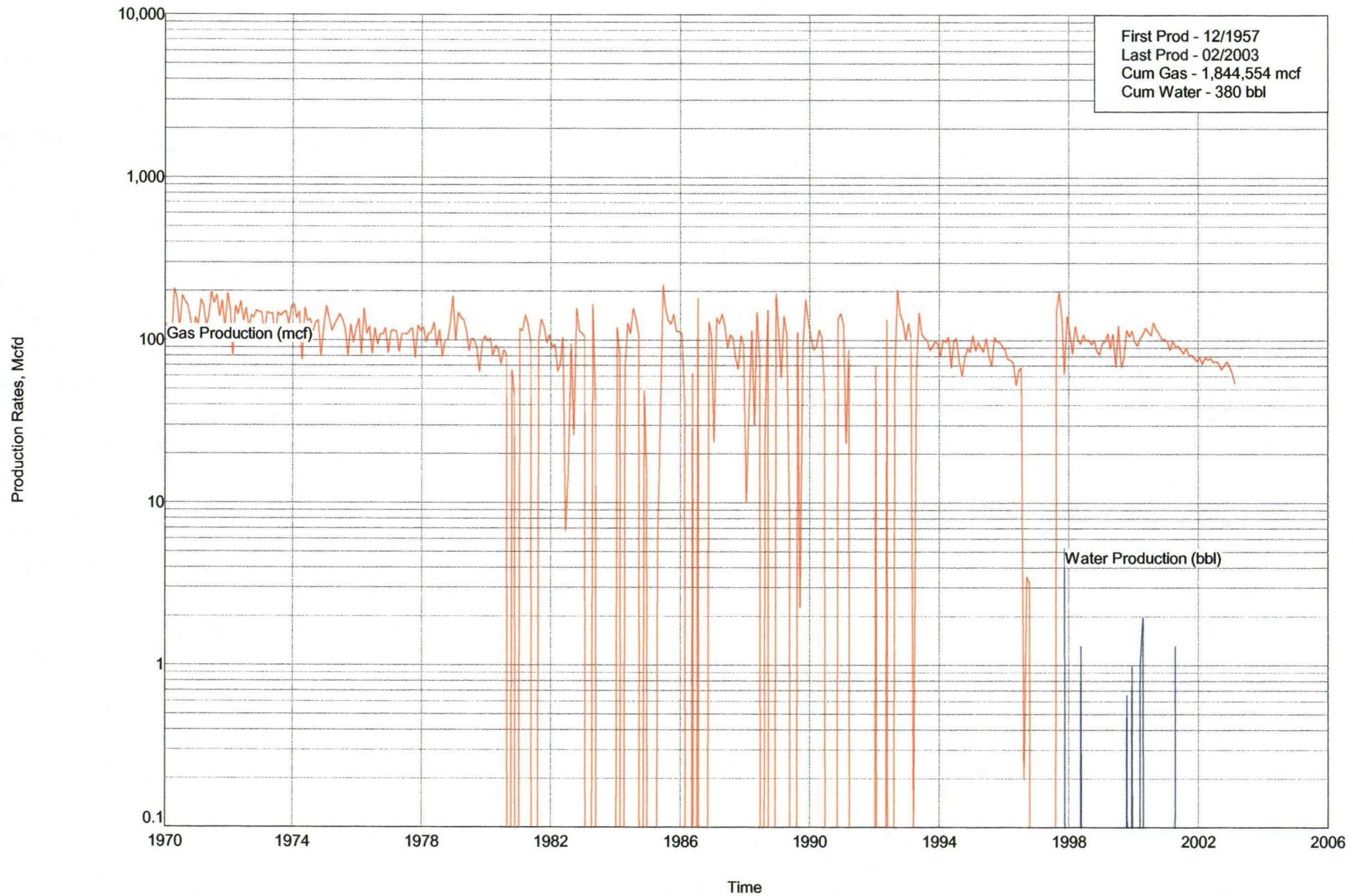




Lease Name: SAN JUAN 30 4 UNIT  
County, State: RIO ARBA, NM  
Operator: ENERGEN RESOURCES CORPORATION  
Field: BLANCO EAST  
Reservoir: PICTURED CLIFFS  
Location: 17 30N 4W SW NE NE

PC TYPE CURVE

SAN JUAN 30 4 UNIT #17



# **Energen Resources Corporation**

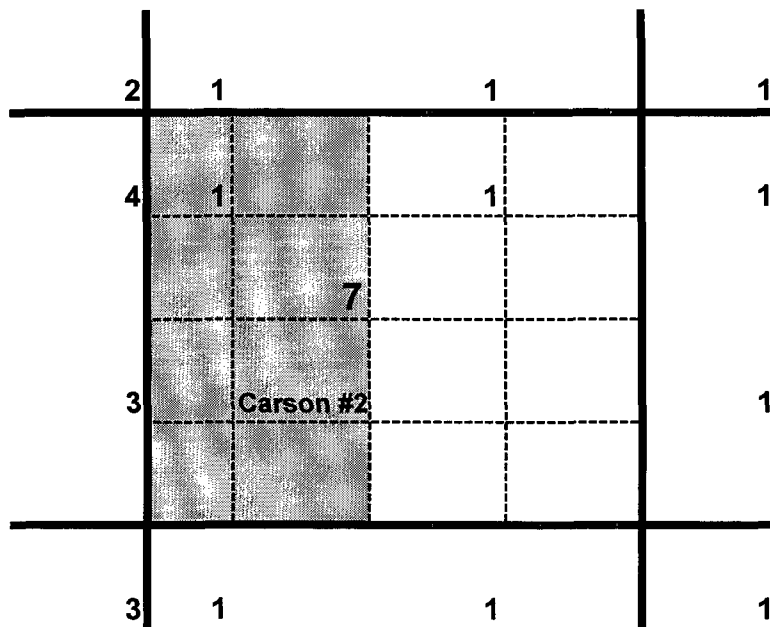
**Carson #2**

**Offset Operator / Ownership Plat**

**East Blanco PC/Blanco Mesaverde/Wildhorse Gallup**

**Downhole Commingling**

**Township 30 North, Range 4 & 5 West**

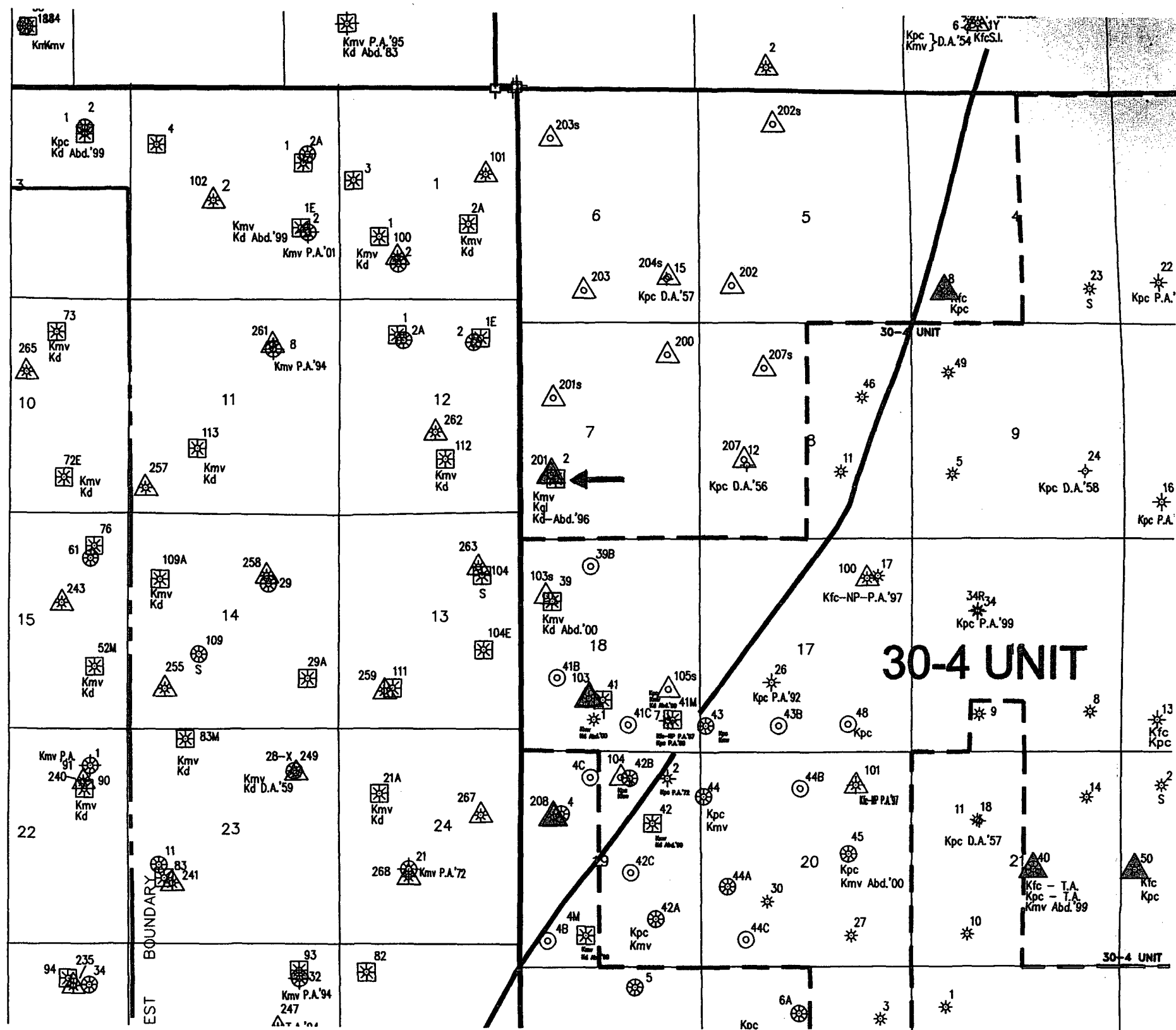


1) Energen Resources

2) Burlington Resources  
P.O. Box 4289  
Farmington, NM 87499

3) Jennifer Barber  
ConocoPhillips  
P.O. Box 2197  
3 Westlake Building  
Houston, TX 77252-2197

4) Schalk Development Company  
PO Box 25825  
Albuquerque, NM 87125



## Carson #2

### Proposed Allocation Method

In accordance with DHC-2740 the allocation for the current wellbore configuration is Mesaverde-33% of the Gas, Gallup-67% of the gas; 100% of the oil.

Currently, the well is producing 125 MCFD and 0 BOPD as a commingled Blanco Mesaverde/Wildcat Gallup. It is anticipated that the Pictured Cliffs will add 75-125 MCFD to the total flow stream.

Following 60 days of stabilized production from the Pictured Cliffs pay add, use subtraction method as follows:

Total stream = X

Mesaverde/Gallup = 125 MCFD

Mesaverde/Gallup Allocation =  $125 / X$  as a percentage

Split allocation for MV/GL per previous approved rates

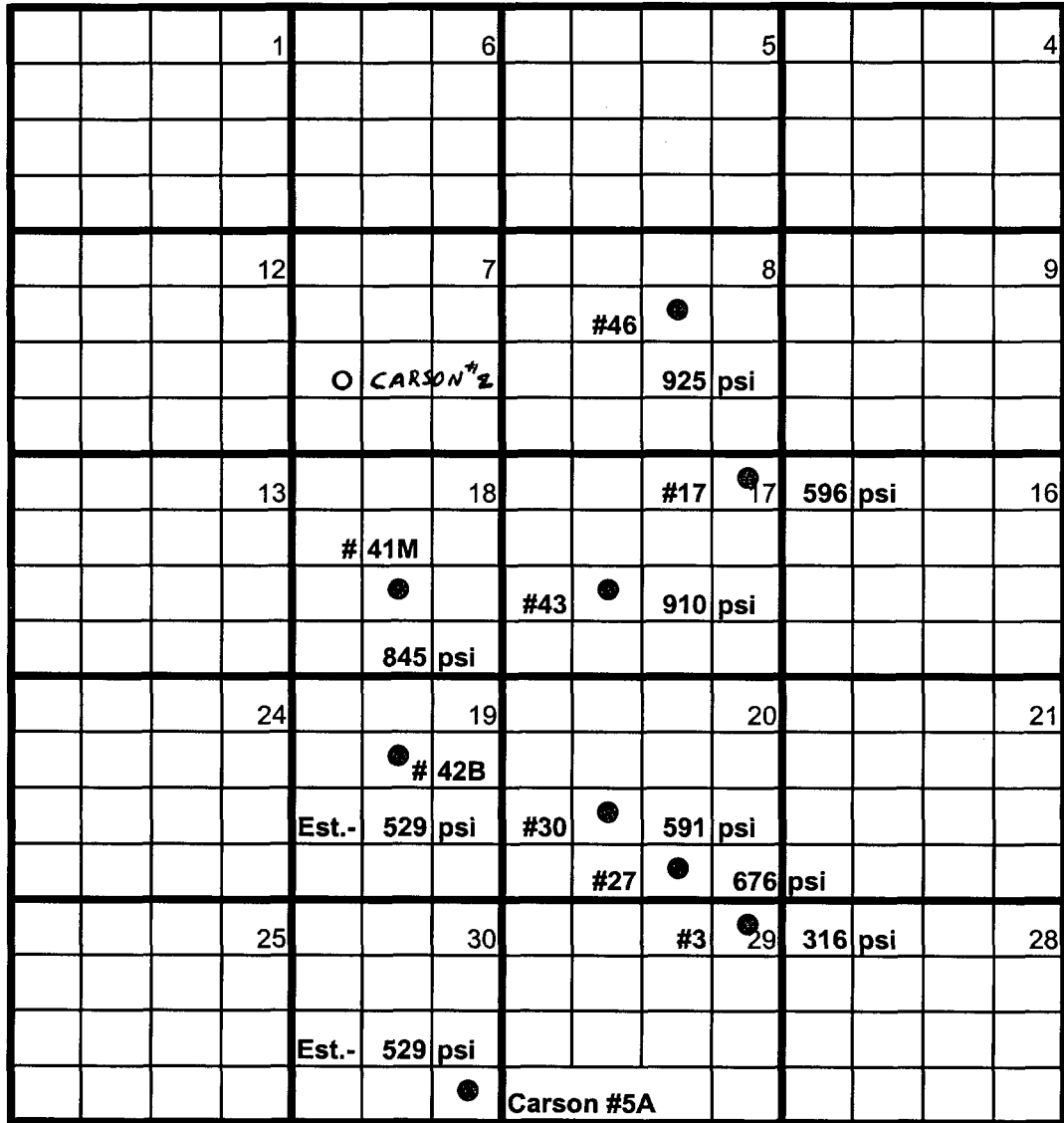
PC allocation =  $(X-125)/X$

PC oil allocation = 0%

Rates will be reported to NMOCD- Aztec for final allocation percentage determination

# Energen Resources Corporation

## Current Pictured Cliffs Bottomhole Pressures Area offsetting Carson #2





## Initial Pictured Cliffs Bottomhole Pressures Area offsetting Carson #2

