

1/5/01 1/25/01 DC M DHC

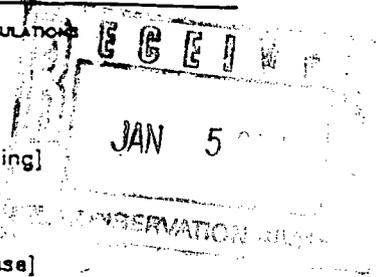
ABOVE THIS LINE FOR DIVISION USE ONLY

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NEW MEXICO OIL CONSERVATION DIVISION - Engineering Bureau -

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 [x] DHC [ ] CTB [ ] PLC [ ] PC [ ] OLS [ ] OLM
- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery [ ] WFX [ ] PMX [ ] SWD [ ] IPI [ ] EOR [ ] PPR

2869

[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] [x] 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, I, ORRJ) 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

GARY BRINK Print or Type Name

[Signature] Signature

Production Supt. Title

1/3/01 Date



January 2, 2001

Ms. Lori Wrotenbery  
New Mexico Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505

RE: Administrative Approval to Downhole Commingle  
Energen Resources Corporation  
Jicarilla 96 #8B  
1980' FNL, 685' FWL, Sec. 12, T26N R3W, NMPM  
Rio Arriba County, New Mexico

Dear Ms. Wrotenbery:

Energen Resources Corporation requests administrative approval to downhole commingle the Gavilan Pictured Cliffs and Blanco Mesa Verde pools in the subject well. As applied for in the Drilling Permit, it is felt that commingling is the most economical method to recover gas from both zones in the subject well. Offset wells in this area have experienced liquid loading problems and it is felt downhole commingling would improve the overall producing efficiency of the well.

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

1. For C-107A - Application for Downhole Commingling
2. C-102 - Location plat showing each spacing unit and dedicated acreage
3. Production curves from offset Pictured Cliffs and Mesa Verde wells
4. Offset operator plat
5. Well location plat
6. Allocation method

In accordance to New Mexico Oil Conservation Division Rule 303C, Energen Resources operates all offset proration units.

If additional information is needed, please contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Gary W. Brink".

Gary W. Brink  
Production Superintendent

GWB/vd

xc: NMOCD – Aztec  
BLM – Albuquerque

DISTRICT I

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

DISTRICT II

811 S. 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

Form C-107-A  
New 3-12-96

OIL CONSERVATION DIVISION

2040 S. Pacheco  
Santa Fe, New Mexico 875054-6429

APPROVAL PROCESS:

Administrative  Hearing

EXISTING WELLBORE

YES  NO

APPLICATION FOR DOWNHOLE COMMINGLING

Operator Energen Resources Corporation Address 2198 Bloomfield Highway, Farmington, New Mexico 87401

Lease Jicarilla 96 Well No. 8B Unit Ltr. - Sec - Twp - Rge E Sec. 12 T26N R3W County Rio Arriba

OGRID NO. 162928 Property Code 21938 API NO. 30-039-26572 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	Gavilan PC 77360		Blanco MV 72319
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)	flowing		flowing
5. Bottomhole Pressure Oil Zones - Artificial Lift: Estimated Current Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated Or Measured Original	a. (Current) not drilled yet	a.	a. 740 estimated
	b. (Original) 1120 psi estimated	b.	b. 2000 psi estimated
6. Oil Gravity ( <sup>o</sup> API) or Gas BTU Content)	1202 BTU		1210 BTU
7. Producing or Shut-In?	not drilled		not drilled
Production Marginal? (yes or no)	yes		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	Date: Rates:	Date: Rates:	Date: Rates:
* If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date: Rates:	Date: Rates:	Date: Rates:
8. Fixed Percentage Allocation Formula - % for each zone	Oil: % Gas: % <i>SEE ATTACHED ALLOCATION</i>	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 in 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 *Gary W. Brink* TITLE Prod. Superintendent DATE 01/03/01

TYPE OR PRINT NAME Gary W. Brink TELEPHONE NO. ( 505 ) 325-6800

District I  
PO Box 1980, Hobbs, NM 88241-1980

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised February 21, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

District II  
PO Drawer DD, Artesia, NM 88211-0719

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

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

AMENDED REPORT

District IV  
PO Box 2088, Santa Fe, NM 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-039-26572		2 Pool Code 72319 / 77360		3 Pool Name Blanco Mesaverde / Gavilan Pictured Cliffs	
4 Property Code 21938		5 Property Name JICARILLA 96			6 Well Number 88
7 OGRID No. 162928		8 Operator Name ENERGEN RESOURCES CORPORATION			9 Elevation 7154'

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	12	26N	3W		1980	NORTH	685	WEST	RIO ARRIBA

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

12 Dedicated Acres 160/320				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

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

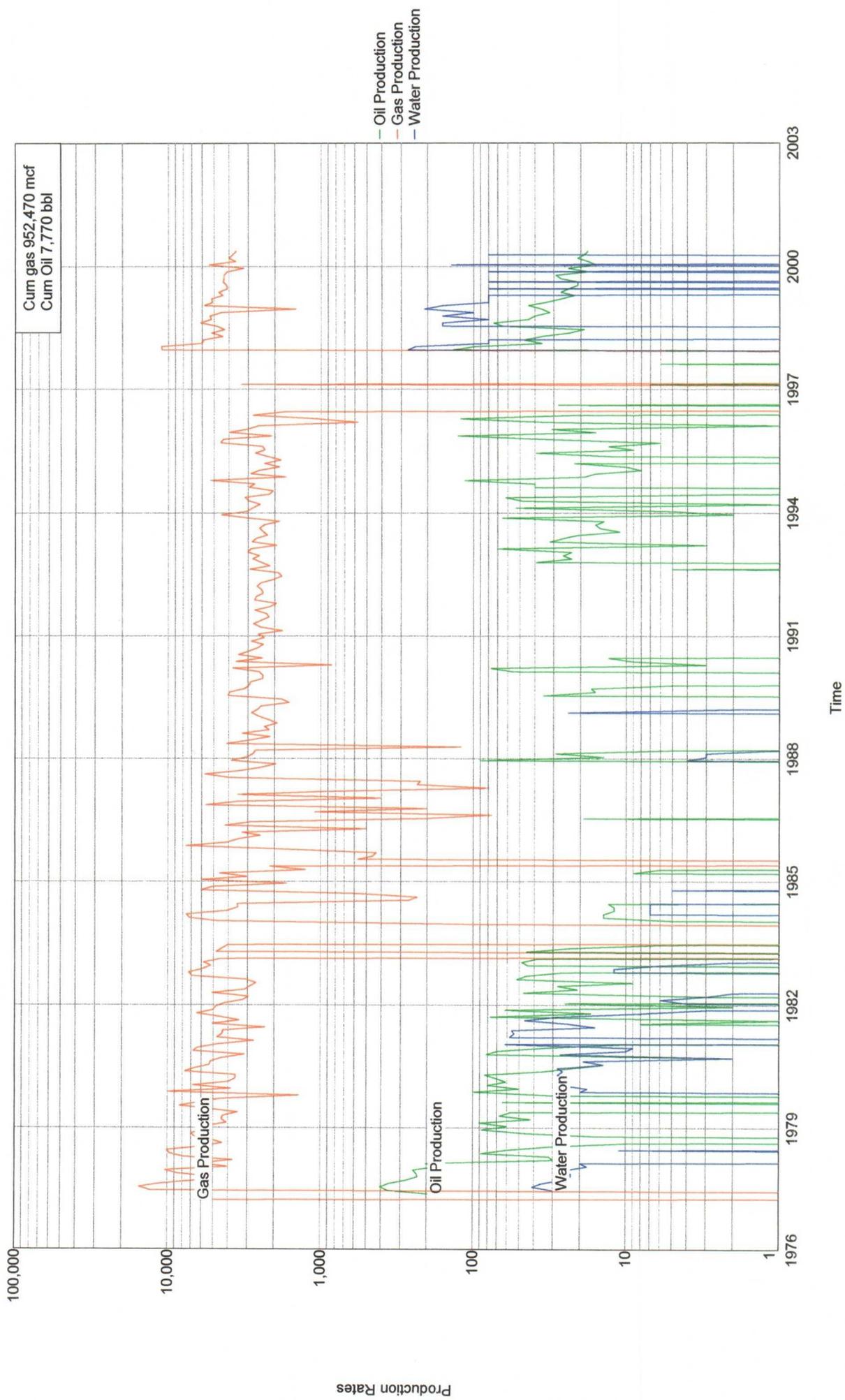
*[Signature]*  
Signature  
Gary Brink  
Printed Name  
Production Superintendant  
Title  
9/1/00  
Date

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.

JULY 14, 2000  
Date of Survey  
Signature and Seal  
**NEALE C. EDWARDS**  
NEW MEXICO  
6857  
REGISTERED PROFESSIONAL SURVEYOR  
Certificate Number 6857

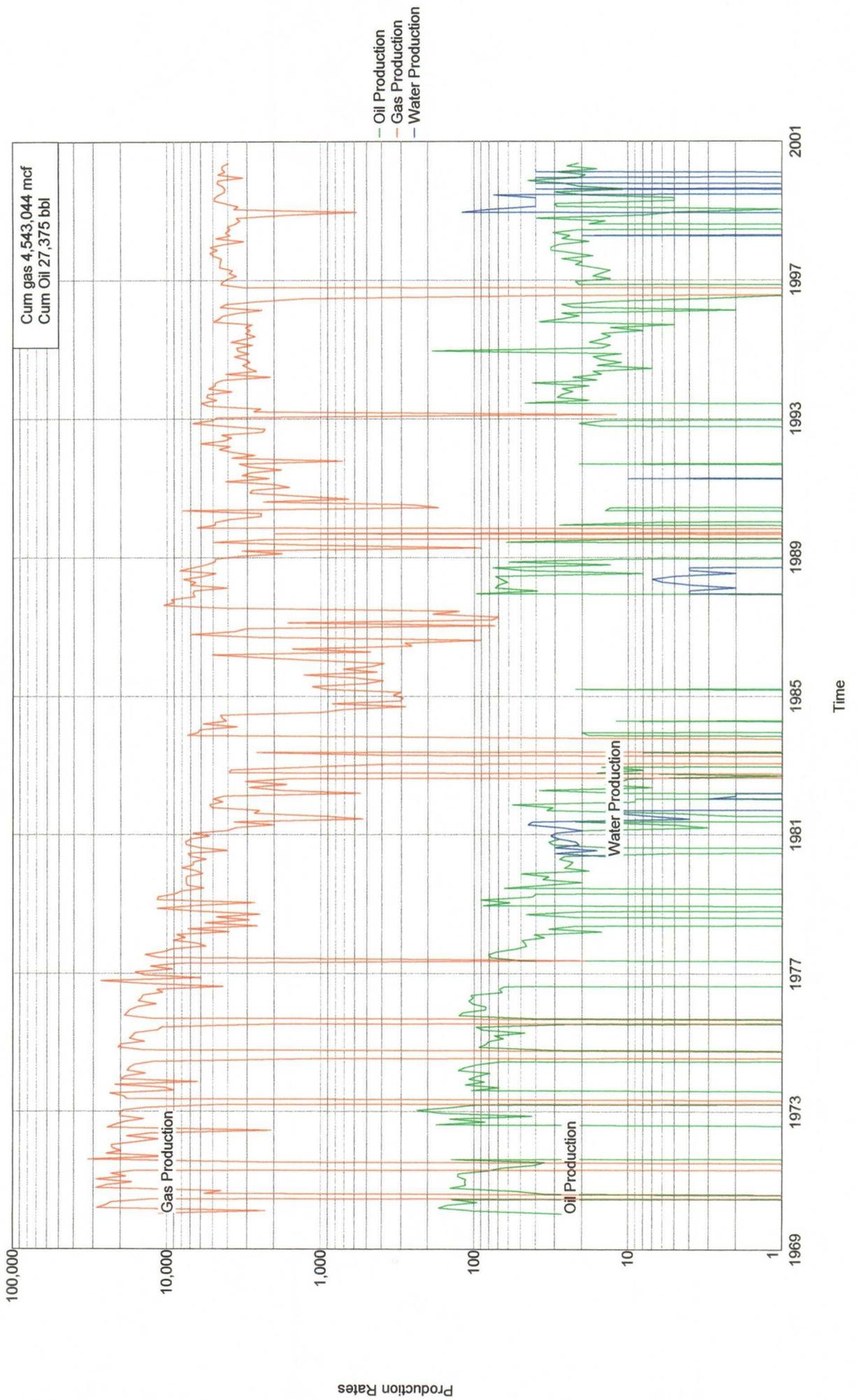
Lease Name: JICARILLA 96  
 County, State: RIO ARBA, NM  
 Operator: TAURUS EXPLORATION USA INCORPORATED  
 Field: BLANCO  
 Reservoir: MESAVERDE  
 Location: D-12-26-3

Jicarilla 96 #8A



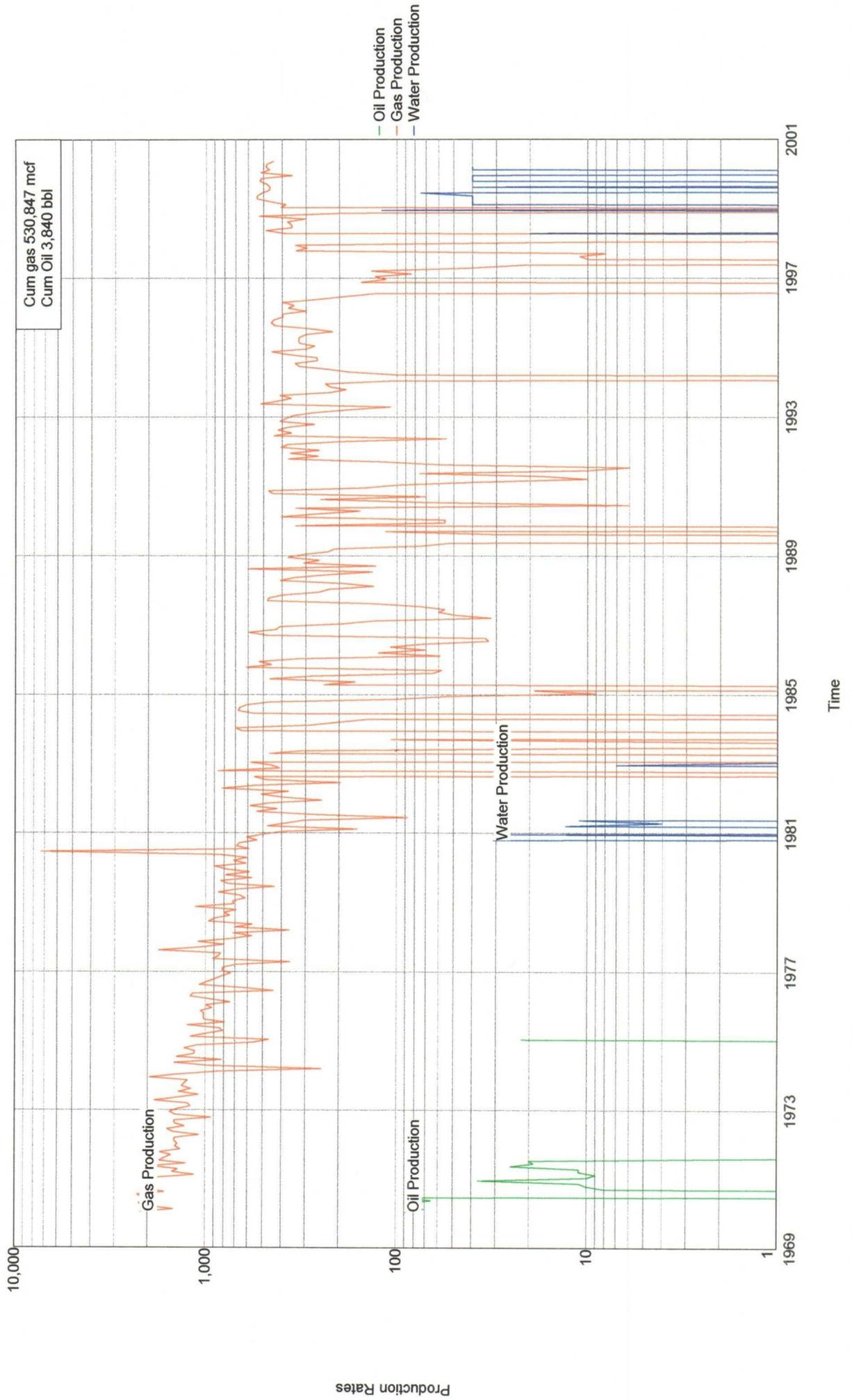
Lease Name: JICARILLA 96  
 County, State: RIO ARBA, NM  
 Operator: TAURUS EXPLORATION USA INCORPORATED  
 Field: BLANCO  
 Reservoir: MESAVERDE  
 Location: M-J-26-3

Jicarilla 96 #7



Lease Name: JICARILLA 96  
 County, State: RIO ARBA, NM  
 Operator: TAURUS EXPLORATION USA INCORPORATED  
 Field: GAVILAN  
 Reservoir: PICTURED CLIFFS  
 Location: M-1-26-3

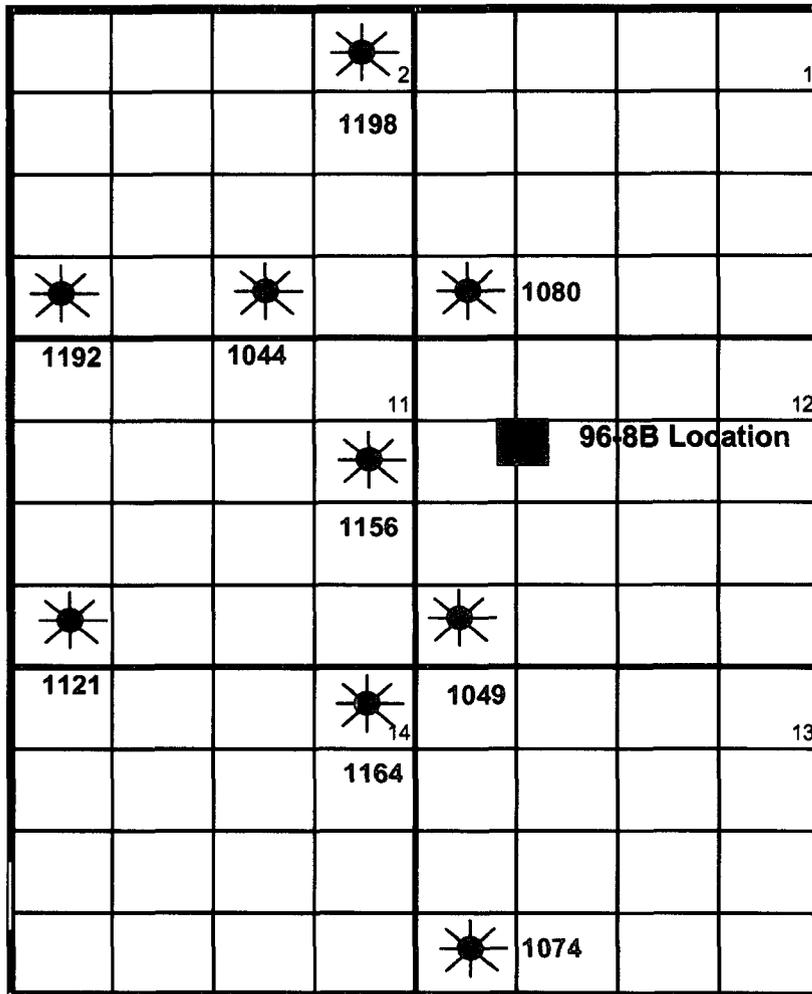
Jicarilla 96 #7



**Pictured Cliffs Initial Shut-In Bottom Hole Pressure**  
(In T26N-R3W Area Near 96-8B Location)

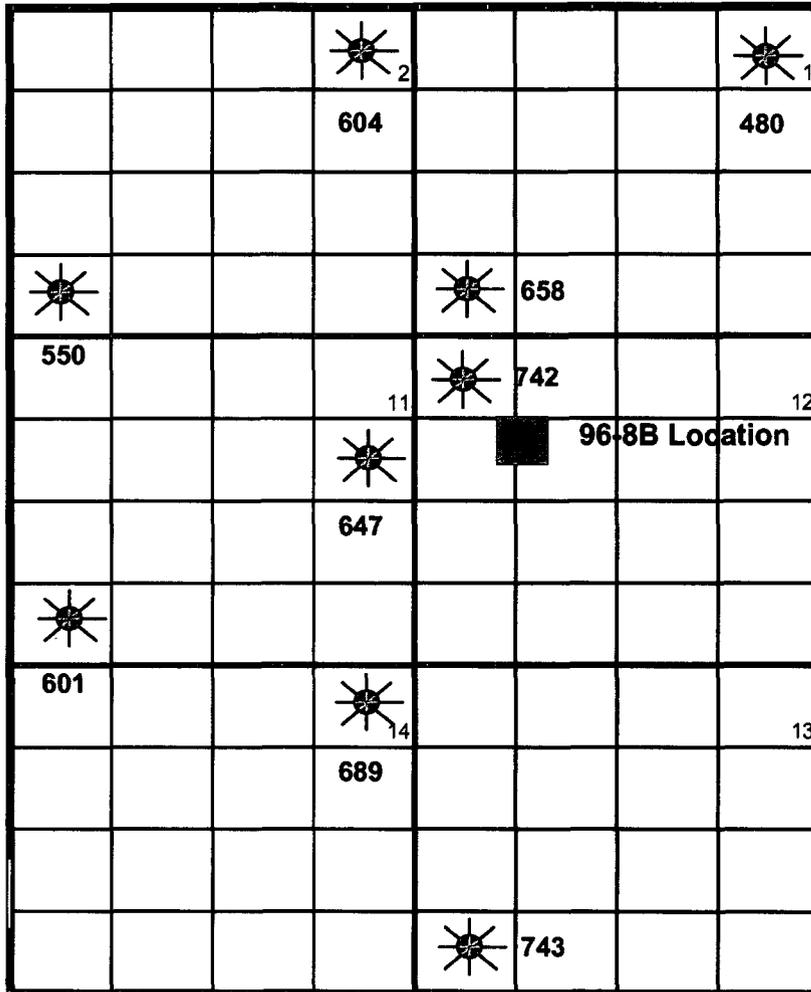
Well	Sec	TWN-RNGE	First Production Date	Initial Shut-In BHP, psia
Jic 96#7	1M	26-3	5812	1080
Jic 96#2	2A	26-3	5707	1198
Jic 96#6	2M	26-3	5712	1192
Jic 96#9	2O	26-3	6201	1044
Jic 96#11	11H	26-3	5703	1156
Jic 96#5	11M	26-3	5712	1121
Jic 96#8	12M	26-3	5812	1049
Jic 99#7	13M	26-3	5810	1074
Jic 99#2	14A	26-3	5706	1164

Initial Pictured Cliffs Shut-In Bottom Hole Pressure  
(In T26N R3W Area Near 96-8B Location)



☀ PC Well  
Initial BHP, psia

Current Mesaverde Shut-In Bottom Hole Pressures  
 In T26N R3W Area Near 96-8B Location



 MV Well

Current BHP, psia

Current Mesaverde Shut-In Bottom Hole Pressures  
(In T26N-R3W Area Near 96-8B Location)

Well	Sec	TWN-RNGE	FD Date	Initial BHP, psia	Current BHP, psia
Jic96#8A	12D	26-3	7703	1469	742
Jic 99#7	13M	26-3	5810	1868	743
Jic 99#2	14A	26-3	5706	2006	689
Jic 96#4	1A	26-3	5712	1862	480
Jic 96#7	1M	26-3	5901	2012	658
Jic 96#2	2A	26-3	5707	2008	604
Jic 96#6	2M	26-3	5712	2082	550
Jic 96#1	11H	26-3	5703	2027	647
Jic 96#5	11M	26-3	5804	1909	601

# Energen Resources Corp.

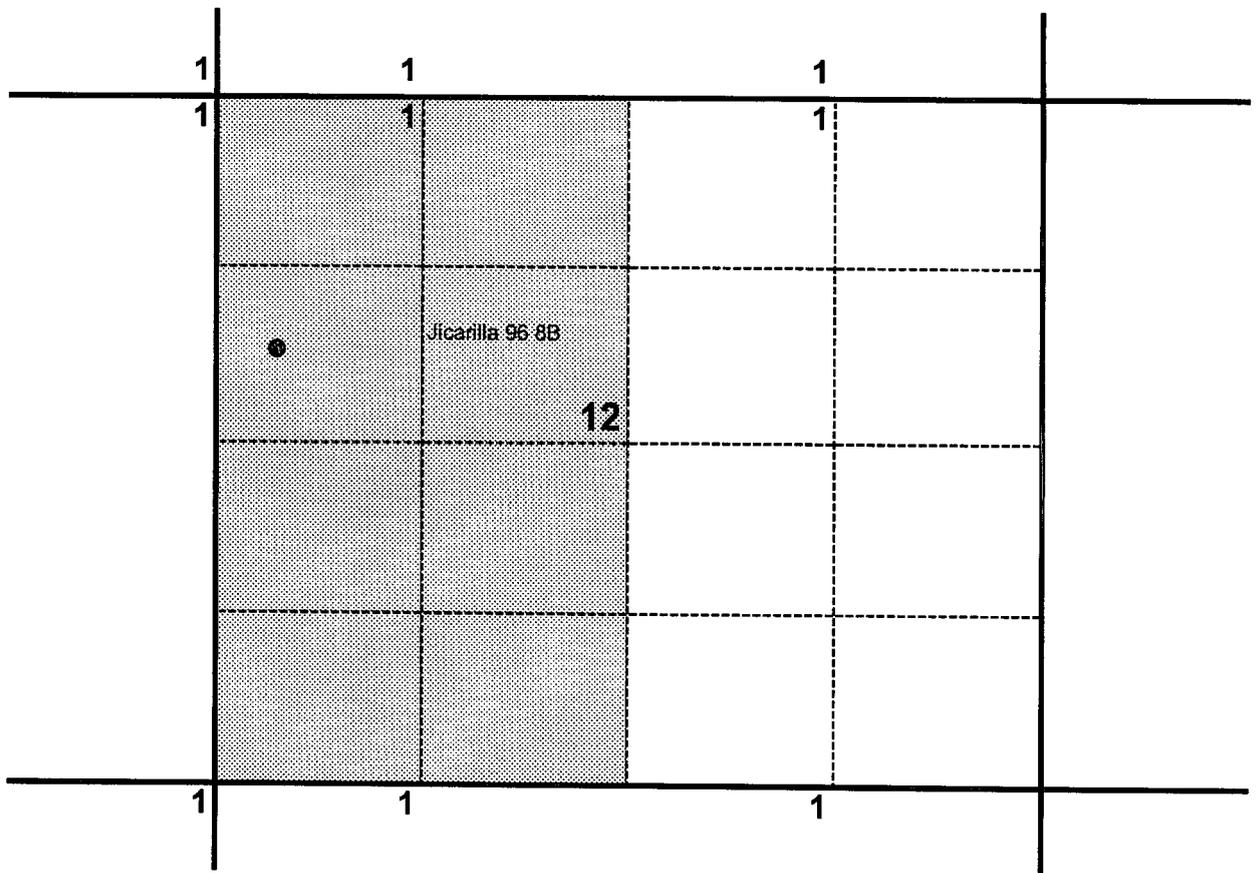
Jicarilla 96 #8B

Offset Operator / Ownership Plat

Gavilan Pictured Cliffs/ Blanco Mesa Verde

Downhole Commingling

Township 26 N, Range 3 W



1) Energen Resources



## **Recommended Allocation Method**

1. Complete both Pictured Cliffs and Mesa Verde intervals.
2. Clean out well to total depth with air mist and test combined flowstream.
3. Run RBP and set above Mesa Verde perforations and flow test Pictured Cliffs interval.
4. Remove RBP and finalize completion.
5. Report test results to NMOCD Aztec District office.
6. Allocate Production as follows:

$$PC = PC \text{ test rate} / \text{total combined rate}$$

$$MV = \text{Total combined rate} - PC \text{ test rate} / \text{total combined rate}$$