

10/25/99	11/15/99	DC	W	DHC
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

25/5

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]

OCT 25 1999

CONSERVATION DIVISION

[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: Statements must be completed by an individual with supervisory capacity

GARY BENK

Print or Type Name

Signature

Title

Production Spt.

10/22/99

Date



October 22, 1999

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

RE: Administrative Approval to Downhole Commingle
Energen Resources Corporation
Jicarilla 152W #2
990 FNL, 1650 FEL, Sec. 5, T26N, R5W, N.M.P.M.
Rio Arriba County, New Mexico

Dear Ms. Wrotenbery:

Energen Resources Corporation, requests to downhole commingle the S. Blanco Pictured Cliffs, Blanco Mesaverde and Basin Dakota pools in the subject well. The well is currently producing as a Pictured Cliffs/Mesaverde dual completion. The Dakota zone was temporarily abandoned in 1967 when a blanking plug was set in the tubing to repair a packer leak. In addition, the Mesaverde is experiencing liquid loading problems due to mechanical restrictions and it is felt downhole commingling would eliminate excessive operational problems and recover the lost reserves in the Dakota Pool by returning it to production.

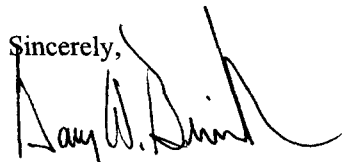
To comply with New Mexico Oil Conservation Rules, Energen Resources Corporation, is submitting the following data for your approval of the proposed commingling:

1. For C107A – Application for Downhole Commingle
2. C102 – Location plat showing each spacing unit and dedicated acreage
3. Production curves for both the Pictured Cliffs, Mesaverde and Dakota
4. Offset operator plat
5. Well location plat
6. Proposed allocation method

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,



Gary W. Brink
Production Superintendent

GWB/mt

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

Jic152W 4.doc

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

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 875054-6429Form C-107-A
New 3-12-96

APPROVAL PROCESS:

☒ Administrative ☐ Hearing

EXISTING WELLBORE

☒ YES ☐ NO

APPLICATION FOR DOWNHOLE COMMINGLING

ENERGEN RESOURCES CORPORATION 2198 Bloomfield Highway, Farmington, New Mexico 87401
Operator AddressJicarilla 152 W 2 B Sec. 5 T26N R5W Rio Arriba
Lease Well No. Unit Ltr. - Sec - Twp - Rge CountyOGRID NO. 162928 Property Code 21949 API NO. 30-039-06726 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	S Blanco Pictured Cliffs 72439	Blanco Mesaverde 72319	Basin Dakota 71599
2. Top and Bottom of Pay Section (Perforations)	3132-3184	4820-5426	7464-7572
3. Type of production (Oil or Gas)	Gas	Gas	Gas
4. Method of Production (Flowing or Artificial Lift)	Flowing	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) 516 calc. b. (Original) 1159 calc.	a. 622 calc. b. 1284 calc.	a. 983 calc. b. 2724 calc.
6. Oil Gravity (^o API) or Gas BTU Content)	1203 BTU	1187 BTU	1222 BTU
7. Producing or Shut-In?	Producing	Producing	Shut In
Production Marginal? (yes or no)	Yes	No	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: Est. Jic 152W 6 Rates: .5/80/.1
* If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date: 10/12/99 Rates: 0/33/.1	Date: 10/4/99 Rates: .5/124/.2	Date: Rates:
8. Fixed Percentage Allocation Formula - % for each zone	Oil: % Gas: % See %	Oil: % Gas: % Attached % Alloc. %	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 ☐ 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 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 10/22/99TYPE OR PRINT NAME Gary W. Brink TELEPHONE NO. (505) 325-6800

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
811 S. 1st Street, Artesia, NM 88210-2834
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-102
Revised October 18, 1994

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

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-06726	² Pool Code 72439/72319/71599	³ Pool Name S. Blanco PC/Blanco MV/Basin DK
⁴ Property Code 21949	⁵ Property Name Jicarilla 152 W	⁶ Well Number 2
⁷ OGRID No. 162928	⁸ Operator Name ENERGEN RESOURCES CORPORATION	⁹ Elevation 6493

¹⁰ Surface Location									
UL or lot no. B	Section 5	Township 26N	Range 5W	Lot. Idn	Feet from the 990	North/South Line North	Feet from the 1650	East/West line East	County 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 159.7 & 319.70		¹³ Joint or Infill	¹⁴ Consolidation Code		¹⁵ Order No.				

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>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</i> Signature Gary W. Brink Printed Name Production Superintendent Title 10/22/99 Date	
	¹⁸ SURVEYOR CERTIFICATION <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 belief.</i> July 13, 1956 Date of Survey Signature and Seal of Professional Surveyer: Reissue of original survey by Ernest Echohawk Certificate Number	

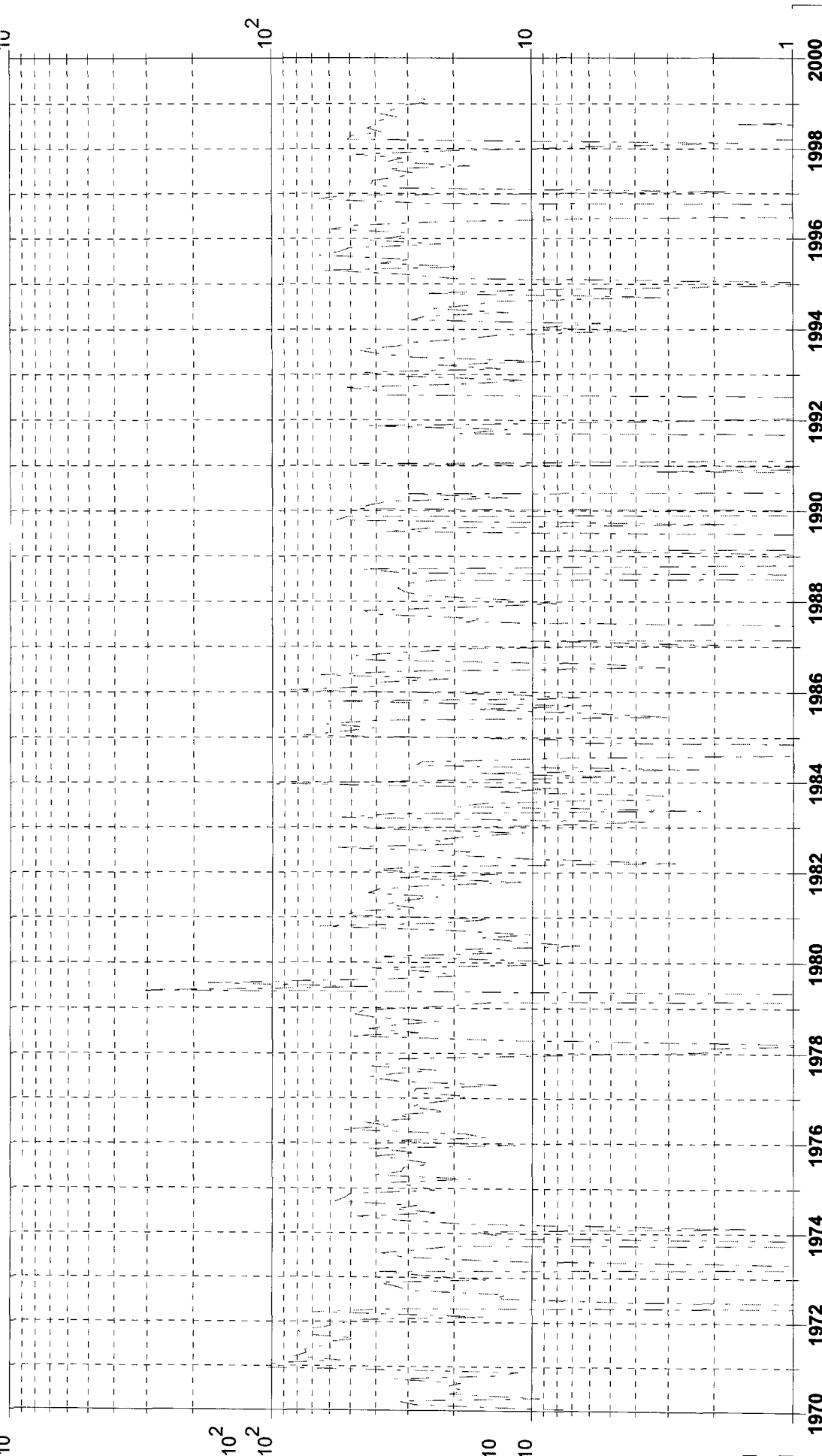
Dwights

10/21/99

Retrieval Code: 251,039,26N05W05B00PC

Lease: JICARILLA 152 W (2)

10³
10³



Gas (mcf/day)

Water (bbl/day)

Oil (bbl/day)

County: RIO ARRIBA, NM

F.P. Date: 04/57

Field: BLANCO SOUTH (PICTURE CLIFFS) PC Oil Cum: 0 bbl

Reservoir: PICTURE CLIFFS

Gas Cum: 618.5 mmcf

Operator: ENERGEN RESOURCES

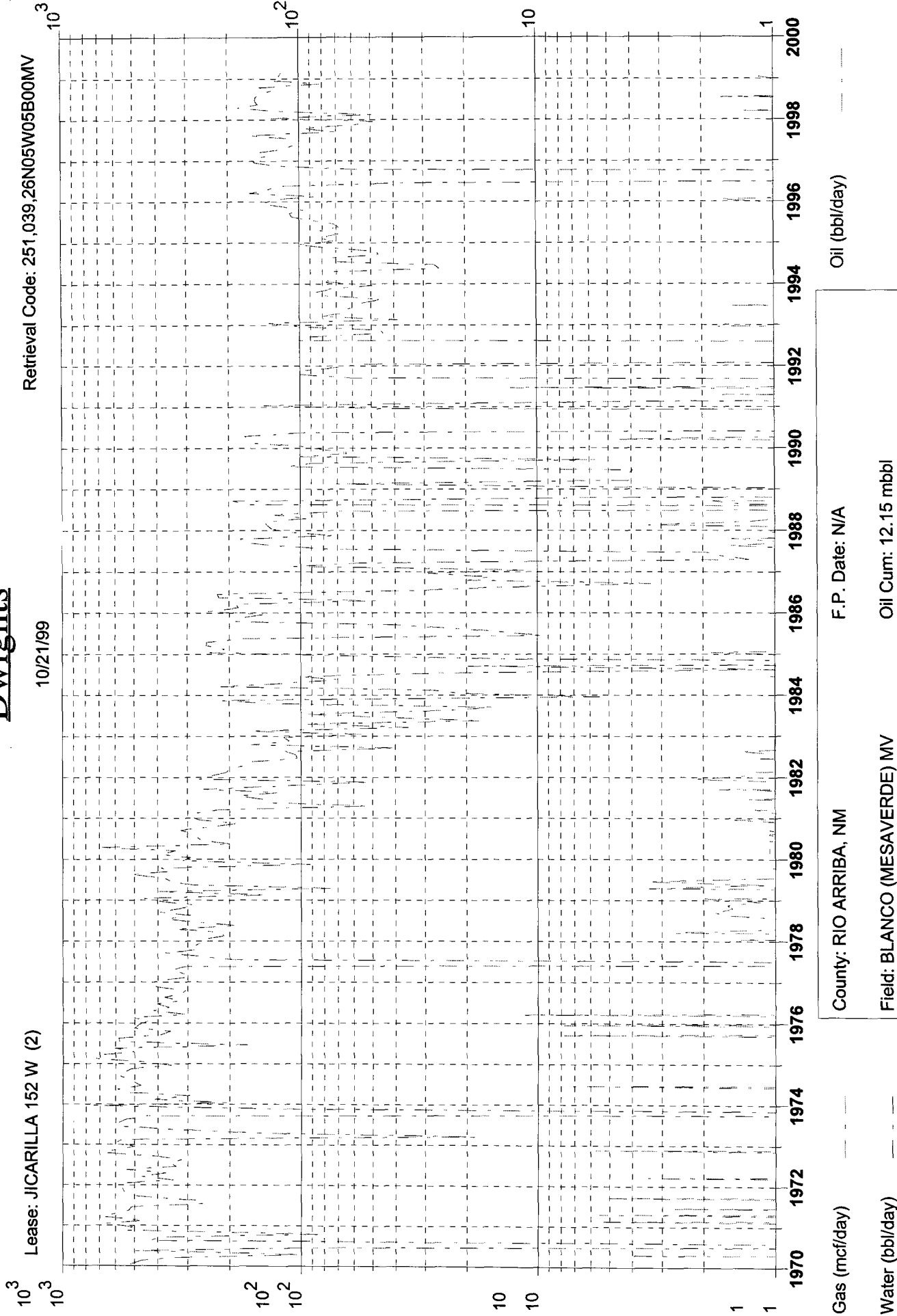
Location: 5B 26N 5W

Dwights

Lease: JICARILLA 152 W (2)

10/21/99

Retrieval Code: 251,039,26N05W05B00MV



Gas (mcf/day)

Water (bbl/day)

Oil (bbl/day)

County: RIO ARRIBA, NM

F.P. Date: N/A

Field: BLANCO (MESAVERDE) MV

Oil Cum: 12.15 mbbl

Reservoir: MESAVERDE

Gas Cum: 3920 mmcf

Operator: ENERGEN RESOURCES

Location: 5B 26N 5W

Lease: JICARILLA 152 W (000002)

Dwights

10/21/99

Retrieval Code: 251,039,26N05W05BPADK

No Data or Data Out of Range for This Property

Gas (mcf/day)

Water (bbl/day)

Oil (bbl/day)

County: RIO ARRIBA, NM

Field: BASIN (DAKOTA) DK

Reservoir: DAKOTA

Operator ENERGEN RESOURCES

F.P. Date: N/A

Oil Cum: 3247 bbl

Gas Cum: 451.5 mmcf

Location: 5B 26N 5W

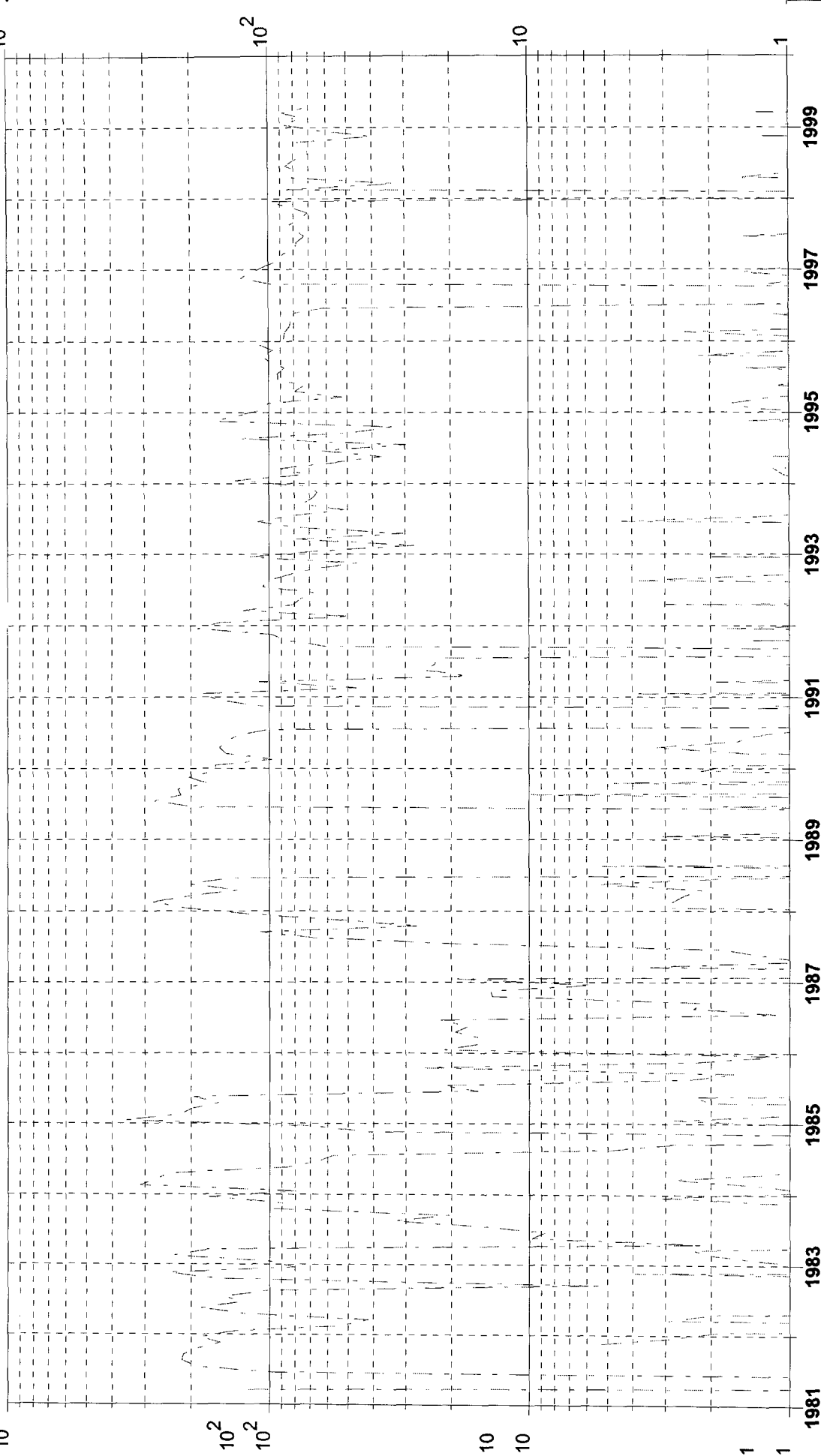
Dwights

Lease: JICARILLA 152 W (6)

Retrieval Code: 251,039,26N05W05E00DK

10/21/99

10³
10³
10³



Gas (mcf/day)

Water (bbl/day)

Oil (bbl/day)

F.P. Date: 03/81

Oil Cum: 5162 bbl

Gas Cum: 556.0 mmcf

Location: 5E 26N 5W

County: RIO ARRIBA, NM

Field: BASIN (DAKOTA) DK

Reservoir: DAKOTA

Operator: ENERGEN RESOURCES

TYPE CURVE OF DAKOTA

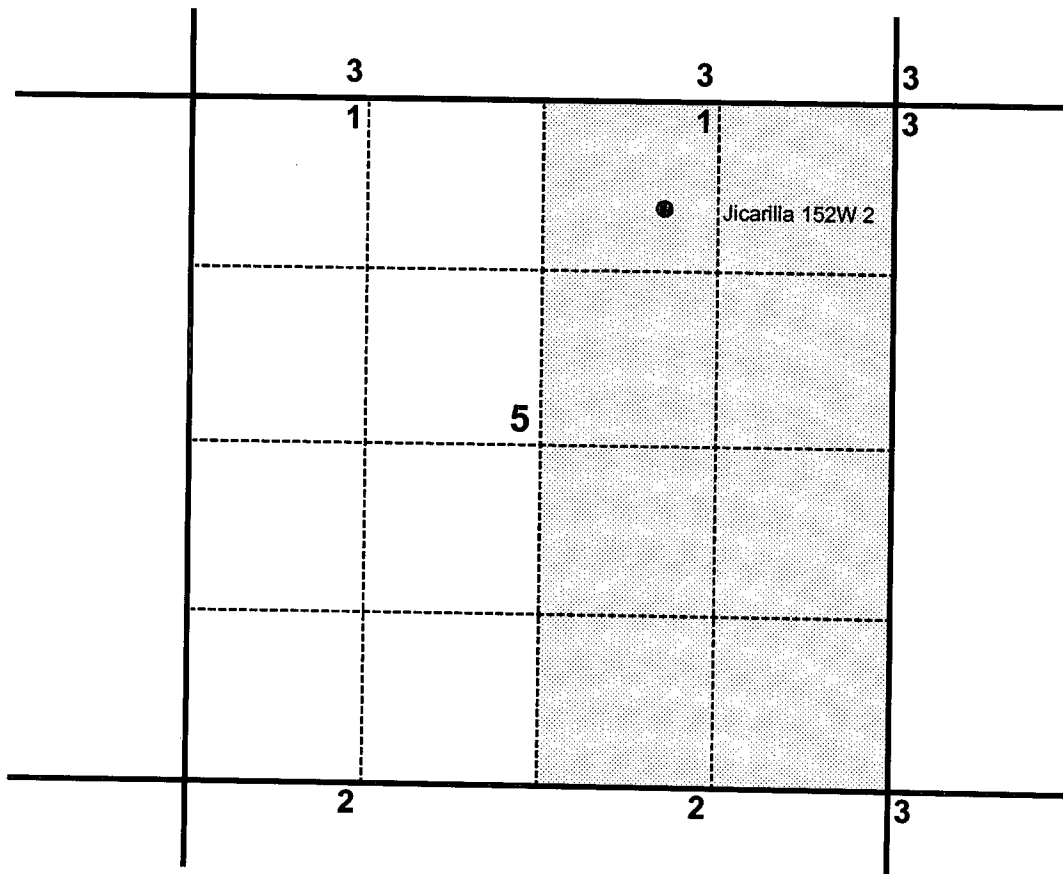
Energen Resources Corp.

Jicarilla 152W #2

Offset Operator / Ownership Plat

S. Blanco Pictured Cliffs/ Blanco Mesa Verde/
Basin Dakota
Downhole Commingling

Township 26 N, Range 5 W



- 1) Energen Resources
- 2) Graystone Energy Inc.
5802 Highway 64
Farmington, N. M. 87401
- 3) Burlington Resources
P.O. Box 4289
Farmington, N.M. 87499-4289

Jicarilla 152 W 2

Proposed Allocation Method

Produce total well stream for 30 days following commingling
Dakota stream projected to add 80 MCFD to total flow stream

Total Stream = X

Stabilized PC flowstream – 33 MCFD

Stabilized MV flowstream – 124 MCFD

DK Allocation = $(X - 33 - 124) / X$ as a percentage

MV Allocation = $124 / X$ as a percentage

PC Allocation = $33 / X$ as a percentage

DK Oil Allocation = Total Stream - .5 BOPD to Mesa Verde as a percentage of the total
Production

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