

4/24/01	5/14/01	DC	KV	AMEND DHC - 2790 111646457
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ABOVE THIS LINE FOR DIVISION USE ONLY

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

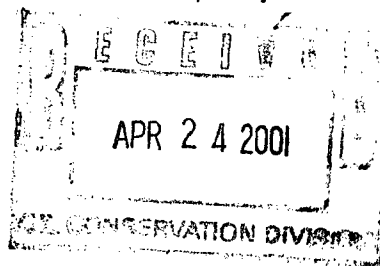
Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement

☒ 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

Gary Brink
Print or Type Name

Gary Brink
Signature

Production Supt.
Title

4/20/01
Date



April 19, 2001

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

RE: Administrative Approval to Downhole Commingle
Energen Resources Corporation
Jicarilla 97 #6
1150' FNL, 790' FEL, Sec. 7, T26N, R3W, N.M.P.M.
Rio Arriba County, New Mexico
API # 30-039-26261

Dear Ms. Wrotenbery:

Energen Resources Corporation requests Administrative Approval to add the Blanco Mesa Verde and downhole commingle it with the Wild Horse Gallup/ Basin Dakota in the subject well. The Gallup/ Dakota was previously commingled in accordance with DHC-2740. Open hole log results show potential in the Mesa Verde Formation similar to offset producing wells. Since the Mesa Verde is marginal in this area, it is felt that commingling is the most economical way to produce the Mesa Verde 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. For C107A – Application for Downhole Commingle
2. C102 – Location plat showing each spacing unit and dedicated acreage
3. Production type curves for both the Mesa Verde, Gallup and Dakota
4. Offset operator plat
5. Well location plat
6. Proposed allocation method
7. Supporting pressure Data

In accordance with 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/vd

cc: NMOCD – Aztec, BLM – Albuquerque, Offset Operators
Jic97 6 4-00.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, NM 87401

Operator

Address

Jicarilla 97

6

D

Sec. 7

T26N

R3W

Rio Arriba, NM

Lease

Well No.

Unit Ltr. - Sec - Twp - Rge

County

OGRID NO. 162928

Property Code 21939

API NO. 30-039-26261

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	Blanco Mesa Verde 72319	Wild Horse Gallup 87360	Basin DK 71599
2. Top and Bottom of Pay Section (Perforations)	5307-5991	6829-7434	7822-7840
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) Not Completed	a. 479 Calc	a. 479 Calc
	b. (Original) 1320 est	b. 1400 Est	b. 1575 Calc
6. Oil Gravity (^o API) or Gas BTU Content)	1265 BTU Est	1322 BTU	1322 BTU
7. Producing or Shut-in?	Not Completed	Producing	Producing
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)	No	Yes	No
	Date: Rates:	Date: Rates:	Date: Rates:
	Date: Rates: Not Completed	Date: 4/14/01 Rates: 0/90/.5	Date: 4/14/01 Rates: 2/125/1
8. Fixed Percentage Allocation Formula - % for each zone	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 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. NMOC 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 4/19/2001

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

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

District II
PO Drawer 00, Artesia, NM 88211-0719

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

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

State of New Mexico
Energy, Minerals & Natural Resources Department

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

Form C-102
Revised February 21, 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 30-039-26261	² Pool Code 72319-71599-87360	³ Pool Name Blanco Mesaverde-Basin Dakota-Wild Horse Gallup
⁴ Property Code 21939	⁵ Property Name JICARILLA 97	⁶ Well Number 6
⁷ OGRID No. 162928	⁸ Operator Name ENERGEN RESOURCES CORPORATION	⁹ Elevation 6921

¹⁰ Surface Location

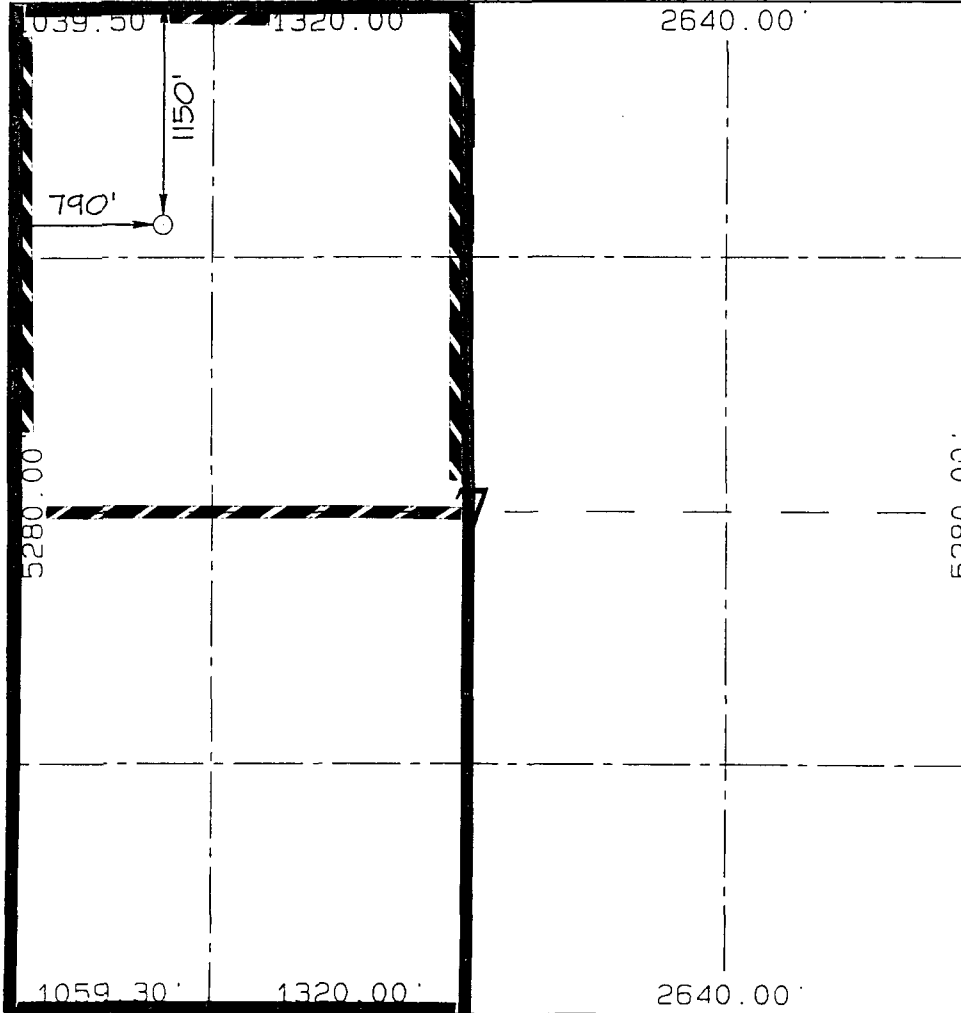

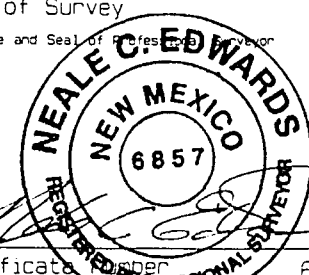
UL or lot no. D	Section 7	Township 26N	Range 3W	Lot Idn	Feet from the 1150	North/South line NORTH	Feet from the 790	East/West line WEST	County RIO ARriba
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¹¹ Bottom Hole Location If Different From Surface

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 288.8 / 144.4	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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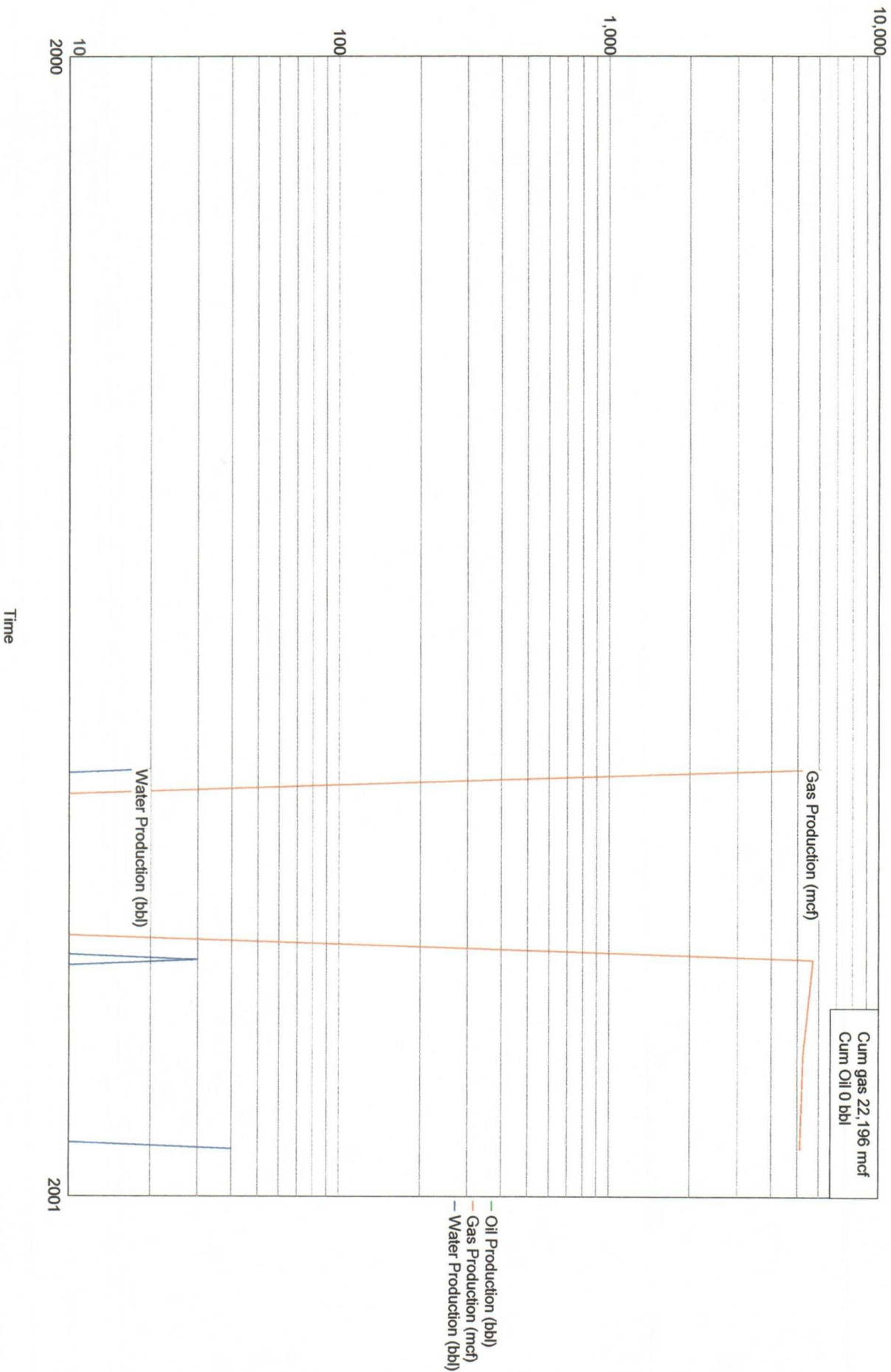
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

¹⁶ 	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  Signature Gary Brink Printed Name Production Superintendant Title Date 4/19/01
	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, 1999 Date of Survey Signature and Seal of Professional Surveyor  Certificate Number 6857

Lease Name: JICARILLA 97
County, State: RIO ARBA, NM
Operator: TAURUS EXPLORATION USA INCORPORATED
Field: WILD HORSE
Reservoir: GALLUP
Location: 7 26N 3W SE NW NW

Jicarilla 97 6

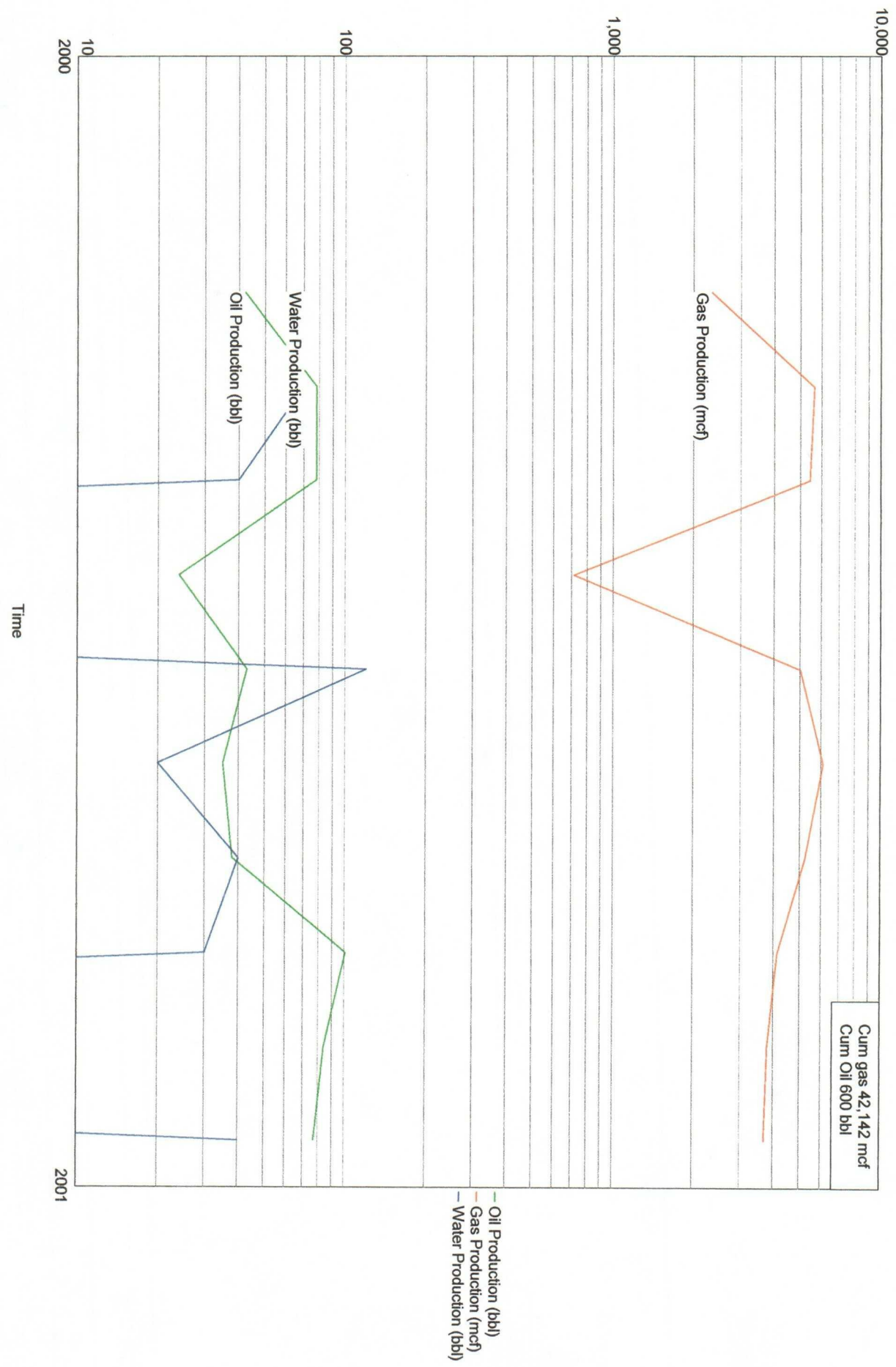
Production Rates



Lease Name: JICARILLA 97
County, State: RIO ARBA, NM
Operator: TAURUS EXPLORATION USA INCORPORATED
Field: BASIN
Reservoir: DAKOTA
Location: 7 26N 3W SE NW NW

Jicarilla 97 6

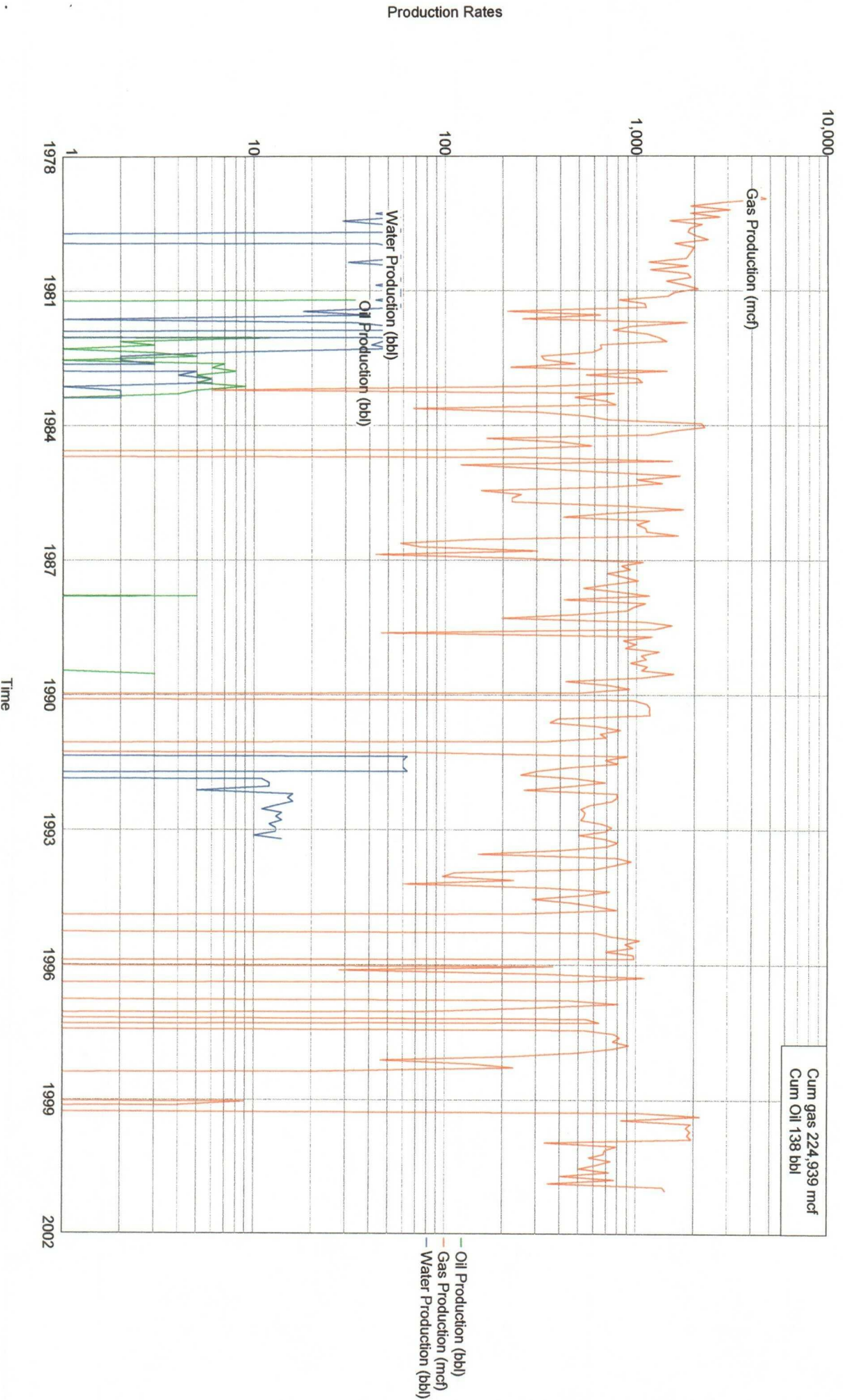
Production Rates



MV Type Curve

Lease Name: TRIBAL C
County, State: RIO ARBA, NM
Operator: GREYSTONE ENERGY INCORPORATED
Field: BLANCO
Reservoir: MESAVERDE
Location: 7 26N 3W NE SW SE

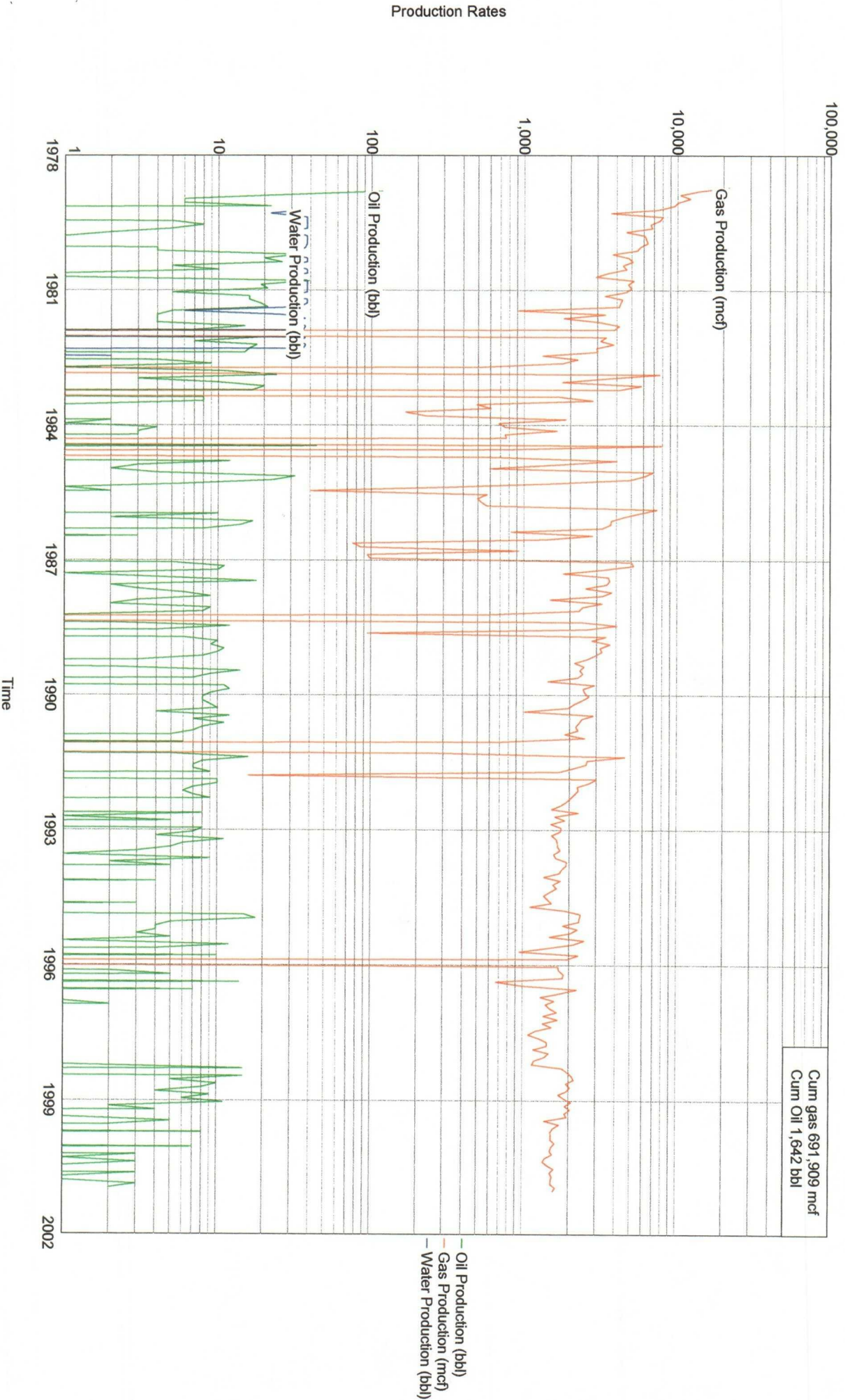
Tribal C 9A



MV Type Curve

Lease Name: TRIBAL C
County, State: RIO ARBA, NM
Operator: GREYSTONE ENERGY INCORPORATED
Field: BLANCO
Reservoir: MESAVERDE
Location: 6 26N 3W SE NW SE

Tribal C 3A



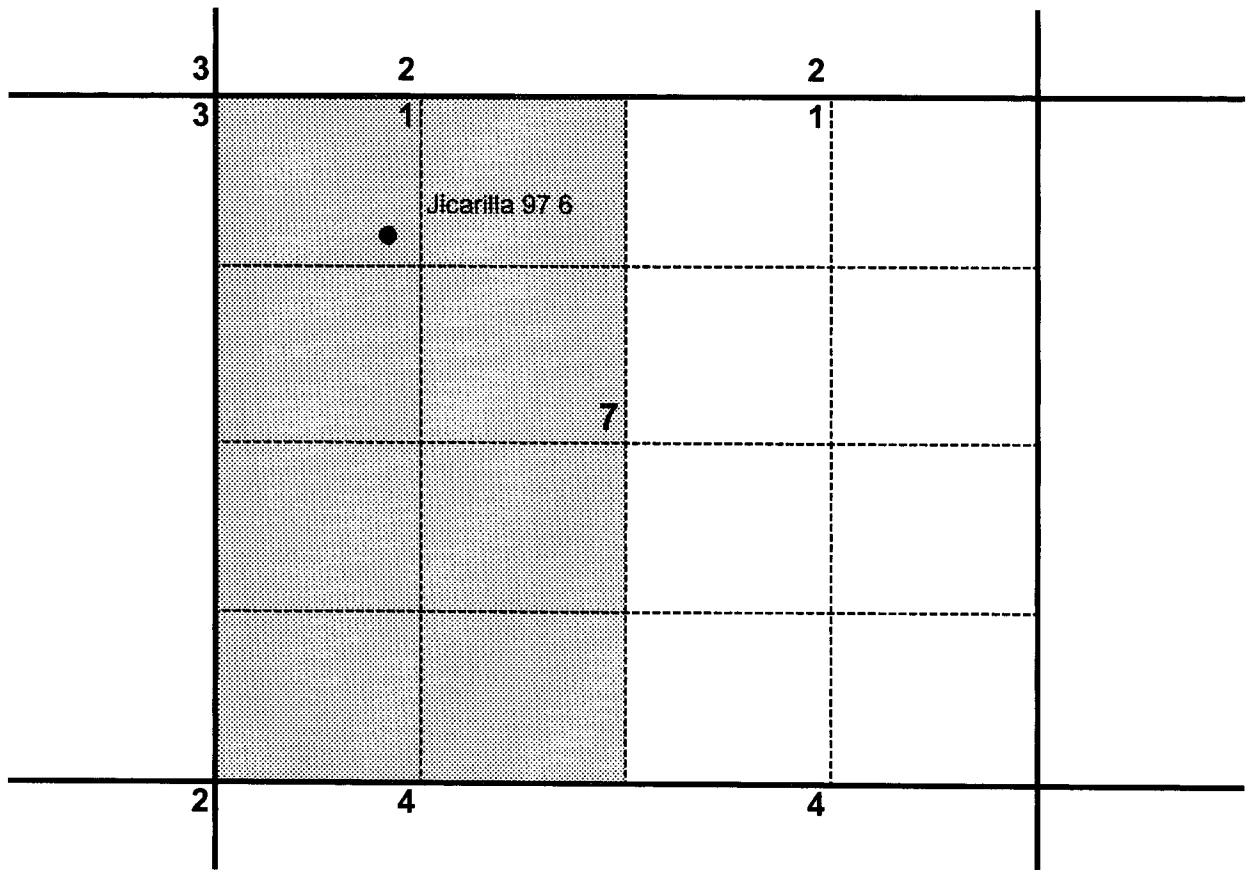
Energen Resources Corp.

Jicarilla 97 6

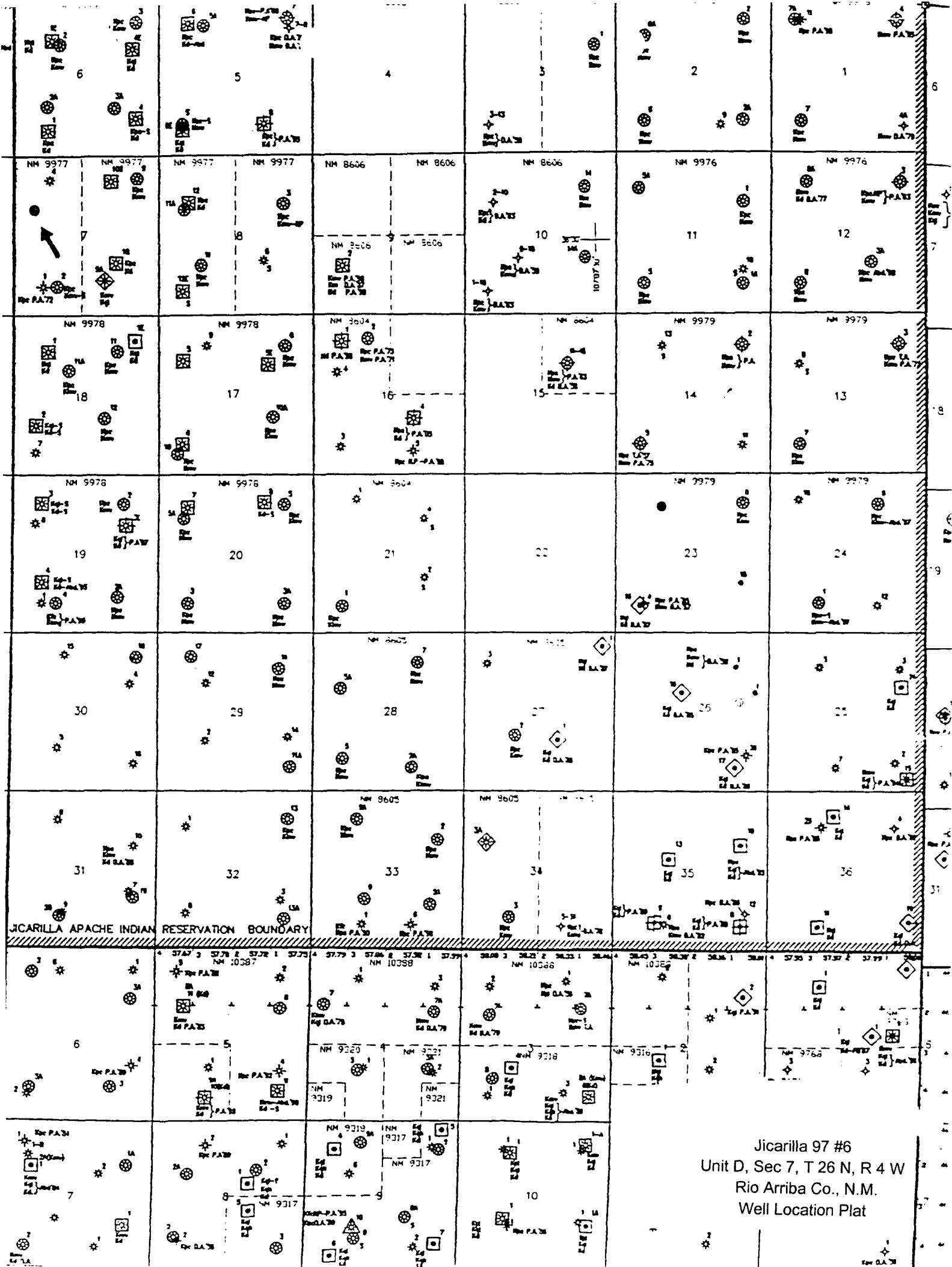
Offset Operator / Ownership Plat

Blanco Mesa Verde/ Wildhorse Gallup/ Basin Dakota
Downhole Commingling

Township 26 N, Range 3 W



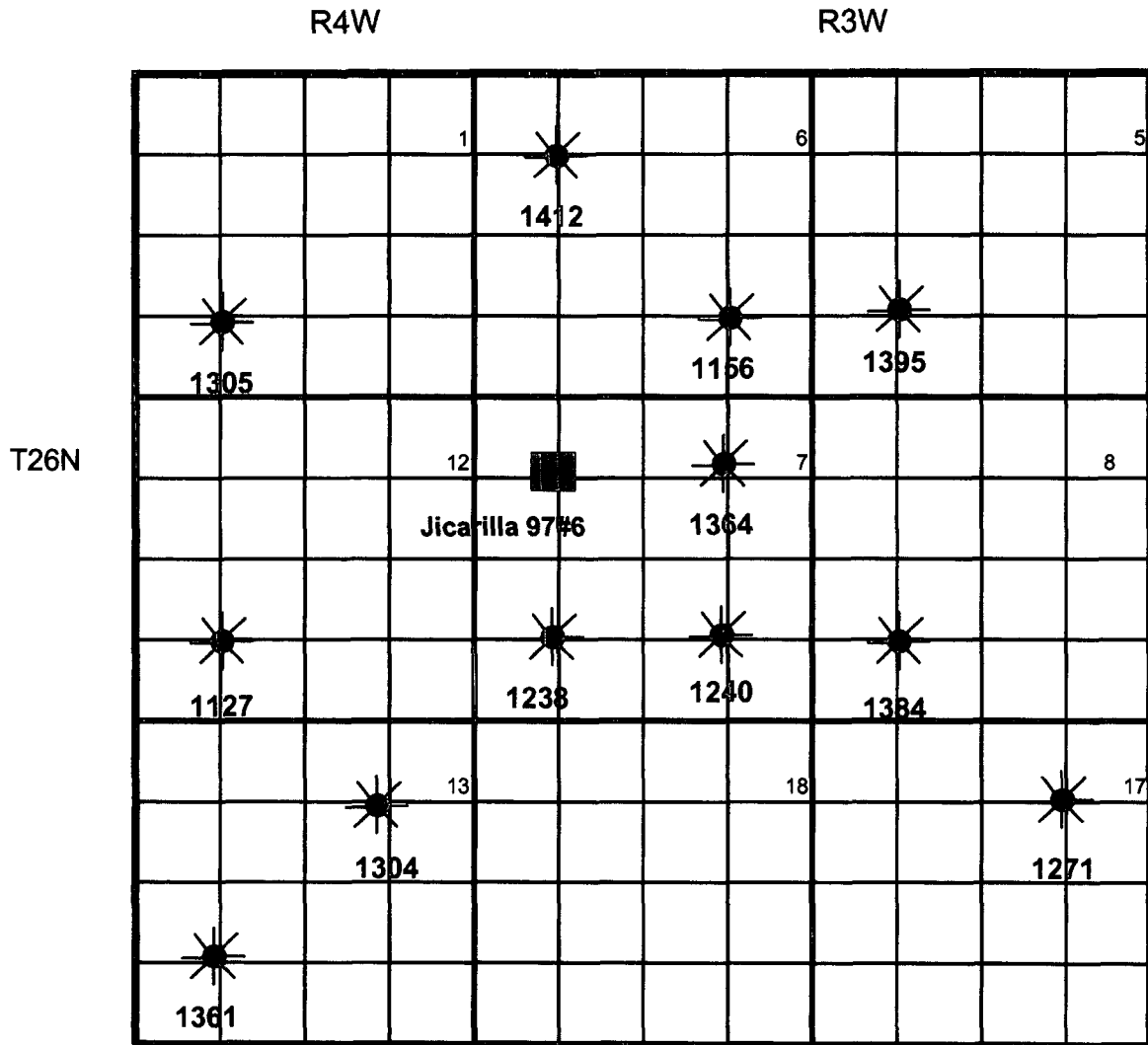
- 1) Energen Resources
- 2) Graystone Energy
5802 Highway 64
Farmington, N.M. 87401
- 3) Burlington Resources
P.O. Box 4289
Farmington, N.M. 87401
- 4) Conoco
10 Desta Dr., Suite 100 W
Midland, Tx. 79705



Initial Mesaverde Bottomhole Pressure
Area Near Jicarilla 97#6

	Well	Sec	TWN-RNGE	FD Date	Initial BHP
1	Jic 98#6	NE 17	26-3	1157	1271
2	Jic 97#2	SW 7	26-3	1057	1238
3	Tribal C#11	SW 8	26-3	1262	1384
4	Tribal C#9	NE 7	26-3	1062	1364
5	Tribal C#5	SW 5	26-3	1062	1395
6	Tribal C#2	NW 6	26-3	462	1412
7	Tribal C#3A	SE 6	26-3	579	1156
8	Tribal C#9A	SE 7	26-3	978	1240
9	Jenny #1	NE 13	26-4	578	1304
10	Jic 101#6	SW 1	26-4	280	1305
11	Jic 101#8	SW 12	26-4	1279	1127
12	Jic A#13E	SW 13	26-4	681	1361

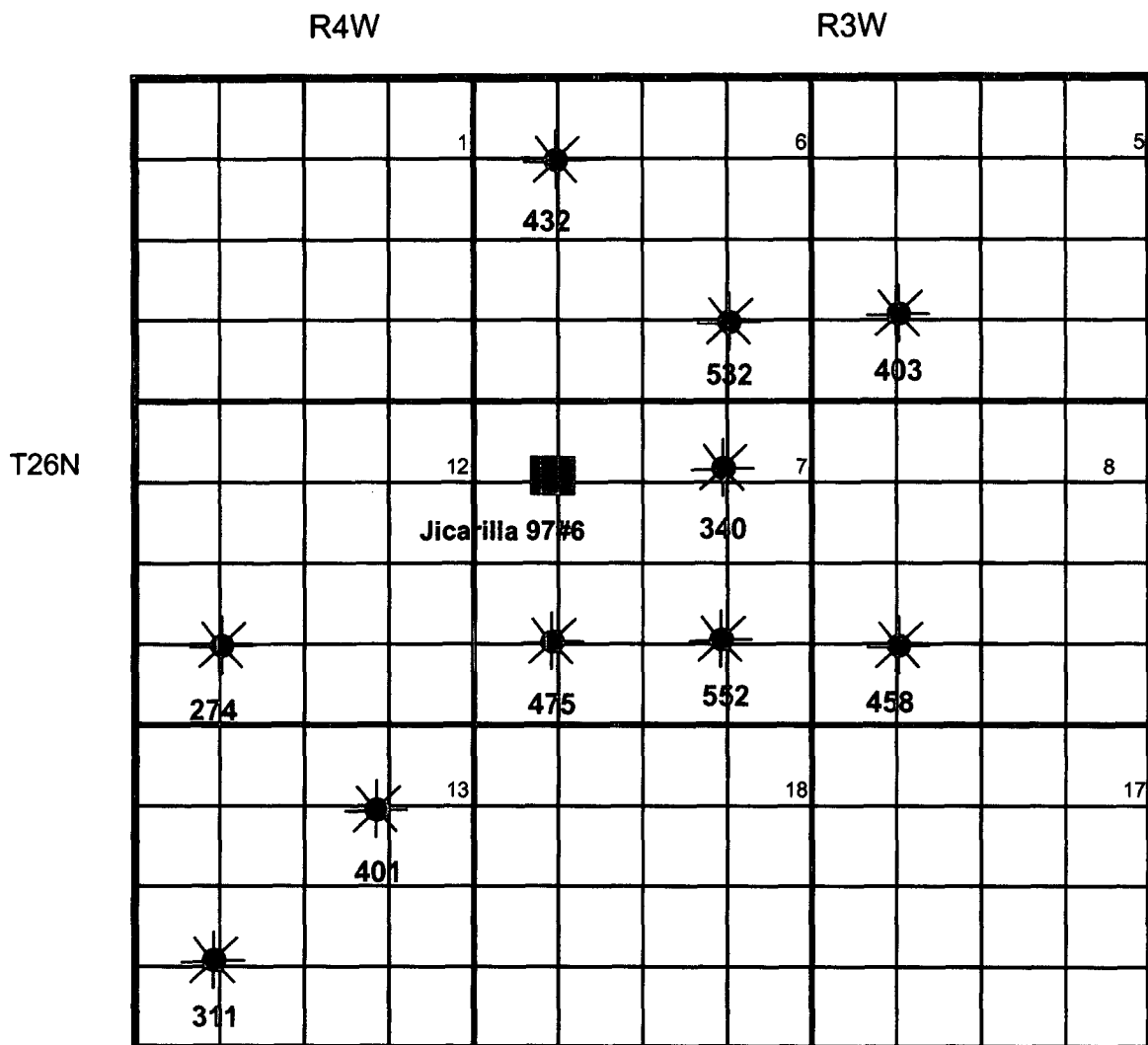
Original Mesaverde Shut-In Bottom Hole Pressure
(Area Near MV Payadd in Jicarilla 97#6)



Current Bottom Hole Pressure
Area near Jic 97#6

	Well	Sec	TWN-RNGE	FD Date	Current BHP
1	Jic 97#2	SW 7	26-3	1057	475
2	Tribal C#11	SW 8	26-3	1262	458
3	Tribal C#9	NE 7	26-3	1062	340
4	Tribal C#5	SW 5	26-3	1062	403
5	Tribal C#2	NW 6	26-3	462	432
6	Tribal C#3	NE 6	26-3	762	290
7	Tribal C#3A	SE 6	26-3	579	532
8	Tribal C#9A	SE 7	26-3	978	552
9	Jenny #1	NE 13	26-4	578	401
10	Jic 101#8	SW 12	26-4	1279	274
11	Jic A#13E	SW 13	26-4	681	311

Current Mesaverde Shut-In Bottom Hole Pressure
(Area Near MV Payadd in Jicarilla 97#6)



Jicarilla 97 #6

Proposed Allocation Method

In Accordance with DHC-2740 the allocation for the current wellbore configuration is Gallup- 42% of the Gas, Dakota- 58% of the gas; 100% of the oil.

Currently the well is producing 215 MCFD and 2 BOPD as a commingled Wild Horse Gallup/ Basin Dakota commingle. It is anticipated the pay add will add 100-120 MCFD to the total flowstream.

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

Total stream = X

Gallup/ Dakota rate = 215 MCFD

Gallup/Dakota Allocation = $215 / X$ as a percentage

Split Allocation for GI/Dk per previous approved rates

MV allocation = $(X-215) / X$ as a percentage

MV Oil allocation = Total stream – 2 BOPD to Dakota as a percentage of total oil production.

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