

DISTRICT I

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

DISTRICT II

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

DISTRICT III

1000 Rio Brazos Rd, Aztec, NM 87410-1893

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 87505-6429Form C-107-A
New 3-12-96

APPROVAL PROCESS:

☒ Administrative ☐ Hearing

EXISTING WELLBORE

☒ YES ☐ NO

APPLICATION FOR DOWNHOLE COMMINGLING

Operator Phillips Petroleum Company Address 5525 Hwy. 64, Farmington, NM 87401
San Juan 29-5 Unit #55 M, Sec. 18, T29N, R5W Rio Arriba
 Lease Well No. Unit Ltr. - Sec - Twp - Rge County

OGRID NO. 017654 Property Code 009256 API NO. 30-039-20458 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	72319 Blanco Mesaverde		71599 Basin Dakota
2. Top and Bottom of Pay Section (Perforations)	4300' - 6030'		7869' - 8006'
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: Gas & Oil - Flowing: All Gas Zones: Estimated Current Measured Current Estimated Or Measured Original	a. (Current) 843 psi (est.) b. (Original) 1234 psi (est.)	RECEIVED JUN 26 1997 OIL CON. DIV. DIST. 3	a. 1224 psi (est.) b. 2981 psi (est.)
6. Oil Gravity ($^{\circ}$ API) or Gas BTU Content	1150 btu/cu. ft.		1000 btu/cu. ft.
7. Producing or Shut-In?			producing
Production Marginal? (yes or no)	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: Estimate Rates: 438 mcf/d	Date: Rates:	Date: 6/12/97 Rates: 120 mcf/d
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?
 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?

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 is 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). R-10770

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 Sean C. Helton Staff Reservoir Engineer DATE 6-25-97

TYPE OR PRINT NAME Sean C. Helton TELEPHONE NO. (505) 599-3455

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

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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 30-039-20458		² Pool Code 72319	³ Pool Name Blanco Mesaverde
⁴ Property Code 009256	⁵ Property Name San Juan 29-5 Unit		⁶ Well Number #55
⁷ OGRID No. 017654	⁸ Operator Name Phillips Petroleum Company		⁹ Elevation

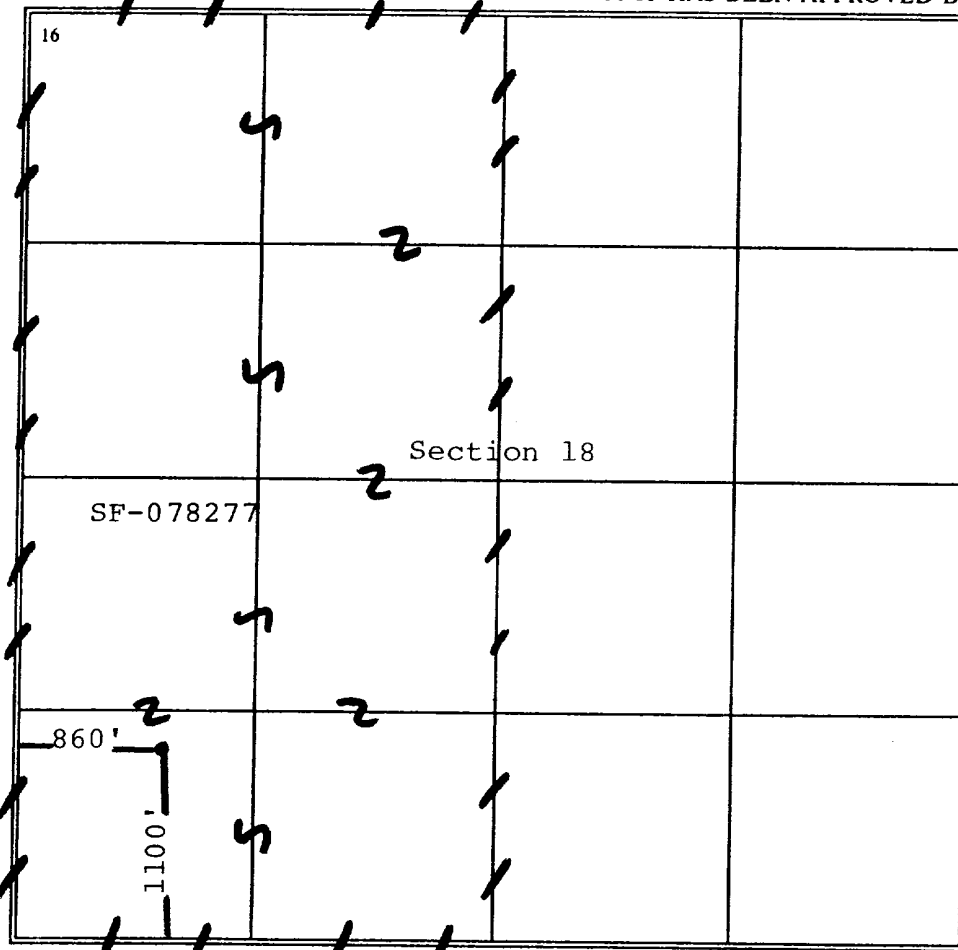
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	18	29N	5W		1100	South	860	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 320 acr		¹³ Joint or Infill Y	¹⁴ Consolidation Code U		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

<div><p>16</p></div>	<p>¹⁷ OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p> <p><i>Sean C Helton</i></p> <p>Signature Sean C. Helton</p> <p>Printed Name Staff Reservoir Engineer</p> <p>Title June 25, 1997</p> <p>Date</p>	
	<p>¹⁸ SURVEYOR CERTIFICATION</p> <p>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>Date of Survey</p> <p>Signature and Seal of Professional Surveyer: See Dakota C-102 dated 11-24-71</p> <p>Certificate Number</p>	

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form 1-1
Supersedes 1-128
Effective 1-1-69

All distances must be from the outer boundaries of the Section

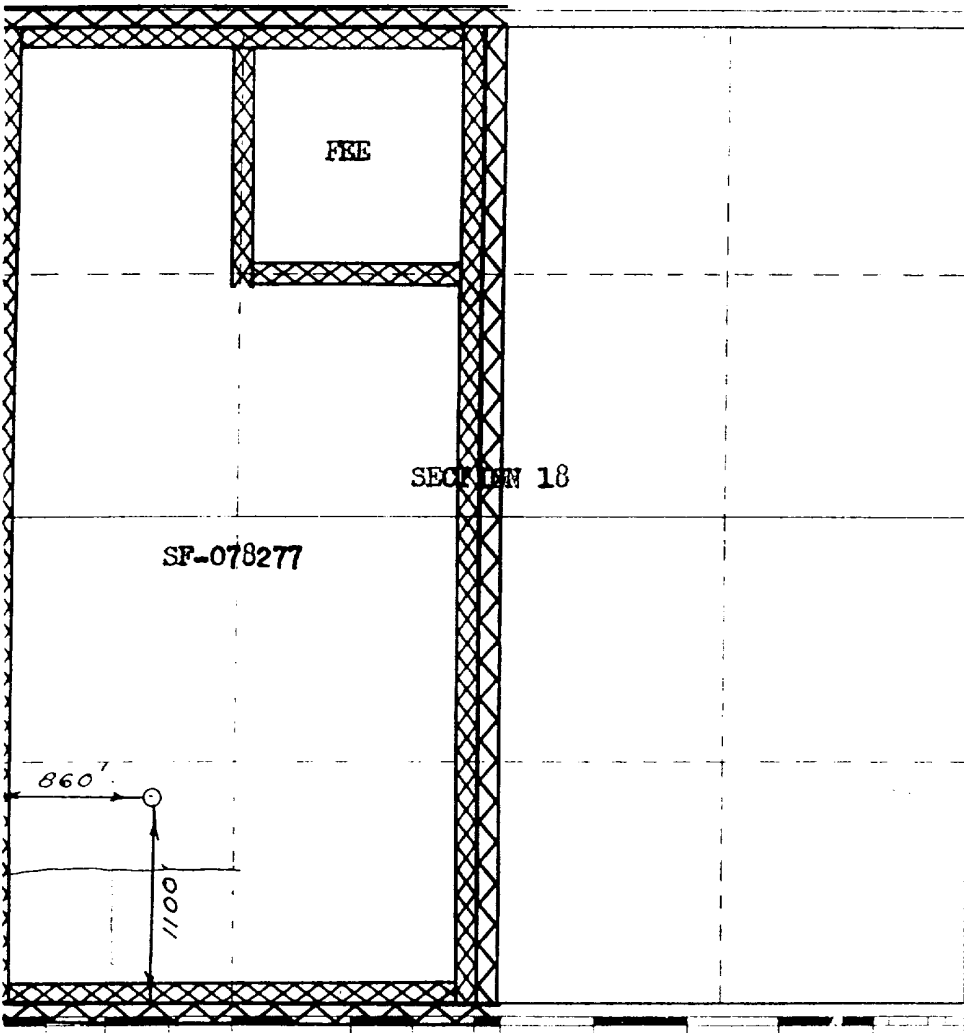
EL PASO NATURAL GAS COMPANY		SAN JUAN 29-5 UNIT (SF-078277)		55
M	18	29-N	5-W	RIO ARRIBA
1100	SOUTH	860	WEST	
DAKOTA		BASIN DAKOTA		320.00 3/8.97

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- 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 Unitization

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.

Original Signed F. H. WOOD

Name
Petroleum Engineer
Firm
El Paso Natural Gas Co.

Date
December 22, 1971

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
NOVEMBER 24, 1971

Registered Professional Engineer
and Geologist

David Wilson
1760

SAN JUAN 29-5 UNIT #55 DAKOTA

	<u>MONTH</u>	MONTHLY FORECAST (MCF)
	Jun-97	3600
1	Jul-97	3570
2	Aug-97	3541
3	Sep-97	3512
4	Oct-97	3483
5	Nov-97	3454
6	Dec-97	3426
7	Jan-98	3398
8	Feb-98	3371
9	Mar-98	3343
10	Apr-98	3316
11	May-98	3290
12	Jun-98	3263
13	Jul-98	3237
14	Aug-98	3211
15	Sep-98	3185
16	Oct-98	3160
17	Nov-98	3135
18	Dec-98	3110

M2Y60-02 PRODUCTION HISTORY FOR WELLZONE L994101 DATE: 06/24/97
 USER: SCHELTO

PROPERTY: 650265 - SAN JUAN 29-5 DAKOTA UNIT
 WELL NO: 000055 RESVR: DAKOTA WELL: 1 OF 1

DATE	DAYS	OPR	PROD	ST	CL	TY	RESVR	PRODUCTION	GAS	WATER
				11	03	2	20076	0.00	589	0
199601	30	30.00	11	03	2	20076	0.00	574	0	0
199602	29	29.00	11	03	2	20076	0.00	682	0	0
199603	31	31.00	11	03	2	20076	0.00	851	0	0
199604	30	30.00	11	03	2	20076	0.00	692	0	0
199605	28	28.00	11	03	2	20076	0.00	659	0	0
199606	29	29.00	11	03	2	20076	0.00	594	0	0
199607	31	31.00	11	03	2	20076	0.00	552	0	0
199608	31	31.00	11	03	2	20076	0.00	521	0	0
199609	30	30.00	11	03	2	20076	0.00	1123	0	0
199610	31	31.00	11	03	2	20076	0.00	1349	0	0
199611	23	23.00	11	03	2	20076	0.00	1763	0	0
199612	20	20.00	11	03	2	20076	0.00	9949	0	0
YEARLY TOTAL								0.00		0

199701	27	27.00	11	03	2	20076	0.00	1922	0	0
199702	28	28.00	11	03	2	20076	0.00	1631	0	0
199703	31	31.00	11	03	2	20076	0.00	2635	0	0
199704	30	30.00	11	03	2	20076	0.00	3955	0	0
199705	31	31.00	11	03	2	20076	0.00	3899	0	0
YEARLY TOTAL								0.00	14042	0

L994101 SELECTION TOTAL

0.00	23991	0
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L994101 LIFE CUMULATIVE

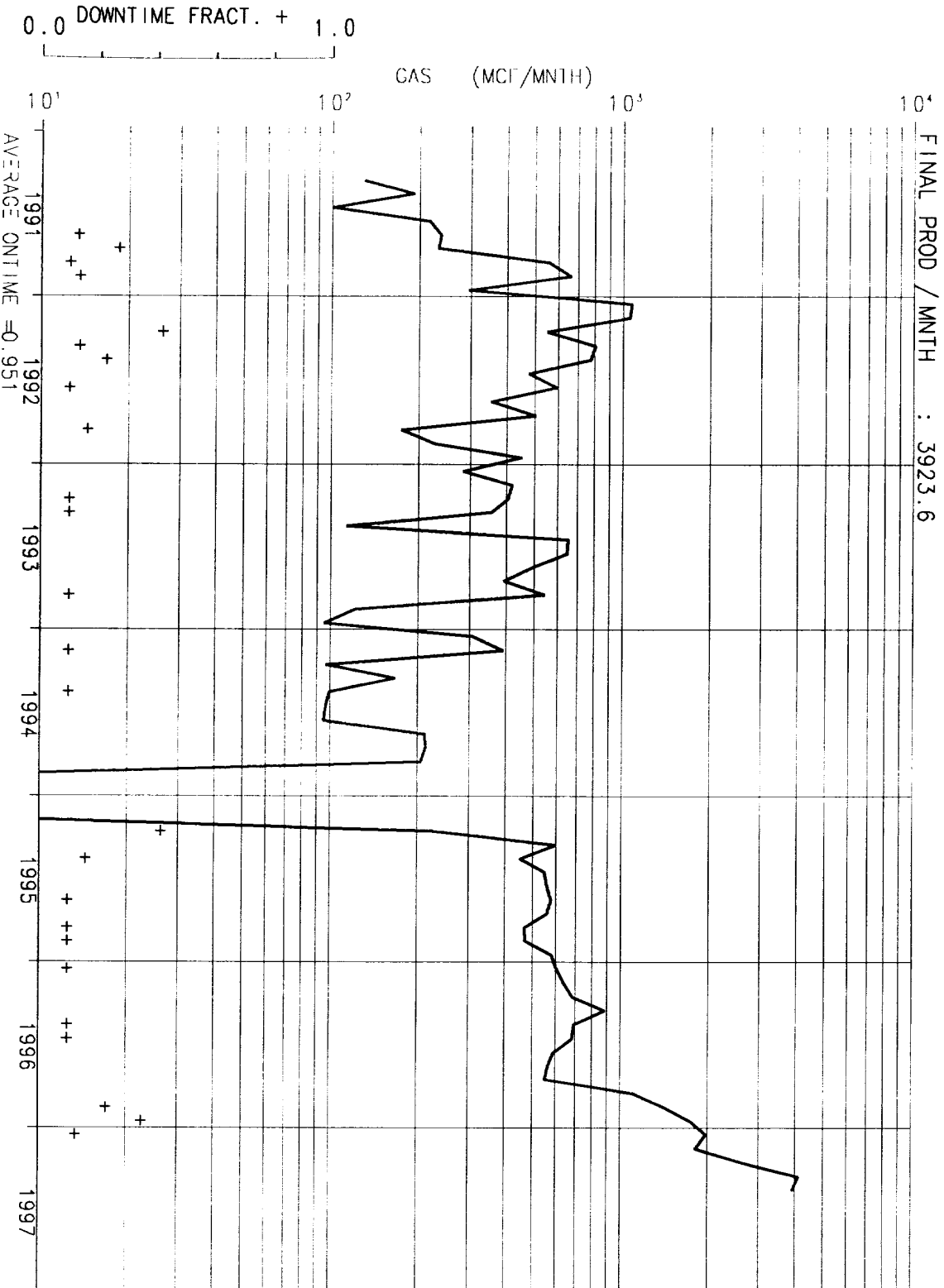
0.00	1230381	0
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4/91-5/97

INITIAL PROD / MNTH : 129.0
REMAINING LIFE : 6.17
0.00

Current Cums
45659. MCF GAS

CUM PRODUCTION : 45659.
FINAL PROD / MNTH : 3923.6



LEASE- 650265 : SAN JUAN 29-5 DAKOTA UNIT
RESVR- 076 : BASIN DAKOTA
WELL - 000055 CUM MMCF = 1261.

L994101
ZONE-650265076000055 L994101
API-30039204580000 THRU 97/05

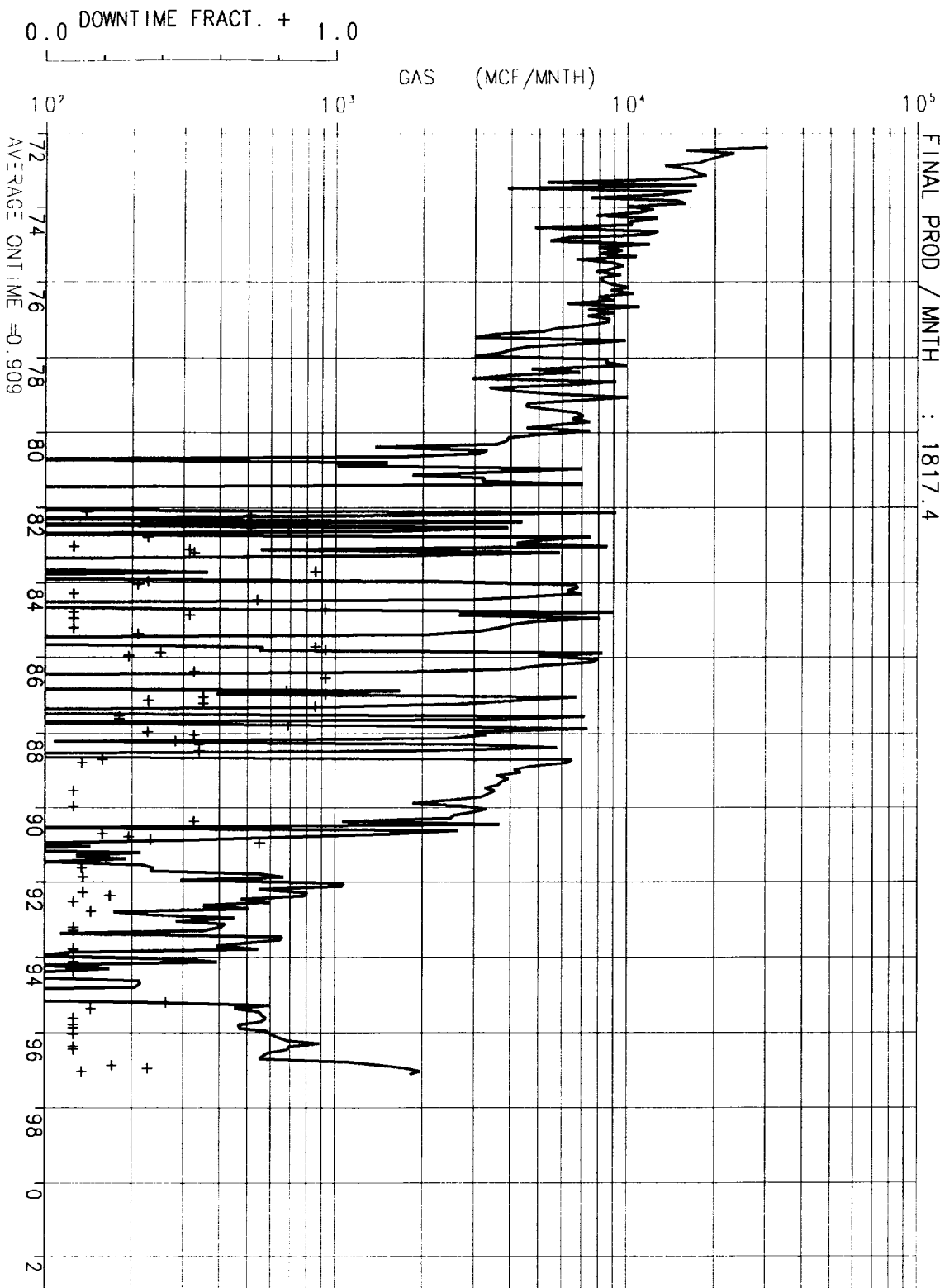
5/72-2/97

Current Cums

INITIAL PROD / MNTH : 30135.1
REMAINING LIFE : 24.83

1251. MMCF GAS
233. BBL H2O

CUM PRODUCTN-MUNITS : 1251.
FINAL PROD / MNTH : 1817.4

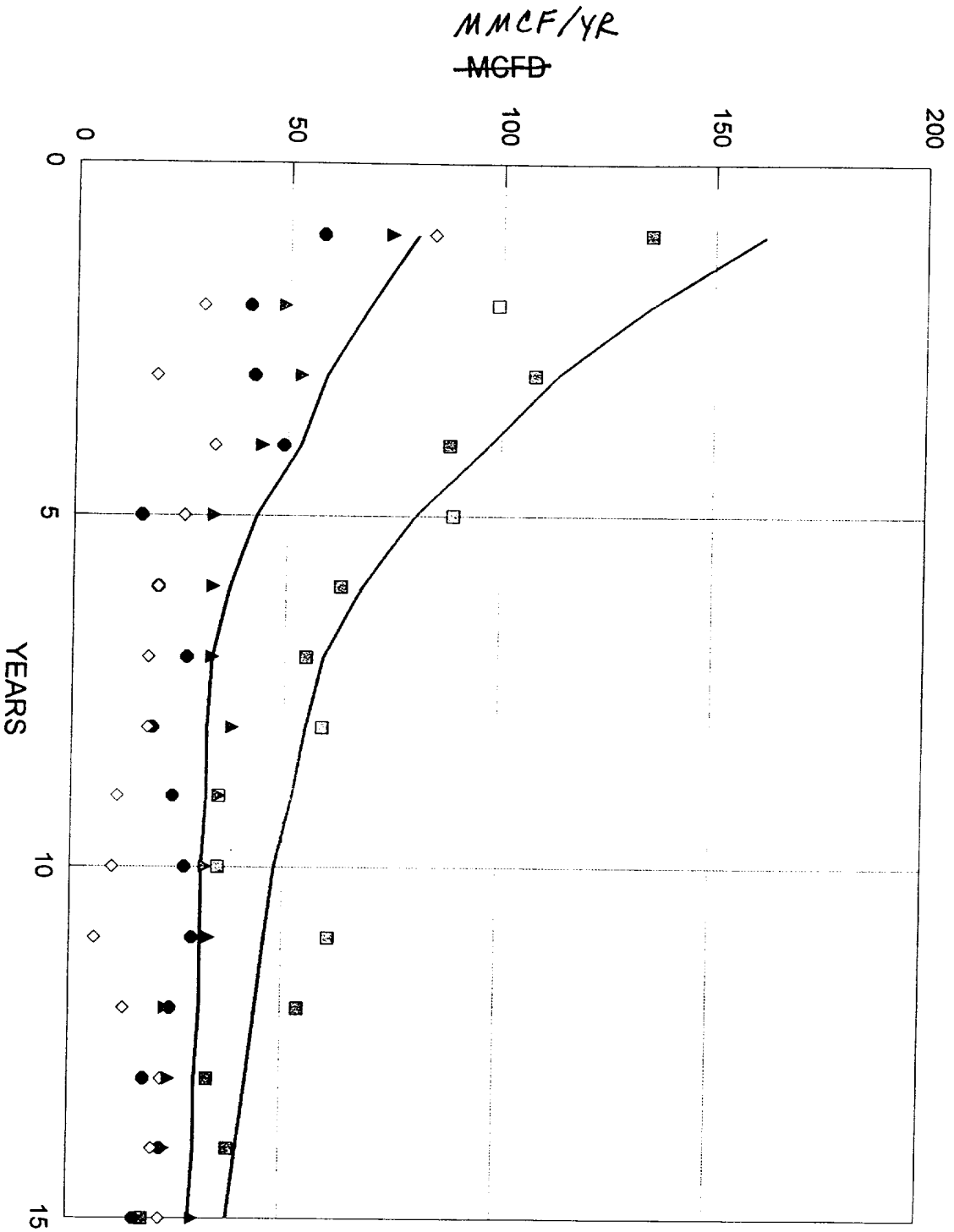


WELL - 55 CUM MMCF = 1251.

DWIGHTS
COMPOSITE OF TOTAL
THRU 1 WELLS(MAX)
2/97

SAN JUAN 29-5 UNIT

MESAVERDE



- 29-5 MV Type Curve
- 29-5 MV T.C. w/ Lewis
- 29-5 #74 MV
- 29-5 #41A MV
- ◇ 29-5 #14 MV
- ▲ 29-5 #16 MV

Production Allocation Methodology

◆ Adding New Zone to Existing Zone - Initially Subtraction Method followed by Fixed Allocation Method

- Subtraction Method (+/- 1st 12 months)
 - Forecast production rate by month for existing zone utilizing established decline curve for zone
 - Subtract forecasted rate from commingled rate to define new zone rate
 - Utilize subtraction method for +/- 12 months until new zone rate stabilizes, then utilize fixed allocation method with current rates
- Fixed Allocation Method (after Subtraction Method)
 - Utilize forecasted rate from established decline curve for lower zone
 - Calculate upper zone rate by subtracting lower zone rate from commingled rate
 - Lower zone allocation = $\frac{\text{Lower zone rate}}{\text{Commingled rate}}$
 - Upper zone allocation = $\frac{(\text{Commingled rate} - \text{Lower zone rate})}{\text{Commingled rate}}$