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 87410-1693

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 87505-6429

APPLICATION FOR DOWNHOLE COMMINGLING

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

APPROVAL PROCESS:
_X_ Administrative ___ Hearing

EXISTING WELLBORE
_X_ YES ___ NO

Phillips Petroleum Company | 5525 Hwy. 64, Farmington, NM 87401
Operator · **Address**

San Juan 29-6 Unit | #86 | N, Section 27, T29N, R6W. | Rio Arriba, NM
Lease · **Well No.** · **Unit Ltr. - Sec - Twp - Rge** · **County**

OGRID NO. __017654__ Property Code _009257_ API NO. __30-039-07516__ Federal _X_, State ___, (and/or) Fee ___

Spacing Unit Lease Types: (check 1 or more)

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)	4,984' – 5540'		7555' – 7658'
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) 750 psi (est.) — b. (Original) 1280 psi (est.)	a. — b.	a. 907 psi (24-hr SI) — b. 3,130 psi (est)
6. Oil Gravity (°API) or Gas BTU Content	1150 btu/scf		1015 btu/scf
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: — Rates: 450 mcfd (est.)	Date: — Rates:	Date: 9/31/99 — Rates: 72 mcfd, 0 bwpd
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 _X_ No
    If not, have all working, overriding, and royalty interests been notified by certified mail? ___ Yes _X_ No
    Have all offset operators been given written notice of the proposed downhole commingling? _X_ Yes ___ No

11. Will cross-flow occur? ___ Yes _X_ 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? _X_ Yes ___ No

13. Will the value of production be decreased by commingling? ___ Yes _X_ 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-11187__

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 _Mark Stodola_ TITLE _Reservoir Engr._ DATE __11/9/99__

TYPE OR PRINT NAME __Mark Stodola__ TELEPHONE NO. (505) 599-3455

PHILLIPS PETROLEUM COMPANY

FARMINGTON, NEW MEXICO 87401
5525 HWY. 64 NBU 3004

November 8, 1999

New Mexico Oil & Gas Conservation Div.
2040 South Pacheco
Santa Fe, New Mexico 87505-6429

Downhole Commingling Allocation Method
On the San Juan 29-6 Unit #86

Dear Sirs:

Phillips Petroleum is proposing to utilize the subtraction method on the subject well for approximately twelve months after actual commingling occurs. After the 12th month period we will convert to the ratio method as indicated in our commingling application. We believe this will be a more accurate method of allocating production considering the Dakota interval has been producing for years and that the production will not be stabilized on the Mesaverde for several months.

Dakota Production Forecast

December 1999	2,165	January 2000	2,156
February 2000	1,940	March 2000	2,139
April 2000	2,061	May 2000	2,121
June 2000	2,044	July 2000	2,104
August 2000	2,095	September 2000	2,019
October 2000	2,078	November 2000	2,002

For example, if the total volume for December 1999 were 16,115 mcf, then the Dakota would be allocated 2,165 mcf and the Mesaverde 13,950 mcf. And subsequently, the Dakota would be allocated (2,165/16,115) or 13.43% and the Mesaverde would be allocated (13,950/16,115) or 86.57%.

Sincerely,

PHILLIPS PETROLEUM COMPANY

Mark Stodola
Reservoir Engineer

MS/pc

cc: OCD - Aztec
        BLM - Farmington
        NM Commissioner of Public Lands - Santa Fe

PHILLIPS PETROLEUM COMPANY
5525 HWY 64 NBU 3004
FARMINGTON, NEW MEXICO 87401   DATE: NOVEMBER 2, 1999

WELL NAME: SAN JUAN 29-6 # 86   TYPE TEST: STATIC GRADIENT
FORMATION: DAKOTA

COUNTY: RIO ARRIBA
STATE: NEW MEXICO

TOTAL DEPTH: PBTD @ 7764'   CASING PRESSURE: 830
PERFS: 7555' TO 7658'   TUBING PRESSURE: 100
TUBING: 2 3/8 TO 7626'   OIL LEVEL:
CASING SIZE: WATER LEVEL: 5681'
PACKER: TEMPERATURE:
OTHER: NO SEAT NIPPLE   ELEMENT NO. 86484
PRESSURED UP @ 10:00   ELEMENT RANGE 0 TO 3000

WELL STATUS: SHUT IN

DEPTH IN FEET	PRESSURE PSIG	GRADIENT PSI/FOOT
0	95	
2000	101	0.003
4000	107	0.003
6000	242	0.068
7175	746	0.418
7375	831	0.425
7575	907	0.380

SLM @ 7582'

H & H WIRELINE SERVICE INC.
P. O. BOX 899
FLORA VISTA, NEW MEXICO 87415
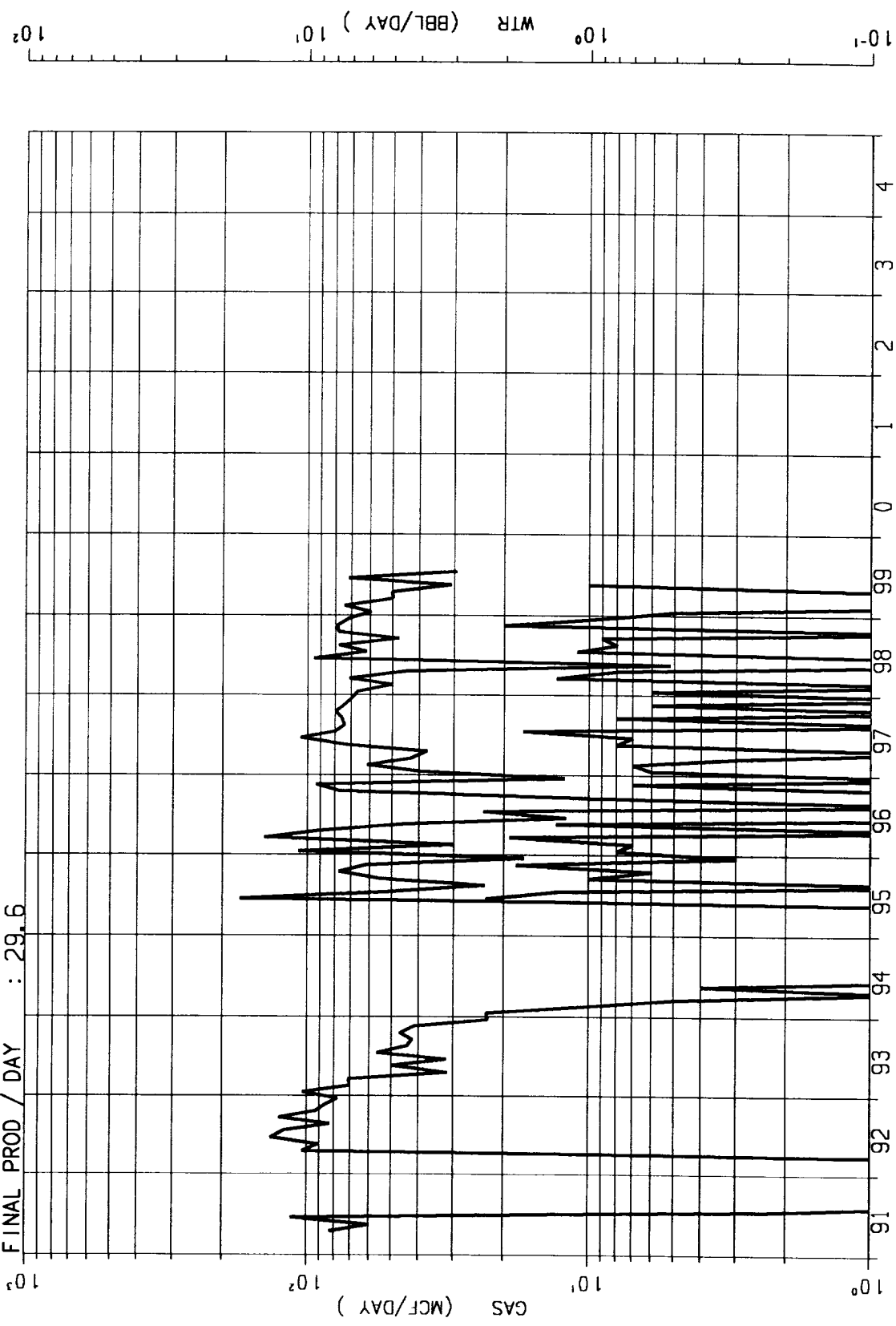OPERATOR: CHARLES HUGHES
UNIT NO. T-11

PHILLIPS PETROLEUM SAN JUAN 29-6 # 86
DATE: NOVEMBER 2, 1999
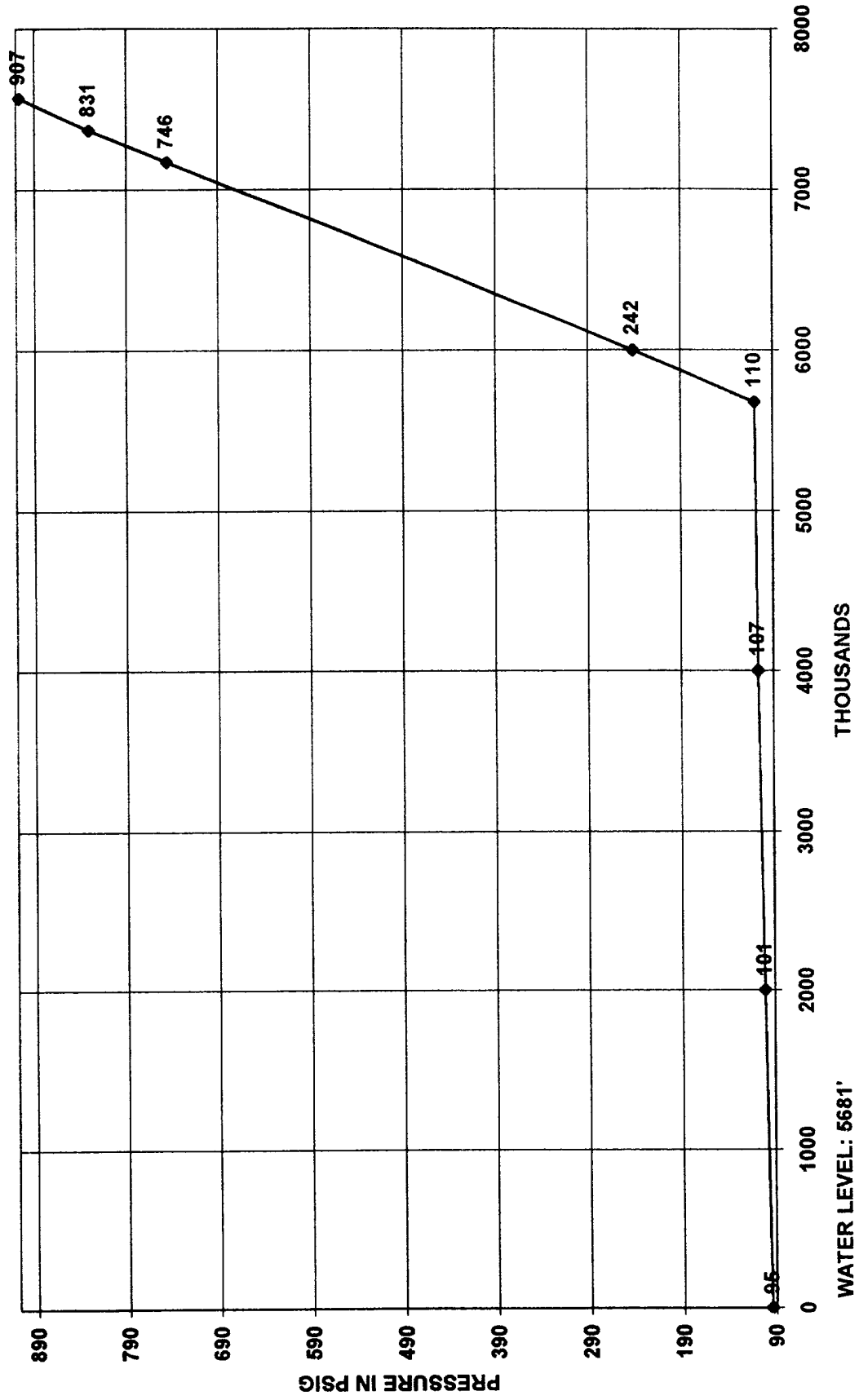
INITIAL PROD / DAY   : 82.9   4/91-7/99   ASSOC.   Current Cums
REMAINING LIFE   : 8.33   147948. MCF GAS
                       0.00   877.   BBL WTR
CUM PRODUCTION   : 147948.
FINAL PROD / DAY   : 29.6

WTR (BBL/DAY)
GAS (MCF/DAY)

91 92 93 94 95 96 97 98 99 0 1 2 3 4

F057801
ZONE-65029907600086 F057801
API-3003907516000   THRU 99/07

LEASE- 650299 : SAN JUAN 29-6 DAKOTA
RESVR-   076 : BASIN   DAKOTA
WELL - 000086   CUM MCF =908095.

MWST 1999/11/05 14:52

```
MEP81-01          PARPI - WELLZONE PRODUCTION BROWSE         Date: 11/05/99
                          MONTHLY TOTALS                     User: MWSTODO
Wellzone F0578 01 Yr: 1998 Mth: 09  Property: 650299 SAN JUAN 29-6 DAKOTA
Screen: 1 (1-Prod, 2-Inj, 3-Both)   Well No:  000086
Type:    T (T-Total, D-Daily Avg)   Field:    042233 BASIN
Period:  M (M-Mnthly, Y-Yrly, C-Cum) Resvr:    20076 DAKOTA
-----------------------------------------------------------------------------
ADJ             --------------- PRODUCED --------------- ---- DAYS ---- - WELL -
FLG DATE        OIL (BBL)    GAS (MCF)   WATER (BBL)   PROD     OP ST CL TY
 * 1998-09         0.00        1,428           27      30.00    30 11 03 2
   1998-10         0.00        2,412            0      31.00    31 11 03 2
 * 1998-11         0.00        2,371           60      30.00    30 11 03 2
 * 1998-12         0.00        2,226           28      31.00    31 11 03 2
 * 1999-01         0.00        1,852           17      31.00    31 11 03 2
 * 1999-02         0.00        2,078            0      28.00    28 11 03 2
   1999-03         0.00        1,548            0      31.00    31 11 03 2
   1999-04         0.00        1,502            0      30.00    30 11 03 2
 * 1999-05         0.00          959           31      31.00    31 11 03 2
   1999-06         0.00        2,150            0      30.00    30 11 03 2
   1999-07         0.00          919            0      31.00    31 11 03 2
 * 1999-08         0.00            0            0      29.00    31 46 03 2

PA1=ICE    PA2=Exit   PF1=Help      PF3=End      PF5=INITIAL CUM  PF11=GRAPH
Transfer->            PF7=Backward  PF8=Forward  PF4=PREV SCREEN  PF12=LOG GRAPH
```

MEP81-01   PARPI - WELLZONE PRODUCTION BROWSE   Date: 11/05/99
                        DAILY AVERAGE BY MONTH   User: MWSTODO
Wellzone F0578 01 Yr: 1998 Mth: 09   Property: 650299 SAN JUAN 29-6 DAKOTA
Screen: 1 (1-Prod, 2-Inj, 3-Both)   Well No: 000086
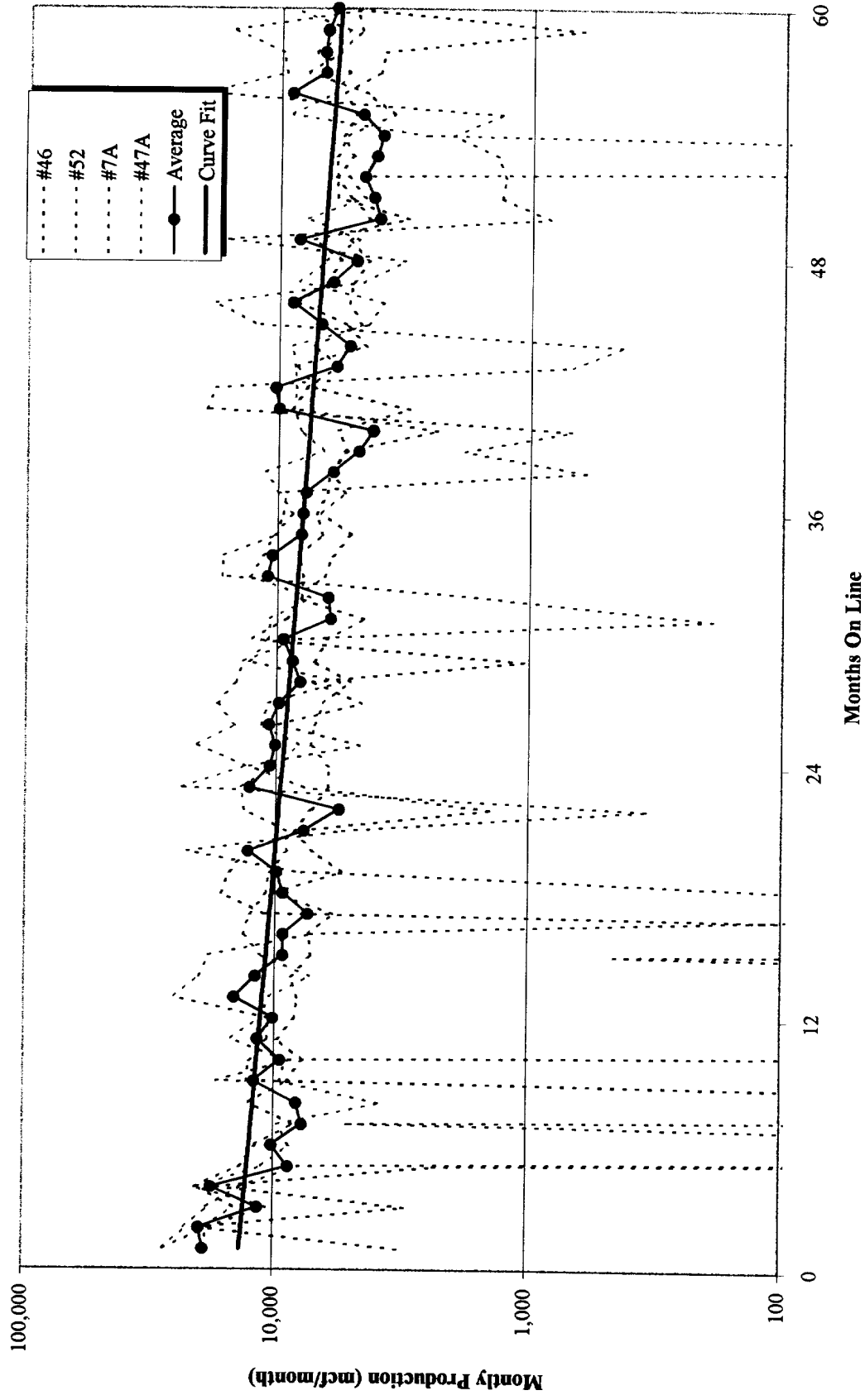Type: D (T-Total, D-Daily Avg)   Field: 042233 BASIN
Period: M (M-Mnthly, Y-Yrly, C-Cum) Resvr: 20076 DAKOTA

ADJ		--------------- PRODUCED ---------------			---- DAYS ----	- WELL -			
FLG	DATE	OIL (BBL)	GAS (MCF)	WATER (BBL)	PROD	OP	ST	CL	TY
*	1998-09	0.00	47	0	30.00	30	11	03	2
	1998-10	0.00	77	0	31.00	31	11	03	2
*	1998-11	0.00	79	2	30.00	30	11	03	2
*	1998-12	0.00	71	0	31.00	31	11	03	2
*	1999-01	0.00	59	0	31.00	31	11	03	2
*	1999-02	0.00	74	0	28.00	28	11	03	2
	1999-03	0.00	49	0	31.00	31	11	03	2
	1999-04	0.00	50	0	30.00	30	11	03	2
*	1999-05	0.00	30	1	31.00	31	11	03	2
	1999-06	0.00	71	0	30.00	30	11	03	2
	1999-07	0.00	29	0	31.00	31	11	03	2
*	1999-08	0.00	0	0	29.00	31	46	03	2

PA1=ICE   PA2=Exit   PF1=Help   PF3=End   PF5=INITIAL CUM PF11=GRAPH
Transfer->   PF7=Backward PF8=Forward   PF4=PREV SCREEN PF12=LOG GRAPH

San Juan 29-6 Unit Mesaverde Production Near the 29-6 #86

Monthly Production (mcf/month)

Months On Line

Legend:
- #46
- #52
- #7A
- #47A
- Average
- Curve Fit

29-6#86MV

11/5/1999

mws

29-6 Unit #86 Dakota Forecast

Initial Production Rate	=	*70 MCFD*
Hyperbolic Exponent	=	*0.33*
Decline Rate	=	*5 %*

	Month	Monthly MCF
1999	Dec	*2,165*
2000	Jan	*2,156*
	Feb	*1,940*
	Mar	*2,139*
	Apr	*2,061*
	May	*2,121*
	Jun	*2,044*
	Jul	*2,104*
	Aug	*2,095*
	Sep	*2,019*
	Oct	*2,078*
	Nov	*2,002*
	Dec	*2,061*
2001	Jan	*2,052*
	Feb	*1,846*
	Mar	*2,036*
	Apr	*1,962*
	May	*2,019*

se subtraction method for +/- 12 months based on this Dakota forecast

Exhibit 3.2

Production Allocation Methodology

♦ <u>Adding New Zone to Existing Zone</u> - 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 = $\dfrac{\text{Lower zone rate}}{\text{Commingled rate}}$

  • Upper zone allocation =
    (Commingled rate - Lower zone rate) / Commingled rate