DHC 2/23/98

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

RECEIVED
FEB - 2 1998
OIL CONSERVATION DIVISION

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

1827

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

APPROVAL PROCESS:
__ Administrative __ Hearing

EXISTING WELLBORE
__ YES __ NO

APPLICATION FOR DOWNHOLE COMMINGLING

Phillips Petroleum Company, 5525 Hwy. 64, Farmington, NM 87401
Operator — Address

San Juan 30-5 Unit #27M — C, Sec. 20, T30N, R5W — Rio Arriba, NM
Lease — Well No. — Unit Ltr. - Sec - Twp - Rge — County

OGRID NO. 017654 Property Code 009258 API NO. 30-039-25669 Spacing Unit Lease Types: (check 1 or more) Federal X, 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)			7778-7947'
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) 1000 psi (est.) b. (Original) 1294 psi (est.)	a. b.	a. 1246 (24 hr SI) psi b. 3412 (est.)
6. Oil Gravity (°API) or Gas BTU Content	1030 BTU/ft^3		990 BTU/ft^3
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 andoil/gas/ water rates of recent test (within 60 days)	Date: Estimate Rates: (400 mcfd)	Date: Rates:	Date: 12/29/97 Rates: 280 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? X Yes ___ No
Have all offset operators been given written notice of the proposed downhole commingling? X Yes ___ No

11. Will cross-flow occur? X 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. X 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-10771

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 Engineer DATE 1/29/98

TYPE OR PRINT NAME Mark W. Stodola TELEPHONE NO. (505) 599-3455

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
811 South First, Artesia, NM 88210
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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-10
Revised October 18, 199
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	² Pool Code	³ Pool Name
	72319	Blanco Mesaverde

⁴ Property Code	⁵ Property Name	⁶ Well Number
009258	SAN JUAN 30-5 UNIT	27-M

⁷ OGRID No.	⁸ Operator Name	⁹ Elevation
017654	PHILLIPS PETROLEUM CO.	6382

¹⁰ Surface Location

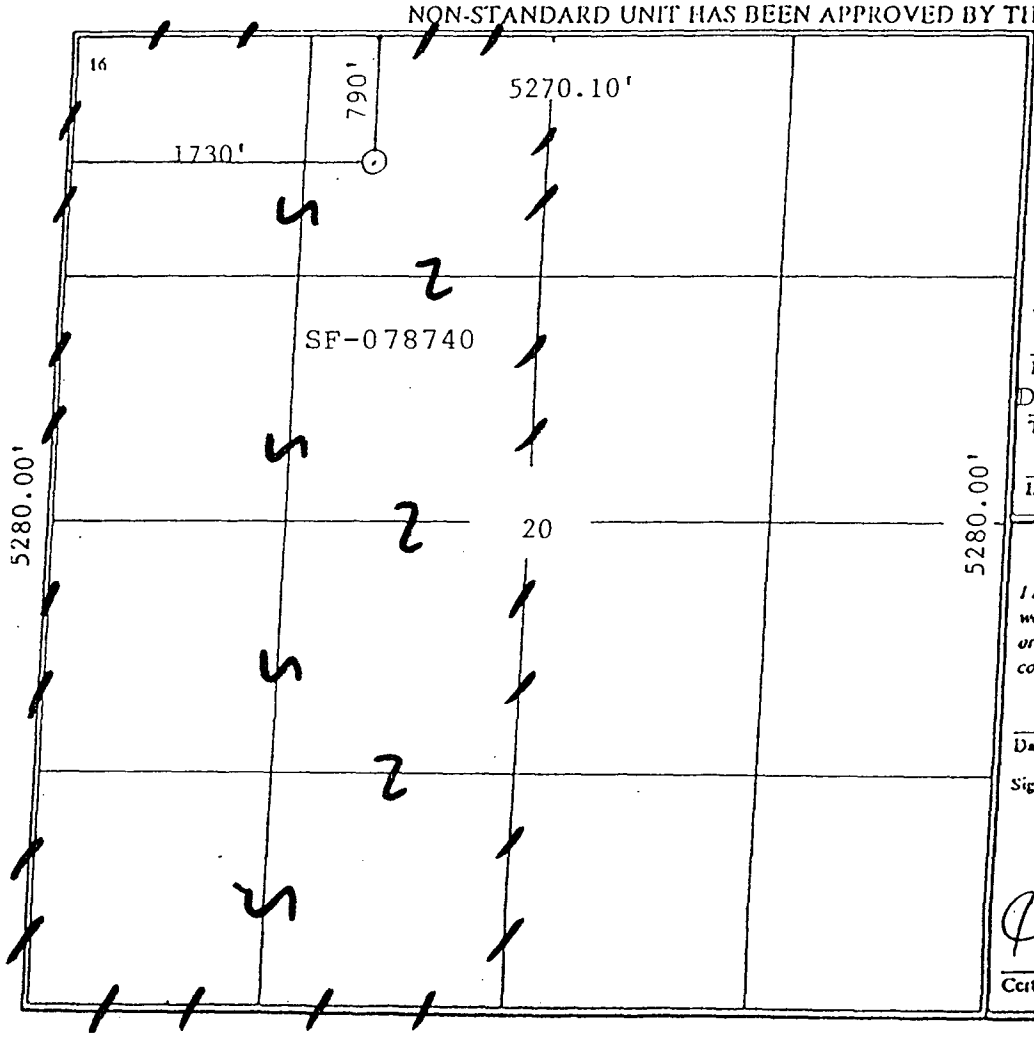
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	20	30N	5W		790	NORTH	1730	WEST	RIO ARRIBA

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
C									

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
320	Y	U	

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: R. A. Allred

Printed Name: Drilling/Production Spvr.

Title: March 19, 1997

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.

2/18/97

Date of Survey

Signature and Seal of Professional Surveyor: FRED B. KERR JR. NEW MEXICO 9393 REGISTERED PROFESSIONAL SURVEYOR 2/24/97

Certificate Number

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
811 South First, Artesia, NM 88210
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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	² Pool Code	³ Pool Name
	71599	Basin Dakota

⁴ Property Code	⁵ Property Name	⁶ Well Number
009258	SAN JUAN 30-5 UNIT	27-M
⁷ OGRID No.	⁸ Operator Name	⁹ Elevation
017654	PHILLIPS PETROLEUM CO.	6382

¹⁰ Surface Location

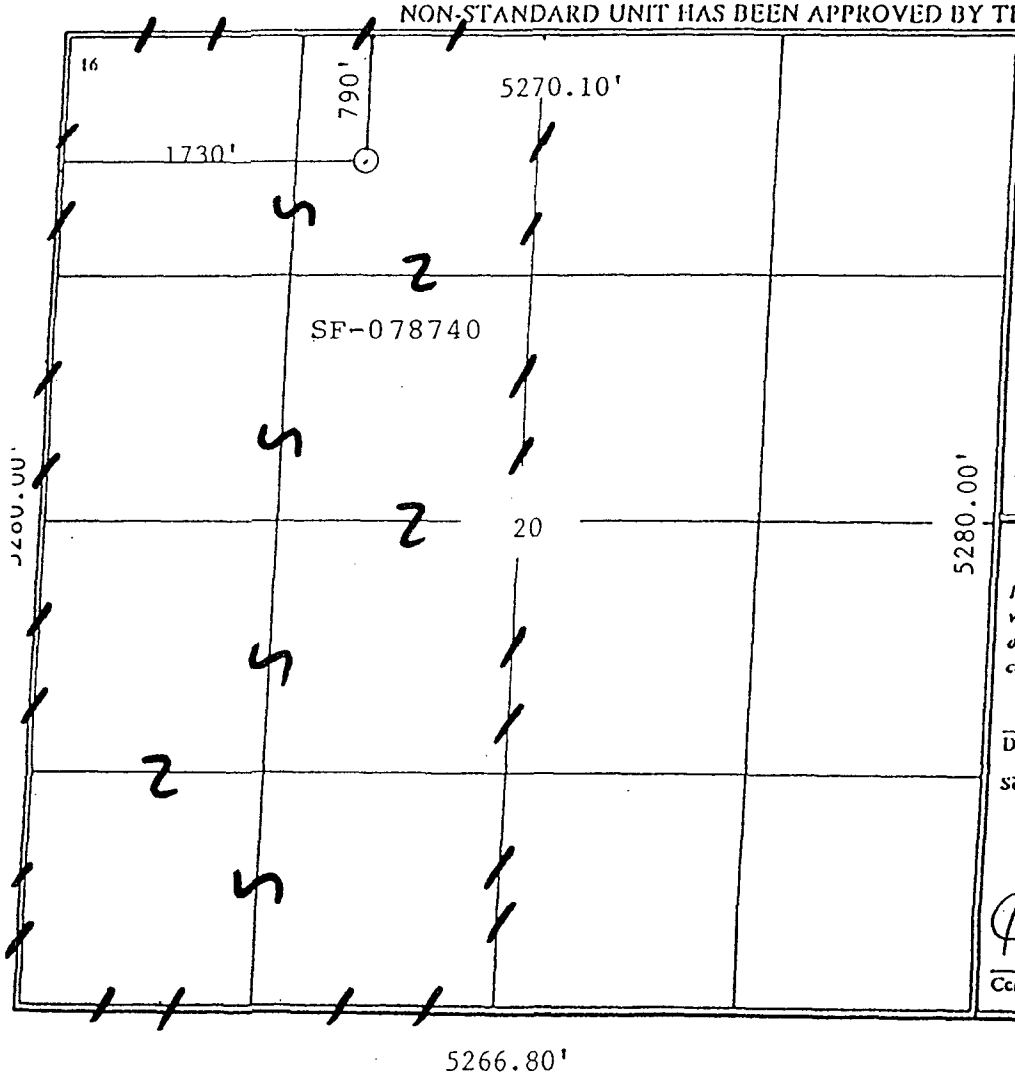
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	20	30N	5W		790	NORTH	1730	WEST	RIO ARRIBA

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
C									

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
320	Y	U	

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

R A Allred
Signature

R. A. Allred
Printed Name

Drilling/Production Spvr.
Title

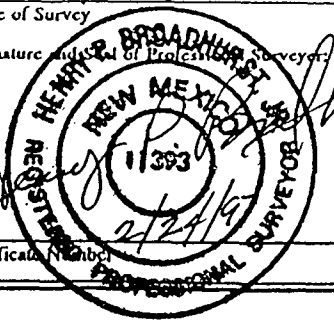
March 19, 1997
Date

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.

2/18/97
Date of Survey

Signature and Seal of Professional Surveyor:



Certificate Number

PHILLIPS PETROLEUM COMPANY
5525 HWY 64 NBU 3004
FARMINGTON. NEW MEXICO 87401

DATE: JANUARY 21. 1998

WELL NAME: SAN JUAN 30-5 # 27M
FORMATION: DAKOTA

TYPE TEST: STATIC GRADIENT

COUNTY: RIO ARRIBA
STATE: NEW MEXICO

ELEVATION: GL
TOTAL DEPTH: 7957'
PERFORATIONS: 7778' TO 7947'
TUBING SIZE: 2 3/8 TO 7776'
CASING SIZE: TO
PACKER:
OTHER: F NIPPLE @ 7745'

CASING PRESSURE: 1160
TUBING PRESSURE: 765
OIL LEVEL:
WATER LEVEL: 6965'
TEMPERATURE:
AMERADA ELEMENT NUMBER: 87977
RANGE: 0-2500
WELL STATUS: SHUT IN 24 HOURS

INDIVIDUAL WELL DATA SHEET

FLOWING GRADIENT TRAVERSE

DEPTH IN FEET	PRESSURE PSIG	GRADIENT PSI/FOOT
0	765	
2000	787	0.011
4000	814	0.013
6000	839	0.012
7462	1093	0.173
7662	1169	0.380
7862	1246	0.385

H & H WIRELINE SERVICE INC.
P. O. BOX 899
FLORA VISTA. N. MEX. 87415
OPERATOR: CHARLES HUGHES
UNIT NO. T-10

PHILLIPS PETROLEUM COMPANY
FARMINGTON, NEW MEXICO 87401
5525 HWY. 64 NBU 3004

January 29, 1998

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

Downhole Commingling Allocation Method
on the San Juan 30-5 Unit #27M

Dear Sirs:

Phillips is proposing to utilized the subtraction method on the subject well for approximately six months after actual commingling occurs. After the six 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 that the Dakota interval has been producing for several months and that the production will not be stabilized on the Mesaverde for several months.

Dakota Production Forecast

January 1998	8,604	February 1998	7,704
March 1998	8,454	April 1998	8,110
May 1998	8,307	June 1998	7,969
July 1998	8,163	August 1998	8,091
September 1998	7,762	October 1998	7,950

For example, if the total volume for September 1998 were 13,400 mcf, then the Dakota would be allocated 7,762 mcf and the Mesaverde 5,638 mcf. And subsequently, the Dakota would be allocated (7762/13400) or 57.92%, and Mesaverde would be allocated (5638/13400) or 42.08%.

Sincerely,
PHILLIPS PETROLEUM COMPANY

Mark Stodola

Mark W. Stodola
Reservoir Engineer

MS/pc

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

PHILLIPS PETROLEUM COMPANY
FARMINGTON, NEW MEXICO 87401
5525 HWY. 64 NBU 3004

December 17, 1997

NM Oil & Gas Conservation Division
1000 Rio Brazos Rd.
Aztec, NM 87410

Downhole Commingling Allocation Method
on the 30-5 Unit #110M

Dear Sirs:

Phillips proposes to utilize the subtraction method through June 1998, and then convert to the ratio method after June 1998. We believe this will be a more accurate method of allocating production considering that the production will not be stabilized on the Mesaverde for several months.

Dakota Production Forecast

Dec. 1997	6879 mcf
Jan. 1998	6814 mcf
Feb. 1998	6097 mcf
March 1998	6687 mcf
April 1998	6410 mcf
May 1998	6561 mcf
June 1998	6290 mcf

For example, if the total June 1998 were to be 12,290 mcf, then the Dakota would be allocated 6290 mcf and the Mesaverde 6000 mcf. And subsequently, the Dakota would be allocated (6290/12,290) or 51.18%, and the Mesaverde would be allocated (6000/12,290) or 48.82%.

Sincerely,

PHILLIPS PETROLEUM COMPANY

Mark W Stodola

Mark W. Stodola
Reservoir Engineer

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
AZTEC NM 87410
(505) 334-6178 FAX: (505) 334-6170
http:\\emnrd.state.nm.us\ocd\District III\3distric.htm

GARY E. JOHNSON
GOVERNOR

Jennifer A. Salisbury
CABINET SECRETARY

January 6, 1998

Mr Mark W Stodola
Phillips Petroleum Co
5525 Hwy 64 NBU 3004
Farmington NM 87401

Re: San Juan 30-5 Unit #110M, API# 30-039-25658, E-16-30N-05W, DHC

Dear Mr. Stodola:

Your recommended allocation of commingled production using the subtraction method for the referenced well is hereby accepted through the month of June 1998. Beginning in July you will submit a recommended allocation formula based on historical production values.

If you have any questions, please contact me.

Yours truly,

Ernie Busch
District Geologist/Deputy O&G Inspector

EB/sh

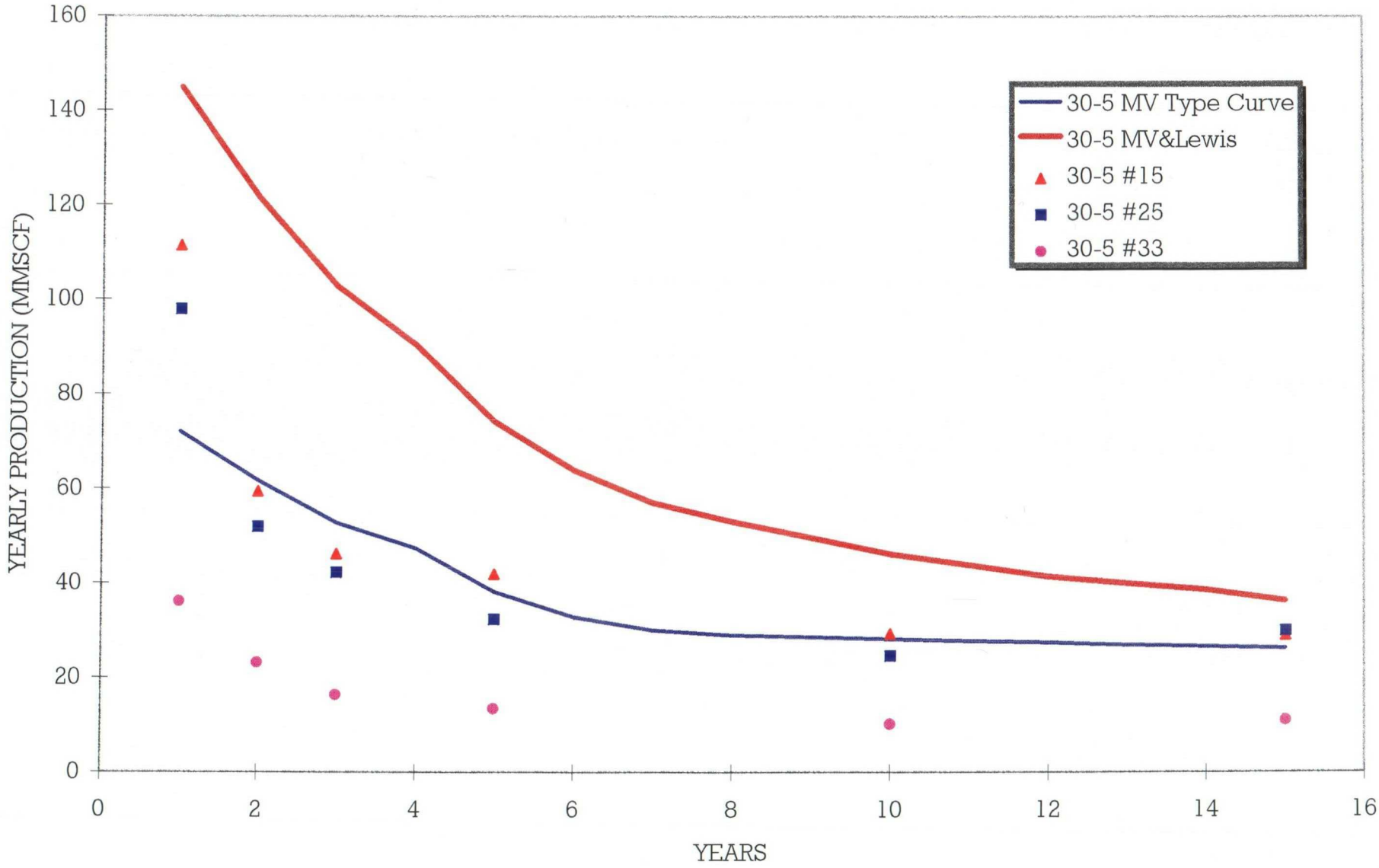
cc: well file

Dakota Production Forecast for 30-5 Unit
Well #27M

Year	Month	Gas (MCF)
1998	1	8,604
	2	7,704
	3	8,454
	4	8,110
	5	8,307
	6	7,969
	7	8,163
	8	8,091
	9	7,762
	10	7,950
	11	7,627
	12	7,812
1999	13	7,744
	14	6,933
	15	7,609
	16	7,299
	17	7,476
	18	7,172

Initial Rate = 280 MCF/D

30-5 UNIT MESAVERDE



MEP81-01 PARPI - WELLZONE PRODUCTION BROWSE Date: 1/28/98
DAILY AVERAGE BY MONTH User: MWSTODO

Wellzone F0628 02 Yr: 1997 Mth: 06 Property: 650423 SAN JUAN 30-5 #27M DK
Screen: 1 (1-Prod, 2-Inj, 3-Both) Well No: 000027M
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 (MCFD)	WATER (BBL)	PROD	OP	ST	CL	TY
*	1997-06	0.00	0	0	0.00	0	82	11	2
*	1997-07	0.00	0	0	0.00	0	50	11	2
*	1997-08	0.00	304	0	31.00	31	11	11	2
*	1997-09	0.00	409	0	30.00	30	11	11	2
*	1997-10	0.00	304	0	31.00	31	11	11	2
	1997-12	0.00	207	0	31.00	31	11	11	2

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

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 = (Commingled rate - Lower zone rate) / Commingled rate

Attachment

OCD Form C-107A (3/12/96)

Item No. 12 - additional explanation:

Based on water analysis from the Mesaverde and Dakota zones and discussions with the chemical treating/analysis company the water from these two zones are compatible. Lab analysis of the individual waters from both the Mesaverde and Dakota formations resulted in positive scaling indices for barium sulfate. There was a slight increase in the barium sulfate scaling index of the combined waters relative to the scaling index of the individual waters.

None of the waters, combined or individual, had meaningful scaling tendencies and combined with the fact that typical water production from either of these zones in San Juan 30-5 are 0-1 BWPD and no barium sulfate scale has been detected to date, no negative impacts to the formations are anticipated.