DHC-2094

NEW MEXICO ENERGY, MINERALS & NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC NM 87410
(505) 334-6178 FAX: (505) 334-6170
http://emnrd.state.nm.us/ocd/District III/3district.htm

GARY E. JOHNSON
Governor

Jennifer A. Salisbury
Cabinet Secretary

November 17, 1999

Mr. Clint Hutchinson
Phillips Petroleum Co
5525 Hwy 64 NBU 3004
Farmington NM 87401

Re: San Juan 30-5 Unit #70, API# 30-039-22462, A-09-30N-05W, DHC

Dear Mr. Hutchinson:

Your recommended allocation of commingled production is hereby accepted as follows:

	Gas
Mesaverde	87%
Dakota	13%

Yours truly,

Ernie Busch

Ernie Busch
District Geologist/Deputy O&G Inspector

EB/mk

cc: Mark Ashley-NMOCD Santa Fe
Jim Lovato-BLM Farmington
Well file

DHC-2094

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Farmington Field Office
1235 La Plata Highway, Suite A
Farmington, New Mexico 87401

IN REPLY REFER TO:

NOV 25 1998

NMSF078997
3162.3-2 (07400)

Phillips Petroleum Company
Attn.: Mark Stodola
5525 Hwy., 64 NBU 3004
Farmington NM 874010

Re: Well No. 70 SJ 30-5 Unit
NENE 9-30N-5W
Rio Arriba Co., NM
Lease No. SF-078997

Dear Mr. Stodola:

Reference is made to your application for down hole commingling of gas and associated liquid hydrocarbons from the Mesaverde and the Dakota Formations in the above referenced well. After reviewing your application and the forecasted production from the Dakota Formation, we concur with the interim use of the subtraction method for allocation of production between zones. Production allocation attributable to the Mesaverde Formation will be based on the difference in the established mid-year production forecast for the Dakota and the commingled gas stream of both intervals. The established decline rate for the Dakota formation is approximately 5.0% per year with the Qi = 80 Mcfd.

Commingled production from each zone must be reported in accordance with the allocation procedure described above. Once stabilized production is established, please file your application for fixed allocation factors for the Mesaverde and Dakota Formations. The effective date will be the date down hole commingling actually occurs.

If you have any questions regarding the above, contact Jim Lovato at (505) 599-6367.

Sincerely,

Jim Lovato

Duane Spencer
Team Leader, Petroleum Management Team

cc:
NMOCD, Santa Fe
NMOCD, Aztec

RD - 9/8/98
DHC 2094

COMMERCIAL RESOURCES
(505)-827-5724

SURFACE RESOURCES
(505)-827-5793

MINERAL RESOURCES
(505)-827-5744

ROYALTY
(505)-827-5772

State of New Mexico
Commissioner of Public Lands
Ray Powell, M.S., D.V.M.
310 Old Santa Fe Trail, P. O. Box 1148
Santa Fe, New Mexico 87504-1148
Phone (505)-827-5760, Fax (505)-827-5766

PUBLIC AFFAIRS
(505)-827-5765

ADMINISTRATIVE MGMT.
(505)-827-5700

LEGAL
(505)-827-5713

PLANNING
(505)-827-5752

August 25, 1998

Phillips Petroleum Company
5525 HWY 64
Farmington, New Mexico 87401

Attn: Mr. Mark W. Stodola

RECEIVED
AUG 27 1998
OIL CONSERVATION DIVISION

Re: Application for Downhole Commingling
San Juan 30-5 Unit Well No. 70
Unit Letter A, Section 9-30N-05W
San Juan 30-5 Unit Well No. 73
Unit Letter B, Section 10-30N-05W
Blanco Mesaverde and Basin Dakota Pools
Rio Arriba County, New Mexico

Dear Mr. Stodola:

Your application to downhole commingle the Blanco Mesaverde and Basin Dakota production from within the wellbore of the above-captioned wells was received on August 18, 1998.

Since it appears that all the New Mexico Oil Conservation Division rules and regulations have been complied with, and there will be no loss of revenue to the State of New Mexico as a result of your proposed operation, your request for downhole commingling is hereby approved. Any deviation from the substance of your request will be sufficient grounds for rescinding our approval. Our approval is subject to like approval by the New Mexico Oil Conservation Division and the Bureau of Land Management.

Please submit your $30.00 dollar filing fee.

Also, please submit a copy of the Oil Conservation Division order approving this application.

If you have any questions or if we may be of further help, please contact Pete Martinez at (505) 827-5791.

Very truly yours,

RAY POWELL, M.S., D.V.M.
COMMISSIONER OF PUBLIC LANDS

BY:
JAMI BAILEY
Oil, Gas and Minerals Division
(505) 827-5744

RP/JB/cpm
Enclosure
pc: Reader File

OCD--Attention: David Catanach, Ben Stone

"WE WORK FOR EDUCATION"

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
811 South First, Artesia, NM 88210
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	[2] Pool Code	[3] Pool Name
30-039-22462	72319	Blanco Mesaverde

[4] Property Code	[5] Property Name	[6] Well Number
009258	San Juan 30-5 Unit	#70

[7] OGRID No.	[8] Operator Name	[9] Elevation
017654	Phillips Petroleum Company	6367

[10] Surface Location

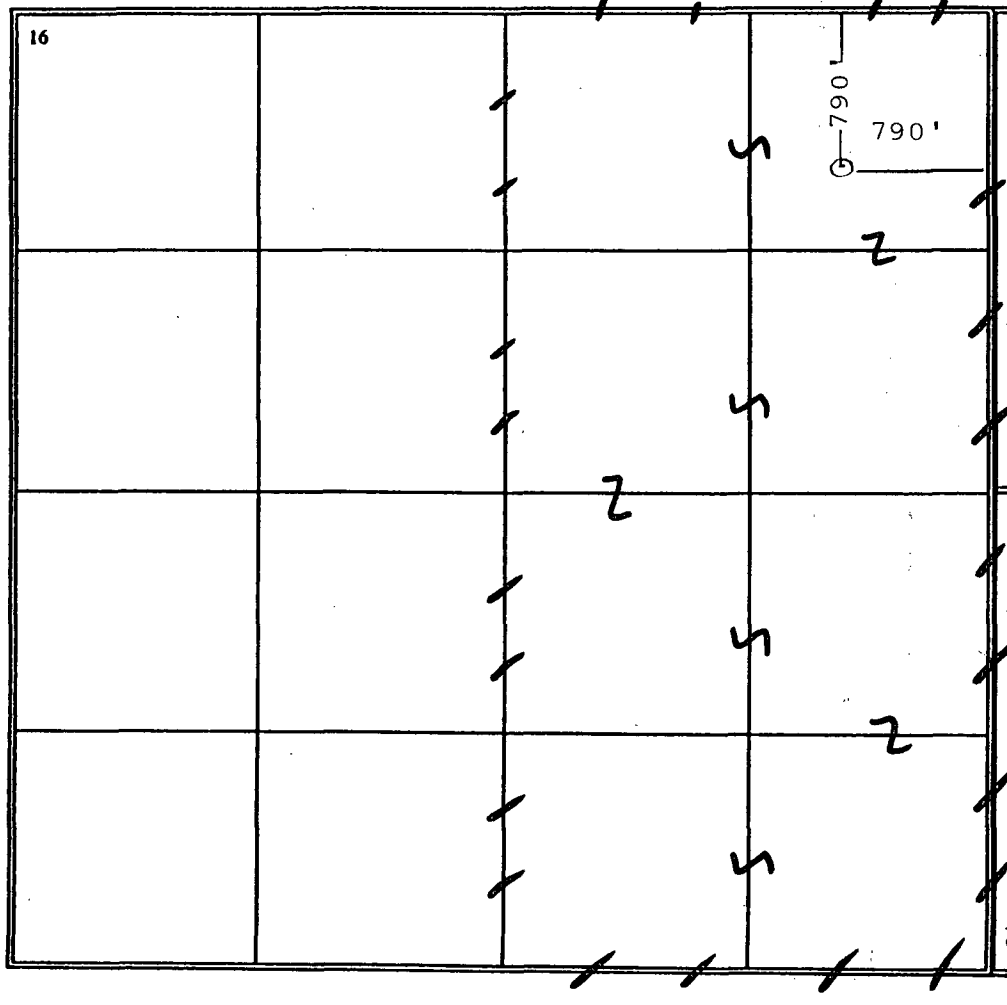
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	9	30N	5W		790	North	790	East	Rio Arriba

[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
A									

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
320 ac			

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

Patsy Clugston

Signature
Patsy Clugston
Printed Name
Regulatory Assistant
Title
8-14-98
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.

Date of Survey

Signature and Seal of Professional Surveyer:

See original dated 4/23/80 signed by Fred B. Kerr, Jr. for 30-5 #70 Dakota

Certificate Number

DHC 9/8/98

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
AUG 17 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

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

APPROVAL PROCESS:
X Administrative __Hearing

EXISTING WELLBORE
X YES __ NO

APPLICATION FOR DOWNHOLE COMMINGLING

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

San Juan 30-5 Unit — Lease
#70 — Well No.
A, Sec. 9, T30N, R5W, Rio Arriba — Unit Ltr. - Sec - Twp - Rge — County

OGRID NO. 017654 Property Code 009258 API NO. 30-039-22462 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)	4100' - 5850'		7764' - 7790'
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) 1030 psi (est.)	a.	a. 24 hr. SI 889 psig
	b. (Original) 1294 pis (est.)	b.	b. 3412 (est.)
6. Oil Gravity (°API) or Gas BTU Content	1050 btu/ft^3 (est		985 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 0 bopd	Date: Rates:	Date: 7/29/98 Rates: 101 mcfd 0 bopd
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 (see attachmen

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. X 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 Engr. DATE 8-14-98

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

IL CONSERVATION DIVISIC

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

APR 28 1980

Form C-102
Revised 10-1-78

All distances must be from the outer boundaries of the Section.

Operator	Lease	Well No.
NORTHWEST PIPELINE CORPORATION	SAN JUAN 30-5 UNIT	70

Unit Letter	Section	Township	Range	County
A	9	30N	5W	Rio Arriba

Actual Footage Location of Well:
790 feet from the North line and 790 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
6367	Dakota	Basin Dakota	320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

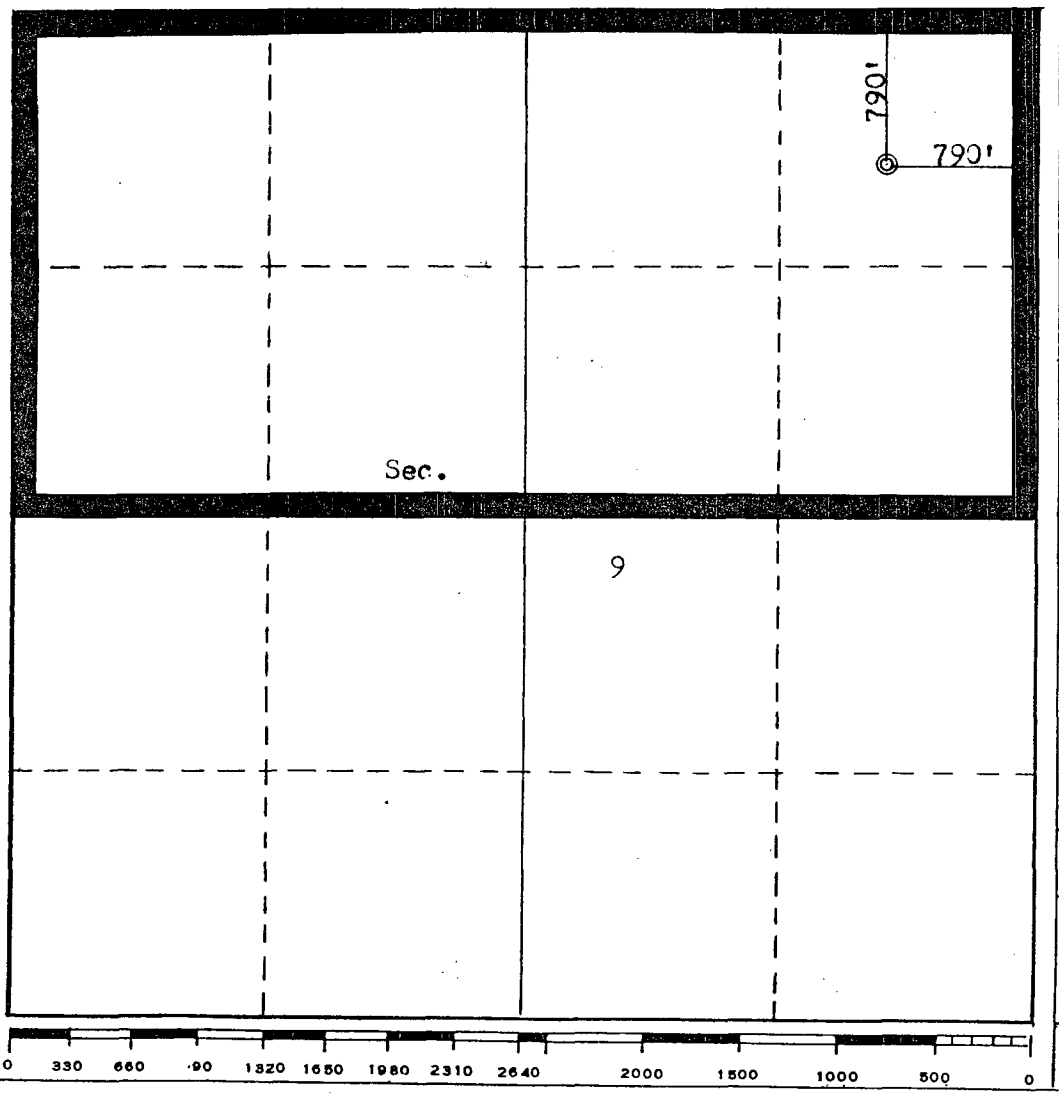
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. 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 _____

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.

Paul C Thompson

Name: Paul C. Thompson

Position: Drilling Engineer

Company: Northwest Pipeline Corp.

Date: April 29, 1980

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 Surveyed: April 23, 1980

Registered Professional Engineer and/or Land Surveyor

Fred B. Kerr Jr.

Certificate No. 3950

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

August 14, 1998

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

Downhole Commingling Allocation Method
on the San Juan 30-5 Unit #70

Dear Sirs:

Phillips is proposing to utilize 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

September 1998	2,390	October 1998	2,459
November 1998	2,448	December 1998	2,438
January 1999	2,428	February 1999	2,417
March 1999	2,407	April 1999	2,397
May 1999	2,386	June 1999	2,376
July 1999	2,366	August 1999	2,356

For example, if the total volume for December 1998 were 6,520 mcf, then the Dakota would be allocated 2,438 mcf and the Mesaverde 4,082 mcf. And subsequently, the Dakota would be allocated (2,438/6,520) or 37.39%, and Mesaverde would be allocated (4,082/6,520) or 62.61%.

Sincerely,

PHILLIPS PETROLEUM COMPANY

Mark W. Stodola

Mark W. 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: AUGUST 7, 1998

WELL NAME: SAN JUAN 30-5 # 70
FORMATION: DAKOTA

TYPE TEST: STATIC GRADIENT

COUNTY: RIO ARRIBA
STATE: NEW MEXICO

ELEVATION: GL.
TOTAL DEPTH: PBTD 7785'
PERFORATIONS: 7764' TO 7790'
TUBING SIZE: 3 1/2 TO 7741'
CASING SIZE: 4 1/2 TO 7850'
PACKER:
OTHER:

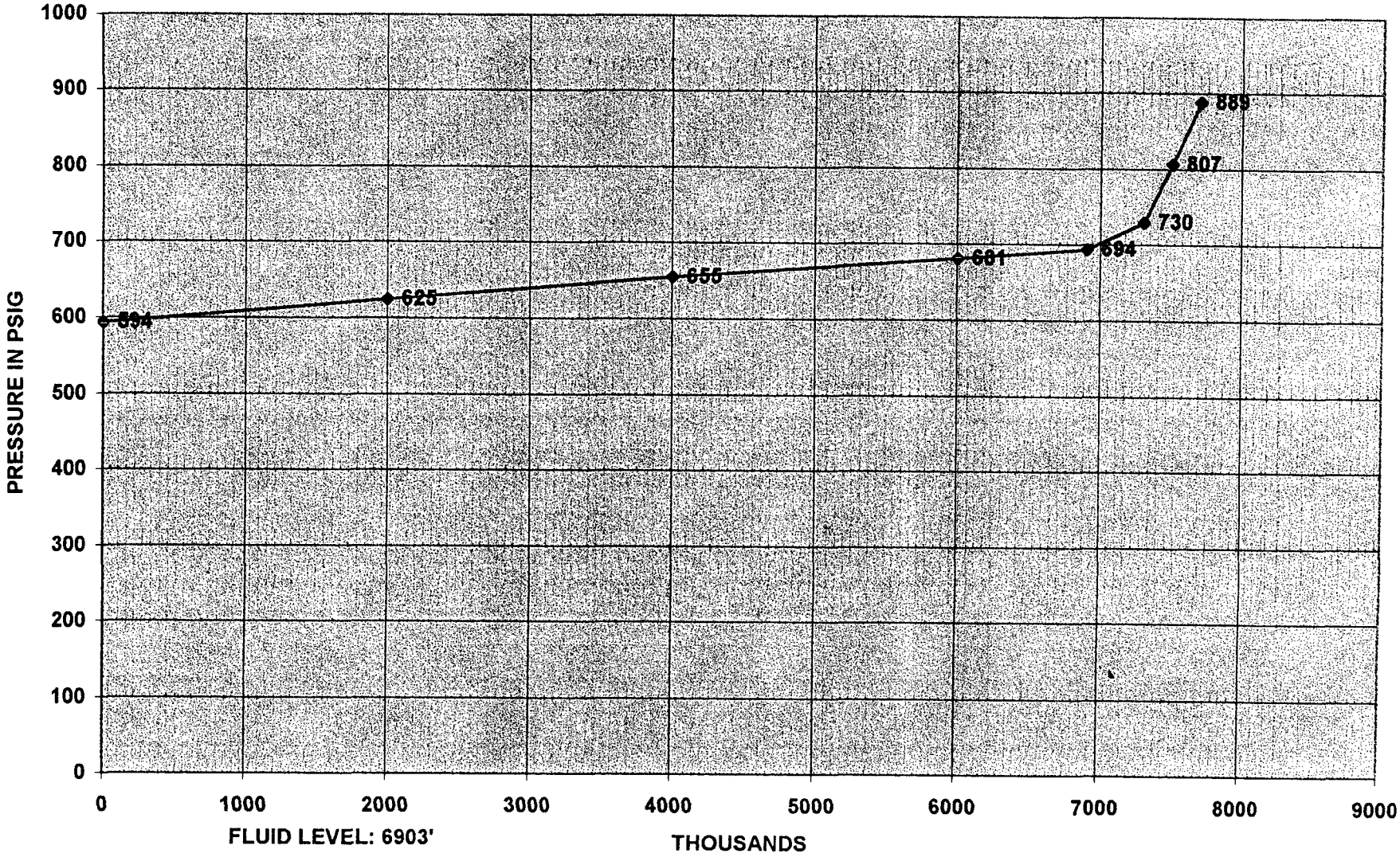
CASING PRESSURE: 789
TUBING PRESSURE: 601
OIL LEVEL:
WATER LEVEL: 6903'
TEMPERATURE:
ANERADA ELEMENT # 87977
RAMGE: 0 TO 2500
WELL STATUS: SHUT IN

INDIVIDUAL WELL DATA SHEET

DEPTH IN FEET	PRESSURE PSIG	GRADIENT PSI/FOOT
0	594	0
2000	625	0.016
4000	655	0.015
6000	681	0.013
7300	730	0.038
7500	807	0.385
7700	889	0.41

H & H WIRELINE SERVICE INC.
P. O. BOX 899
FLORA VISTA, N. MEX. 87415
OPERATOR: C. HUGHES
UNIT NO. T-11

PHILLIPS PETROLEUM SAN JUAN 30-5 # 70
DATE: AUGUST 7, 1998



MEP81-01 PARPI - WELLZONE PRODUCTION BROWSE Date: 8/14/98
DAILY AVERAGE BY MONTH User: MWSTODO

Wellzone L9891 01 Yr: 1997 Mth: 07 Property: 650262 SAN JUAN 30-5 DAKOTA UNIT
Screen: 1 (1-Prod, 2-Inj, 3-Both) Well No: 000070
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
	1997-07	0.00	71	0	31.00	31	11	03	2
	1997-08	0.00	64	0	31.00	31	11	03	2
	1997-09	0.00	80	0	26.00	26	11	03	2
*	1997-10	0.00	91	0	31.00	31	11	03	2
*	1997-11	0.00	88	0	30.00	30	11	03	2
	1997-12	0.00	107	0	31.00	31	11	03	2
*	1998-01	0.00	76	0	31.00	31	11	03	2
	1998-02	0.00	87	0	28.00	28	11	03	2
*	1998-03	0.00	91	0	24.00	24	11	03	2
	1998-04	0.00	81	0	23.00	23	11	03	2
	1998-05	0.00	90	0	31.00	31	11	03	2
	1998-06	0.00	72	0	30.00	30	11	03	2

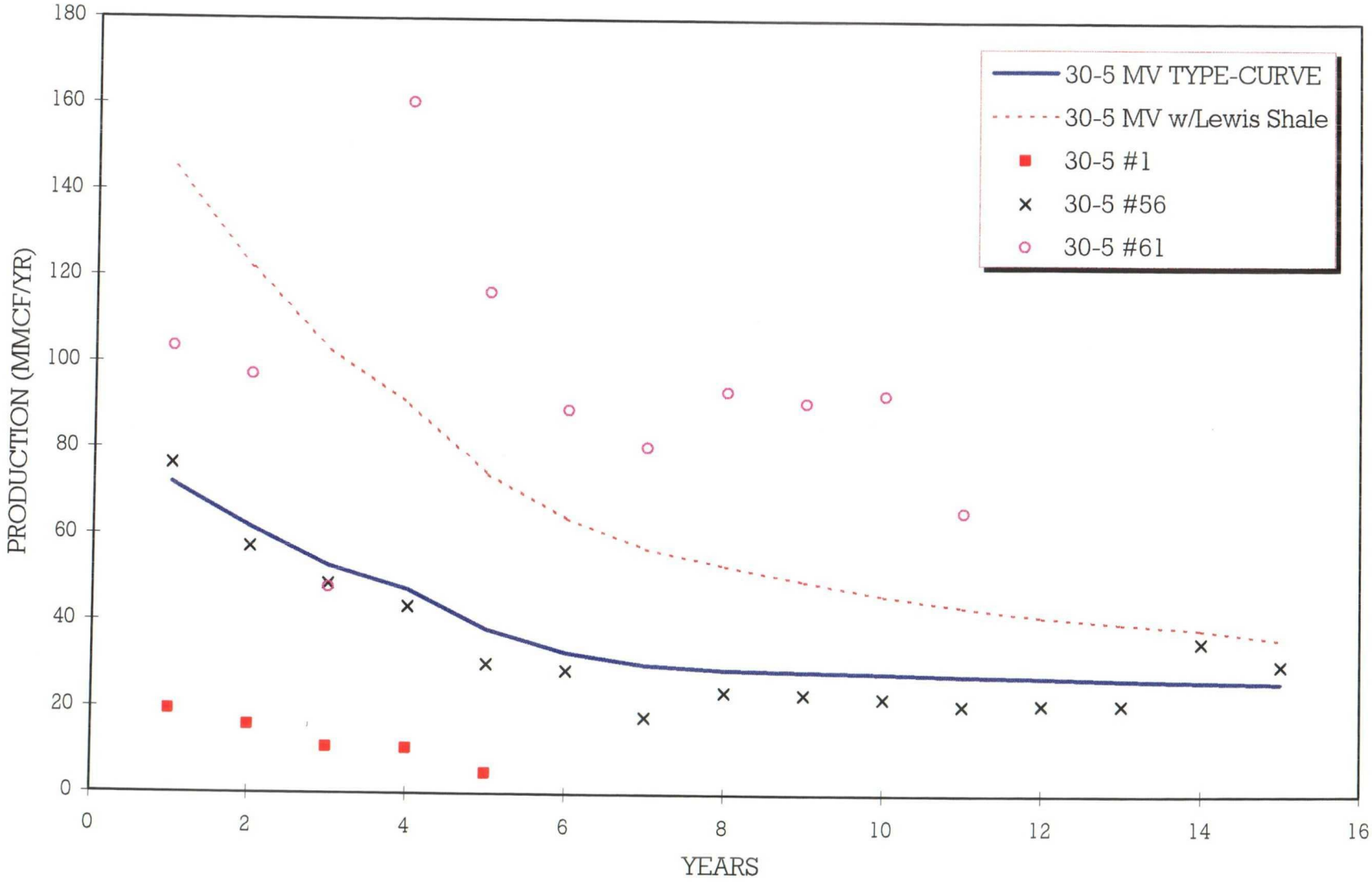
PA1=ICE PA2=Exit PF1=Help PF3=End PF5=INITIAL CUM PF11=GRAPH
Transfer-> PF7=Backward PF8=Forward PF10=GRAND MENU PF12=LOG GRAPH

Dakota Production Forecast for 30-5 Unit
Well #70

Year	Month	Gas (MCF)
Sept. 98	1	2,390
Oct	2	2,459
Nov	3	2,448
Dec	4	2,438
1999	5	2,428
Feb	6	2,417
Mar	7	2,407
Apr	8	2,397
May	9	2,386
Jun	10	2,376
Jul	11	2,366
Aug	12	2,356
Sep	13	2,346
Oct	14	2,336
Nov	15	2,326
Dec	16	2,316
Jan	17	2,306
Feb	18	2,074

Initial Rate = 80 MCF/D

30-5 UNIT MESAVERDE



30-5mvtc

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.