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

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 29-6 Unit — Lease
106 — Well No.
M, 31 - T29N, R6W — Unit Ltr. - Sec - Twp - Rge
Rio Arriba — County

OGRID NO. 017654 Property Code 009267 API NO. 30-039-21039
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	Blanco Mesaverde		Basin Dakota
2. Top and Bottom of Pay Section (Perforations)	4250' - 6000'		7882' - 8016'
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) 600 psi (est.) b. (Original) 1280 psi (est.	a. b.	a. 721 psi b. 3130 psi (est.)
6. Oil Gravity (°API) or Gas BTU Content	1150 BTU/mscf		1010 BTU/mscf
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: 860 mcfd Rates: 0.5 bopd (estimated)	Date: Rates:	Date: 4/30/99 Rates: 37 mcfd, 0 bwpd
8. Fixed Percentage Allocation Formula -% for each zone	Oil: % Gas: %	Oil: % Gas: %	Oil: % Gas: %

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JUN 11 1999
OIL CON. DIV.
DIST. 3

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-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 6/8/99

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

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
30-039-21039	72319	Blanco Mesaverde

[4] Property Code	[5] Property Name	[6] Well Number
009257	San Juan 29-6 Unit	#106

[7] OGRID No.	[8] Operator Name	[9] Elevation
017654	Phillips Petroleum Company	6822'

[10] Surface Location

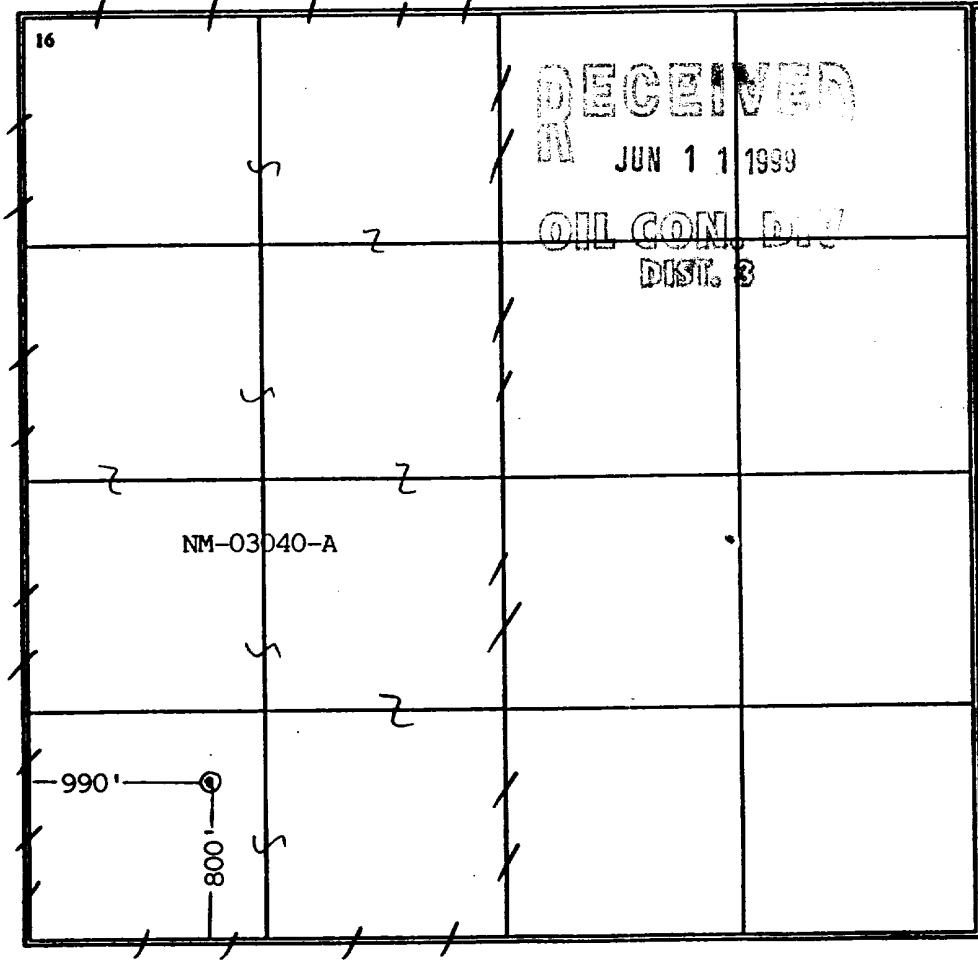
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	31	29N	6W		800	South	990	West	Rio Arriba

[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
M									

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
320 W/2	I	U	29-6 Unit DHC - Order No. R-11187

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

June 9, 1999
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 supervition, and that the same is true and correct to the best of my belief.

11/29/1971
Date of Survey

Signature and Seal of Professional Surveyer:

See original Dakota C102
signed by David O. Vilven
dated 11/29/1971

1760
Certificate Number

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

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

Operator	Lease	Well No.
~~EL PASO NATURAL GAS COMPANY~~ Northwest Pipeline Corp.	SAN JUAN 29-6 UNIT (NM-03040-A)	105

Unit Letter	Section	Township	Range	County
H	31	29-N	6-W	RIO ARRIBA

Actual Footage Location of Well: 800 feet from the SOUTH line and 990 feet from the WEST line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
6822	DAKOTA	BASIN DAKOTA	320.00 Acres

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

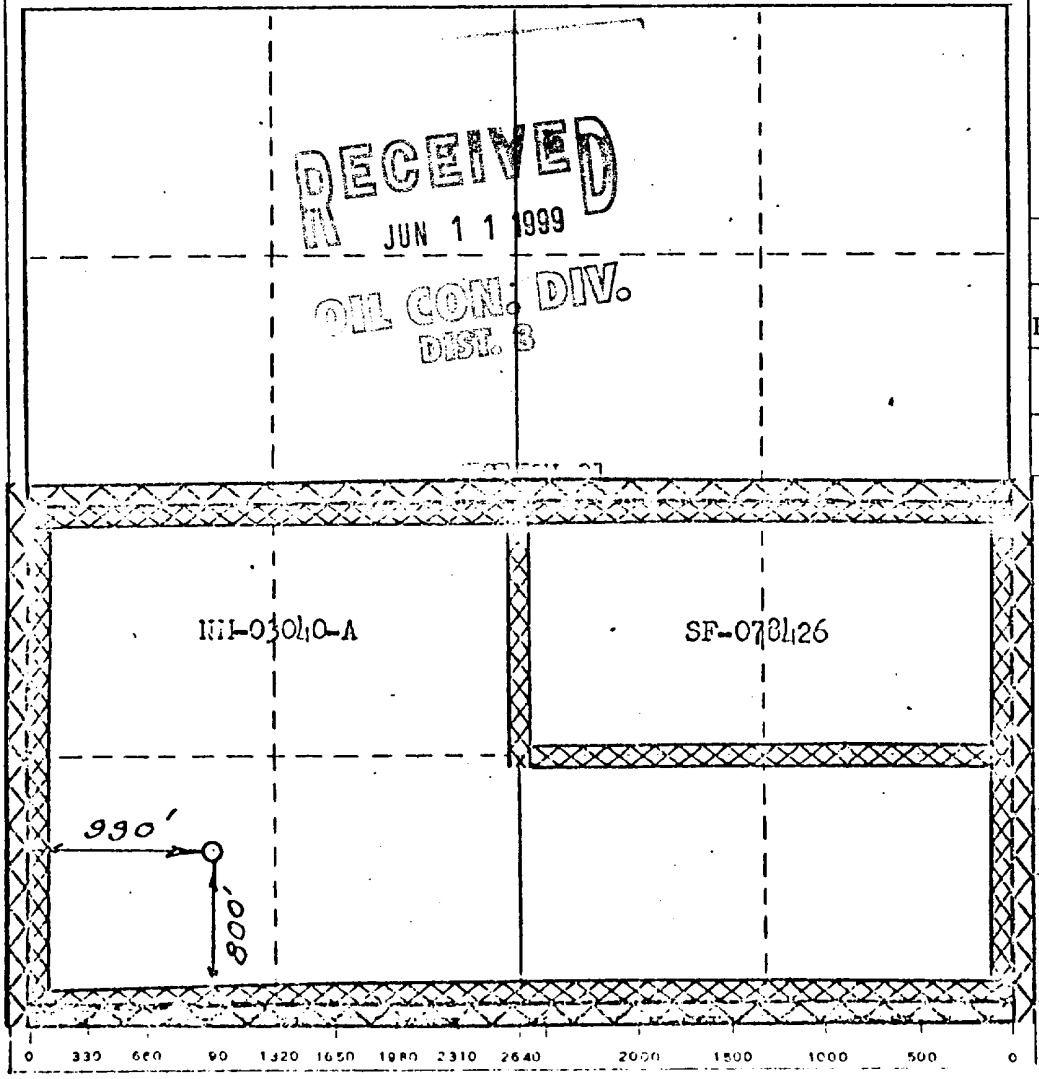
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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.) SW 1/4 SW/4 Section 31, T29N, R6W

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.

Name O.B. Whitenburg

Position Production & Drilling Engineer

Company Northwest Pipeline Corp.

Date October 25, 1974

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 NOVEMBER 29, 1971

Registered Professional Engineer and/or Land Surveyor

Certificate No. 1760

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

June 9, 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 #106

Dear Sirs:

Phillips is proposing to utilize the subtraction method on the subject well for approximately twelve months after actual commingling occurs. After the twelve 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 years and that the production will not be stabilized on the Mesaverde for several months.

Dakota Production Forecast

July 1999	1,235	August 1999	1,226
September 1999	1,178	October 1999	1,208
November 1999	1,160	December 1999	1,190
January 2000	1,181	February 2000	1,097
March 2000	1,164	April 2000	1,118
May 2000	1,147	June 2000	1,102

For example, if the total volume for August 1999 were 4,230 mcf, then the Dakota would be allocated 1,226 mcf and the Mesaverde 3,004 mcf. And subsequently, the Dakota would be allocated (1,226/4,230) or 28.98%, and Mesaverde would be allocated (3,004/4230) or 71.02%.

Sincerely,

PHILLIPS PETROLEUM COMPANY

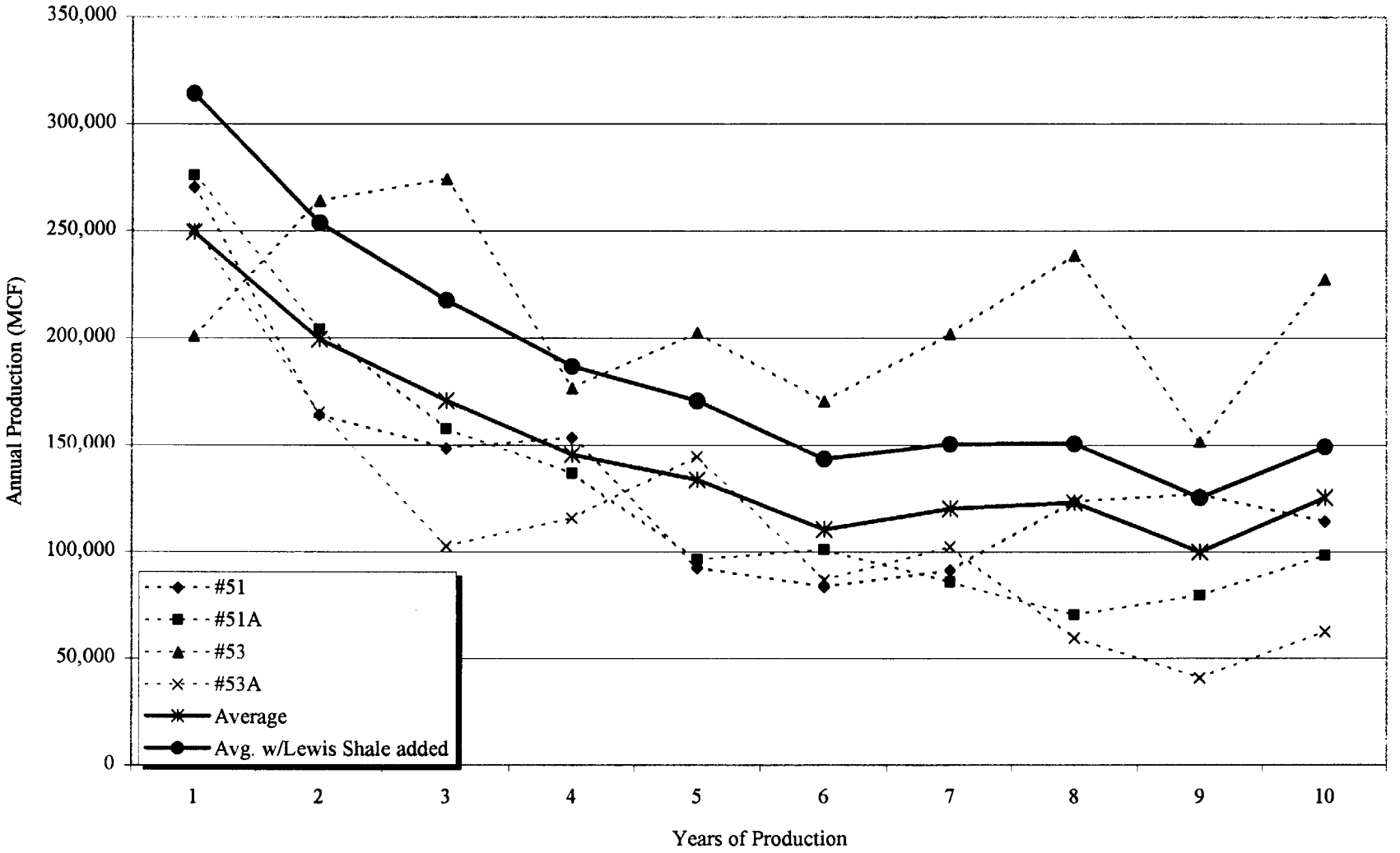
Mark Stodola

Mark W. Stodola
Reservoir Engineer

MS/pc

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

Mesaverde Production for Section 31-T29N-R6W



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

DATE: JUNE 3, 1999

WELL NAME: SAN JUAN 29-6 # 106
FORMATION: DAKOTA

TYPE TEST: STATIC GRADIENT

COUNTY: RIO ARRIBA
STATE: NEW MEXICO

TOTAL DEPTH:
PERFS:
TUBING SIZE: 1 1/2 TO 8013'
CASING SIZE:
PACKER:
OTHER: SN @ 7981'
ENGAGED @ 02:16

CASING PRESSURE:
TUBING PRESSURE: 600
OIL LEVEL:
WATER LEVEL:
TEMPERATURE:
ELEMENT NO.
ELEMENT RANGE 0 TO 3500

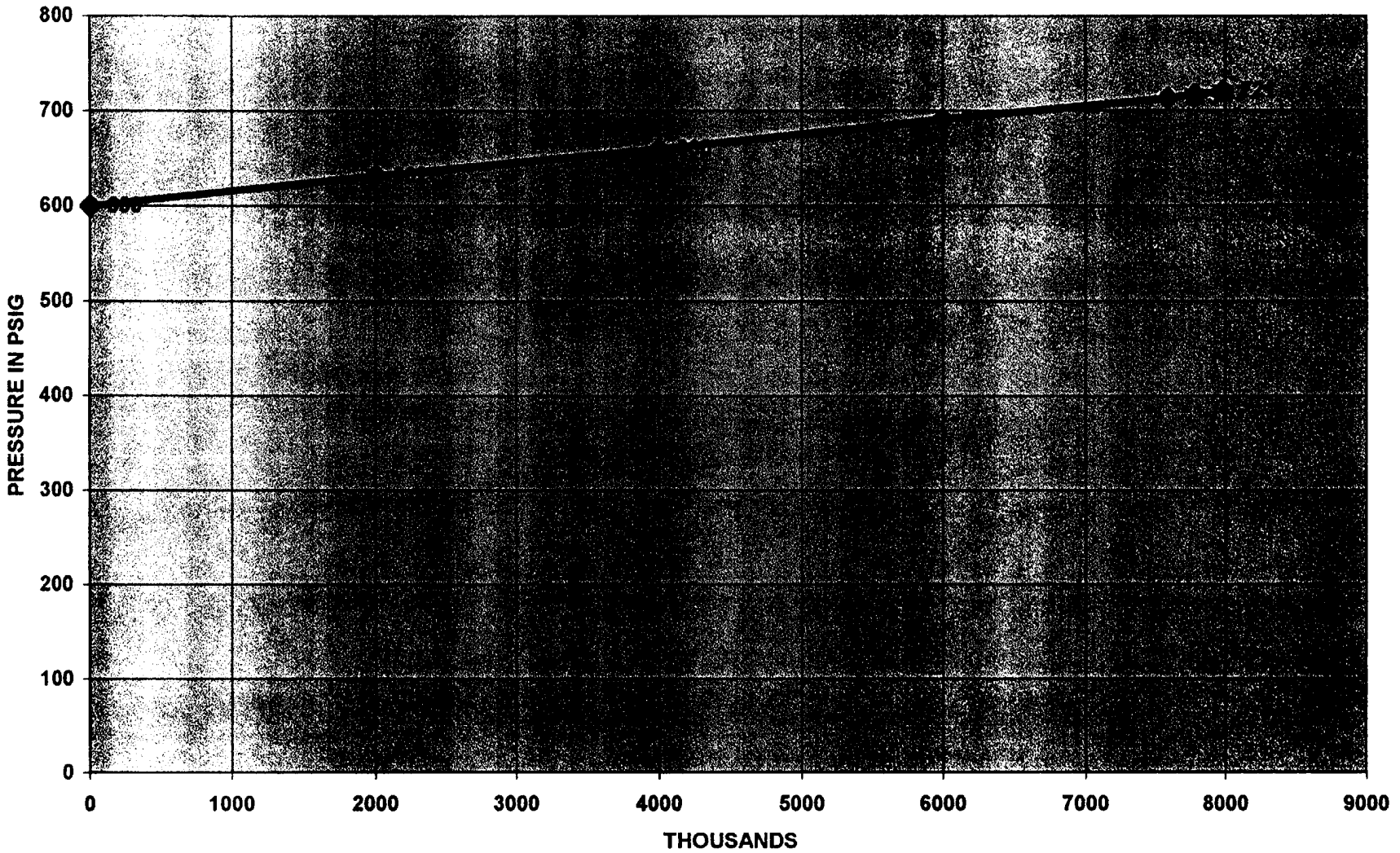
WELL STATUS: SHUT IN

DEPTH IN FEET	PRESSURE PSIG	GRADIENT PSI/FOOT
0	600	
2000	632	0.016
4000	660	0.014
6000	691	0.015
7581	713	0.014
7781	717	0.020
7981	721	0.020

RAN SLM @ 7981'

H & H WIRELINE SERVICE INC.
P. O. BOX 899
FLORA VISTA, NEW MEXICO 87415
OPERATOR: STEVEN HODGES
UNIT NO. T-8

PHILLIPS PETROLEUM SAN JUAN 29-6 # 106
DATE: JUNE 3, 1999



29-6 Unit #106 Dakota Forecast

Initial Production Rate	=	*40 MCFD*
Hyperbolic Exponent	=	*0.33*
Decline Rate	=	*9 %*

	Month	***Monthly MCF***
1999	Jul	***1,235***
	Aug	***1,226***
	Sep	***1,178***
	Oct	***1,208***
	Nov	***1,160***
	Dec	***1,190***
2000	Jan	***1,181***
	Feb	***1,097***
	Mar	***1,164***
	Apr	***1,118***
	May	***1,147***
	Jun	***1,102***
	Jul	***1,130***
	Aug	***1,122***
	Sep	***1,078***
	Oct	***1,106***
	Nov	***1,062***
	Dec	***1,090***

MEP81-01 PARPI - WELLZONE PRODUCTION BROWSE Date: 6/08/99
DAILY AVERAGE BY YEAR User: MWSTODO

Wellzone L9958 01 Yr: 1991 Mth: 05 Property: 650266 SAN JUAN 29-6 UNIT DK #106
Screen: 1 (1-Prod, 2-Inj, 3-Both) Well No: 000106
Type: D (T-Total, D-Daily Avg) Field: 042233 BASIN
Period: Y (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
	1991 IC	0.00	110	0	135.04	136			
	1992	0.00	81	0	349.00	354			
	1993	0.00	65	0	352.00	352			
	1994	0.00	61	0	359.00	359			
	1995	0.00	55	0	361.00	361			
	1996	0.00	59	0	356.00	356			
	1997	0.00	79	0	320.00	320			
	1998	0.00	70	0	365.00	365			
	1999	0.00	47	0	120.00	120			

NO MORE DATA AVAILABLE
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: 6/08/99
DAILY AVERAGE BY MONTH User: MWSTODO

Wellzone L9958 01 Yr: 1998 Mth: 05 Property: 650266 SAN JUAN 29-6 UNIT DK #106
Screen: 1 (1-Prod, 2-Inj, 3-Both) Well No: 000106
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
	1998-05	0.00	77	0	31.00	31	11	03	2
	1998-06	0.00	65	0	30.00	30	11	03	2
	1998-07	0.00	100	0	31.00	31	11	03	2
	1998-08	0.00	83	0	31.00	31	11	03	2
	1998-09	0.00	60	0	30.00	30	11	03	2
	1998-10	0.00	77	0	31.00	31	11	03	2
	1998-11	0.00	69	0	30.00	30	11	03	2
	1998-12	0.00	54	0	31.00	31	11	03	2
	1999-01	0.00	60	0	31.00	31	11	03	2
*	1999-02	0.00	52	0	28.00	28	11	03	2
	1999-03	0.00	39	0	31.00	31	11	03	2
	1999-04	0.00	37	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 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.