

DHC 1843



State of New Mexico
Commissioner of Public Lands

RAY POWELL, M.S., D.V.M.
COMMISSIONER

310 OLD SANTA FE TRAIL P.O. BOX 1148

(505) 827-5760
FAX (505) 827-5766

SANTA FE, NEW MEXICO 87504-1148

February 17, 1998

Phillips Petroleum Company
5525 HWY 64
Farmington, New Mexico 87401

Attn: Mr. Mark W. Stodola

Re: Application for Downhole Commingling
San Juan 30-5 Unit Well No. 75M
Blanco Mesaverde and Basin Dakota Pools
Unit Letter E, Section 21-30N-05W
Rio Arriba, New Mexico

Dear Mr. Stodola:

We are in receipt of your February 10, 1998, downhole commingling application for the above-captioned well. Your application requests our approval to downhole commingle the Blanco Mesaverde and Basin Dakota production from within the wellbore of the San Juan 30-5 Unit Well No. 75M, located in Unit Letter E, Section 21-30N-05W.

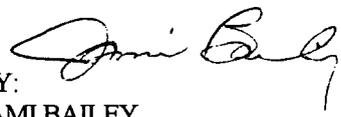
Since it appears that all the New Mexico Oil Conservation Division rules and regulations have been complied with, and there will be no loss of revenue to the State of New Mexico as a result of your proposed operation, your request for downhole commingling is hereby approved. Any deviation from the substance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

Please submit your \$30.00 dollar filing fee.

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

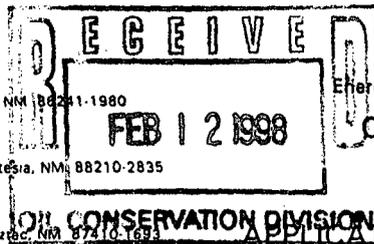
RP/JB/cpm
Enclosure
pc: Reader File

OCD

BLM

DHC 3/4/98

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



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:

Administrative Hearing

EXISTING WELLBORE

YES NO

Phillips Petroleum Company, 5525 Hwy. 64, Farmington, NM 87401

Operator Address
San Juan 30-5 Unit #75M E, Sec. 21, T30N, R5W, Rio Arriba, NM

Lease Well No. Unit Ltr. - Sec - Twp - Rge County

OGRID NO. 017654 Property Code 009258 API NO. 30-039-25659 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)			7754 - 7887'
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) 1277 psi
	b. (Original) 1294 psi (est.)	b.	b. 3412 psi (est.)
6. Oil Gravity (^o 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 * If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date: Rates:	Date: Rates:	Date: Rates:
	Date: estimate Rates: 400 mcf/d	Date: Rates:	Date: 2/4/98 Rates: 186 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? Yes No
If not, have all working, overriding, and royalty interests been notified by certified mail? Yes No
Have all offset operators been given written notice of the proposed downhole commingling? Yes No

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-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 W. Stodola TITLE Reservoir Engin. DATE 2/10/98

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

District I
 180 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

Form C-10
 Revised October 18, 199

OIL CONSERVATION DIVISION
 2040 South Pacheco
 Santa Fe, NM 87505

Instructions on bac
 Submit to Appropriate District Office
 State Lease - 4 Copy
 Fee Lease - 3 Copy

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

* API Number 30-039-25659	* Pool Code 72319	* Pool Name Blanco Mesaverde
* Property Code 009258	* Property Name SAN JUAN 30-5 UNIT	* Well Number 75-M
* OGRM No. 017654	* Operator Name PHILLIPS PETROLEUM CO.	* Elevation 6403

¹⁰ Surface Location

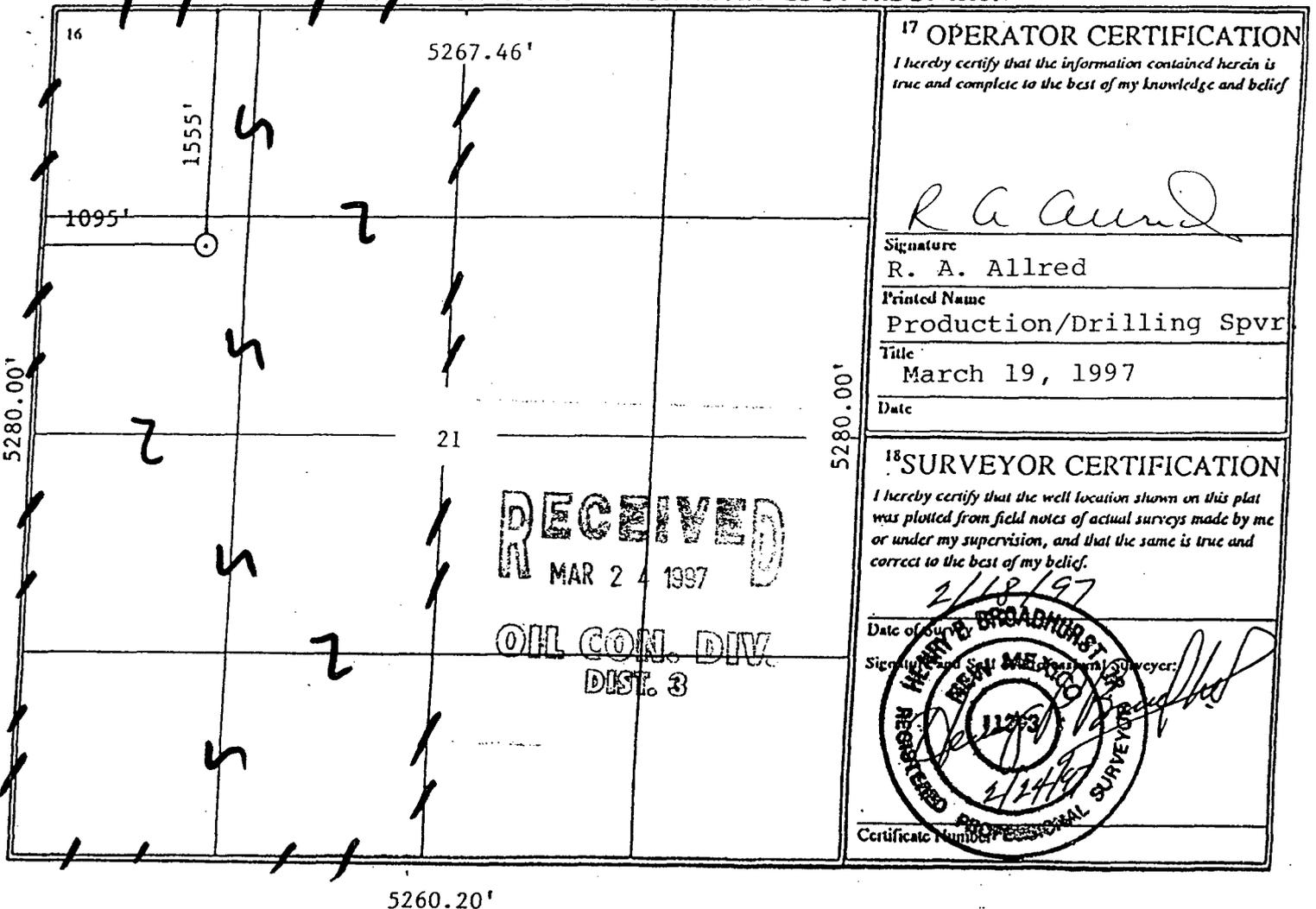
Ul. or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	21	30N	5W		1555	NORTH	1095	WEST	RIO ARriba

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
E									

* Dedicated Acres 320	* Joint or Infill Y	* Consolidation Code U	* Order No.
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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
 Production/Drilling 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
 HENRY E. BROADBENT
 REGISTERED PROFESSIONAL SURVEYOR
 11263
 2/14/97
 Signature
 Certificate Number

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

Form C-102
 Revised October 18, 1994

OIL CONSERVATION DIVISION
 2040 South Pacheco
 Santa Fe, NM 87505

Instructions on back
 Submit to Appropriate District Office
 State Lease - 4 Copies
 Fee Lease - 3 Copies

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

* API Number 30-039-25659		* Pool Code 71599	* Pool Name Basin Dakota
* Property Code 009258	* Property Name SAN JUAN 30-5 UNIT		* Well Number 75-M
* OGRID No. 017654	* Operator Name PHILLIPS PETROLEUM CO.		* Elevation 6403

¹⁰ Surface Location

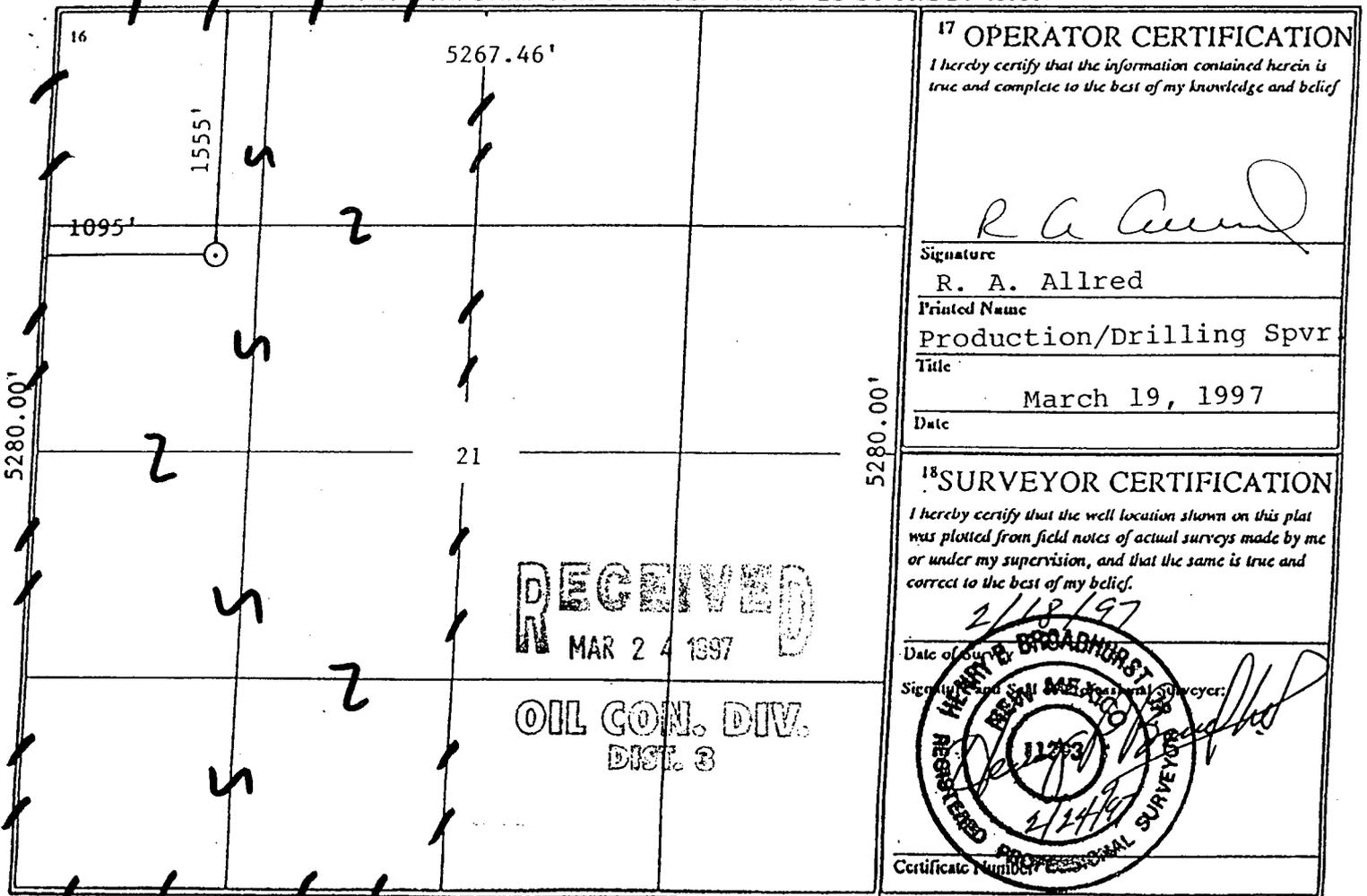
UL, or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	21	30N	5W		1555	NORTH	1095	WEST	RIO ARRIBA

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
E									

* Dedicated Acres 320	* Joint or Infill Y	* Consolidation Code U	* Order No.
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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
 Production/Drilling 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
 Henry Broadhurst
 Signature of Professional Surveyor
 REGISTERED PROFESSIONAL SURVEYOR
 11273
 Certificate Number

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

DATE: FEBRUARY 6. 1998

WELL NAME: SAN JUAN 30-S # 75M
FORMATION: DAKOTA

TYPE TEST: STATIC GRADIENT

COUNTY: RIO ARRIBA
STATE: NEW MEXICO

ELEVATION: GL
TOTAL DEPTH: 7935'
PERFORATIONS: 7754' TO 7887'
TUBING SIZE: 2 3/8 TO 7731'
CASING SIZE: 4 1/2 TO 7942'
PACKER:
OTHER: PRESSURE @ SHUT IN
CASING 900. TUBING 500

CASING PRESSURE: 1100
TUBING PRESSURE: 990
OIL LEVEL:
WATER LEVEL: 7455'
TEMPERATURE:
AMERADA ELEMENT NUMBER: 87977
RANGE: 0-2500
WELL STATUS: SHUT IN 24 HRS
@ 14:00 2-5-98

INDIVIDUAL WELL DATA SHEET

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FLOWING GRADIENT TRAVERSE

DEPTH IN FEET	PRESSURE PSIG	GRADIENT PSI/FOOT
0	987	
2000	1023	0.018
4000	1061	0.019
6000	1094	0.016
7421	1119	0.017
7621	1195	0.380
7821	1277	0.410

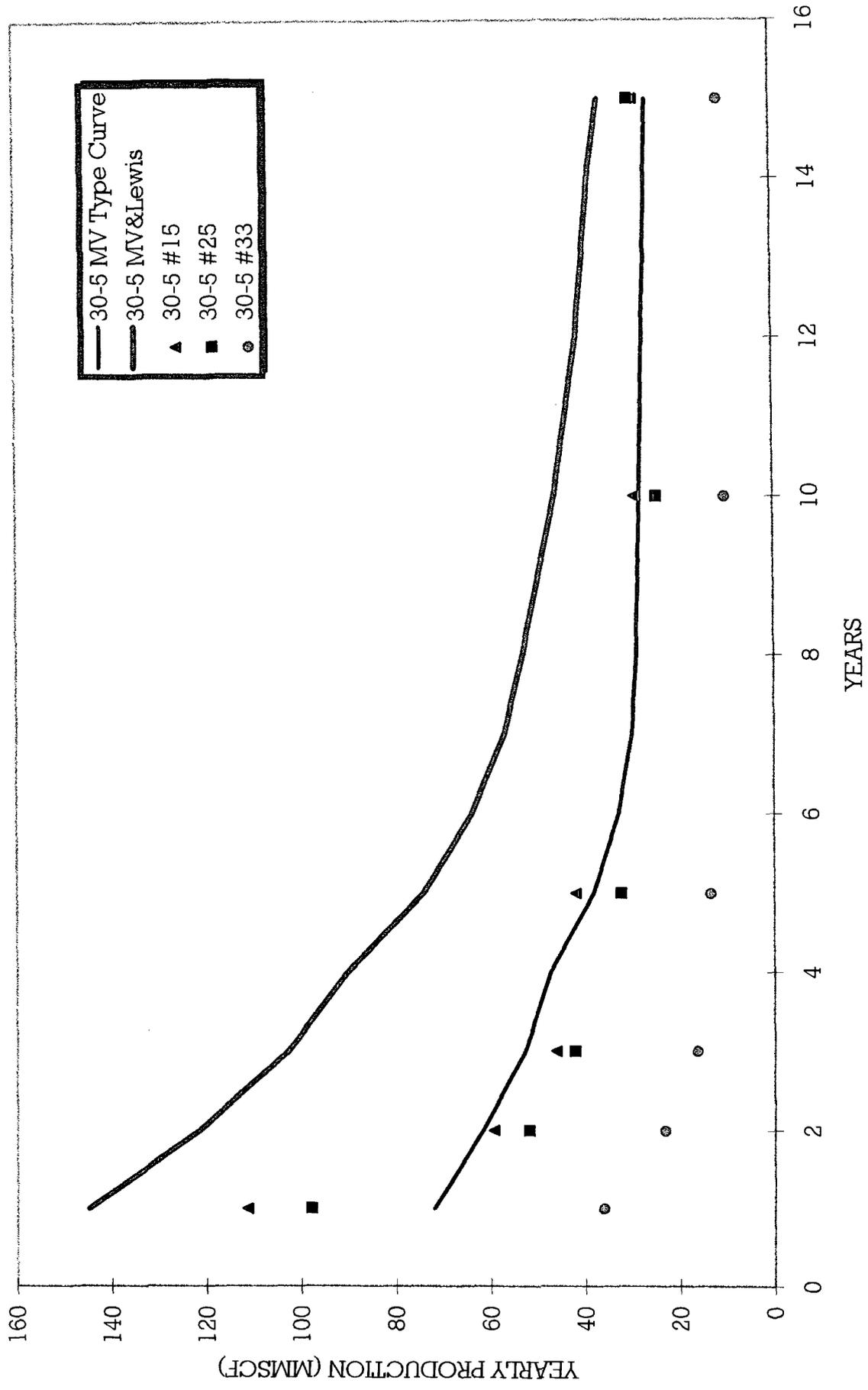
H & H WIRELINE SERVICE INC.
P. O. BOX 899
FLORA VISTA, N. MEX. 87415
OPERATOR: CHARLES HUGHES
UNIT NO. T-10

Dakota Production Forecast for 30-5 Unit
Well #75M

Year	Month	Gas (MCF)
Feb. 98	1	5,135
Mar	2	5,635
Apr	3	5,406
May	4	5,537
Jun	5	5,312
Jul	6	5,441
Aug	7	5,393
Sep	8	5,174
Oct	9	5,299
Nov	10	5,083
Dec	11	5,207
1999	12	5,162
Feb	13	4,621
Mar	14	5,072
Apr	15	4,865
May	16	4,983
Jun	17	4,780
Jul	18	4,897

Initial Rate = 185 MCF/D

30-5 UNIT MESAVERDE





PHILLIPS PETROLEUM COMPANY

FARMINGTON, NEW MEXICO 87401
5525 HWY. 64 NBU 3004

February 10, 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 # 75M

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

February 1998	5,135	March 1998	5,635
April 1998	5,406	May 1998	5,537
June 1998	5,312	July 1998	5,441
August 1998	5,393	September 1998	5,174
October 1998	5,299	November 1998	5,083

For example, if the total volume for September 1998 were 9,980 mcf, then the Dakota would be allocated 5,174 mcf and the Mesaverde 4,806 mcf. And subsequently, the Dakota would be allocated $5,174/9,980$ or 51.84%, and Mesaverde would be allocated $(4,806/9,980)$ or 48.16%.

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



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
AZTEC NM 87410
(505) 334-6178 FAX: (505) 334-6170
<http://emnrnd.state.nm.us/ocd/District/III/3district.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,

A handwritten signature in cursive script that reads "Ernie Busch".

Ernie Busch
District Geologist/Deputy O&G Inspector

EB/sh

cc: well file



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
Reservoir Engineer

MEP81-01

PARPI - WELLZONE PRODUCTION BROWSE

Date: 2/10/98

DAILY AVERAGE BY MONTH

User: MWSTODO

Wellzone F0625 02 Yr: 1997 Mth: 05 Property: 650402 SAN JUAN 30-5 DAKOTA UNIT-
 Screen: 1 (1-Prod, 2-Inj, 3-Both) Well No: 000075M
 Type: D (T-Total, D-Daily Avg) Field: 042233 BASIN
 Period: M (M-Mnthly, Y-Yrly, C-Cum) Resvr: 20079 DAKOTA NQ

ADJ	PRODUCED				DAYS		WELL		
FLG DATE	OIL (BBL)	GAS (MCF/P)	WATER (BBL)	PROD	OP	ST	CL	TY	
1997-05	0.00	0	0	0.00	0	86	11	2	
1997-06	0.00	61	0	30.00	30	11	11	2	
1997-07	0.00	302	0	31.00	31	11	11	2	
1997-08	0.00	208	0	31.00	31	11	11	2	
1997-09	0.00	161	0	30.00	30	11	11	2	
* 1997-10	0.00	158	4	31.00	11	11	11	2	
* 1997-11	0.00	128	0	30.00	30	11	11	2	
1997-12	0.00	136	0	31.00	31	11	11	2	

NO MORE DATA AVAILABLE

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 = $\frac{(\text{Commingled rate} - \text{Lower zone rate})}{\text{Commingled rate}}$

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.