

ABOVE THIS LINE FOR DIVISION USE ONLY

**NEW MEXICO OIL CONSERVATION DIVISION**  
 - Engineering Bureau -  
 2040 South Pacheco, Santa Fe, NM 87505



2487

**ADMINISTRATIVE APPLICATION COVERSHEET**

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATION FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

**Application Acronyms:**

- [NSP-Non-Standard Proration Unit] [NSL-Non-Standard Location]
- [DD-Directional Drilling] [SD-Simultaneous Dedication]
- [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
- [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
- [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
- [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
- [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

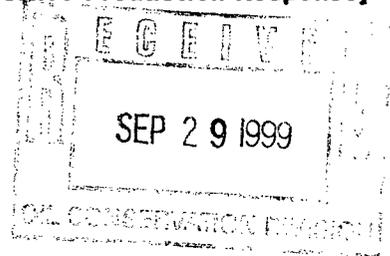
[1] **TYPE OF APPLICATION - Check Those Which Apply for [A]**

- [A] Location - Spacing Unit - Directional Drilling  
 NSL  NSP  DD  SD

Check One Only for [B] or [C]

- [B] Commingling - Storage - Measurement  
 DHC  CTB  PLC  PC  OLS  OLM

- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
 WFX  PMX  SWD  IPI  EOR  PPR



[2] **NOTIFICATION REQUIRED TO: - Check Those Which Apply, or  Does Not Apply**

- [A]  Working, Royalty or Overriding Royalty Interest Owners
- [B]  Offset Operators, Leaseholders or Surface Owner
- [C]  Application is One Which Requires Published Legal Notice
- [D]  Notification and/or Concurrent Approval by BLM or SLO  
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
- [E]  For all of the above, Proof of Notification or Publication is Attached, and/or,
- [F]  Waivers are Attached

[3] **INFORMATION / DATA SUBMITTED IS COMPLETE - Certification**

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I understand that any omission of data (including API numbers, pool codes, etc.), pertinent information and any required notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Clint Hutchinson Reservoir Engr. 9/28/99  
 Print or Type Name Signature Title Date

**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

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

**OIL CONSERVATION DIVISION**

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

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 71M D, Sec. 22 30N, 5W Rio Arriba  
Lease Well No. Unit Ltr. - Sec - Twp - Rge County

OGRID NO. 017654 Property Code 009258 API NO. 30-039-26029 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)			
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: Gas & Oil - Flowing: All Gas Zones: Estimated Current Measured Current Estimated Or Measured Original	a. (Current) 1030 (est)	a.	a. 1264
	b. (Original) 1294 (est.)	b.	b. 3142
6. Oil Gravity (°API) or Gas BTU Content	1030		990
7. Producing or Shut-in?			Producing
Production Marginal? (yes or no)  • 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)	Yes		Yes
	Date: Rates:	Date: Rates:	Date: Rates:
	Date: estimated Rates: 300 mcf/d	Date: Rates:	Date: 8/31/99 Rates: 554 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-10770

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 Clint Hutchinson TITLE Reservoir Engr. DATE 9/28/99

TYPE OR PRINT NAME Clint Hutchinson TELEPHONE NO. ( 505 ) 599-3423

DISTRICT I  
P.O. Box 1980, Hobbs, N.M. 88241-1980

State of New Mexico  
Encl Minerals & Natural Resources Department

Form C-102  
Revised February 21, 1994  
Instructions on back

DISTRICT II  
P.O. Drawer DD, Artesia, N.M. 88211-0719

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

DISTRICT III  
1000 Rio Brazos Rd., Aztec, N.M. 87410

OIL CONSERVATION DIVISION  
P.O. Box 2088  
Santa Fe, NM 87504-2088

DISTRICT IV  
PO Box 2088, Santa Fe, NM 87504-2088

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number	<sup>2</sup> Pool Code 71599	<sup>3</sup> Pool Name Basin Dakota
<sup>4</sup> Property Code 009258	<sup>5</sup> Property Name SAN JUAN 30-5 UNIT	<sup>6</sup> Well Number 71M
<sup>7</sup> OGRID No. 017654	<sup>8</sup> Operator Name PHILLIPS PETROLEUM COMPANY	<sup>9</sup> Elevation 6493'

<sup>10</sup> Surface Location

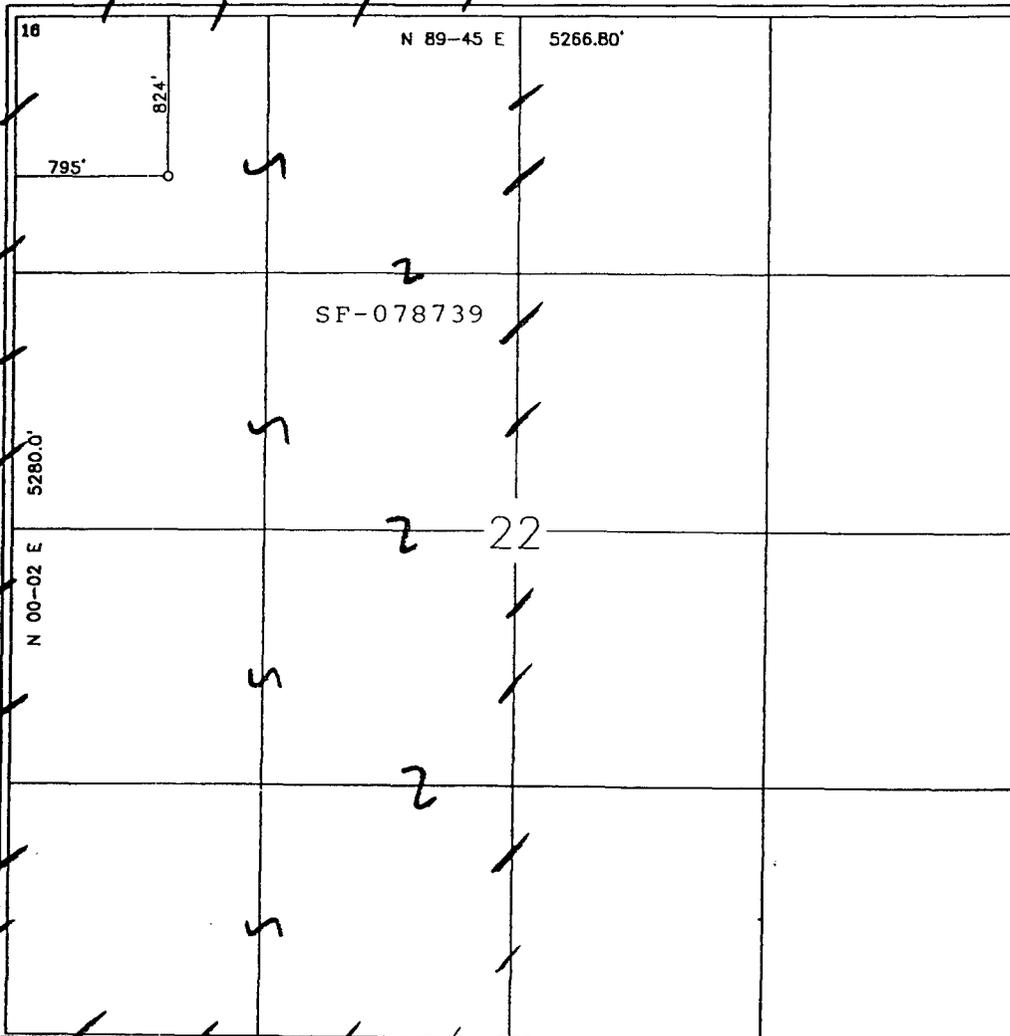
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	22	30-N	5-W		824	NORTH	795	WEST	RIO ARRIBA

<sup>11</sup> 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
D									

<sup>12</sup> Dedicated Acres 320 W/2	<sup>13</sup> Joint or Infill I	<sup>14</sup> Consolidation Code U	<sup>15</sup> 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

*Richard Allred*  
Signature

Richard Allred  
Printed Name

Drilling Superintendent  
Title

11-23-98  
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



8894  
Certificate Number

DISTRICT I  
P.O. Box 1980, Hobbs, N.M. 88241-1980

State of New Mexico  
Minerals & Natural Resources Department

Form C-102  
Revised February 21, 1994  
Instructions on back  
State Lease - 4 Copies  
Fee Lease - 3 Copies

DISTRICT II  
P.O. Drawer DD, Artesia, N.M. 88211-0719

OIL CONSERVATION DIVISION RECEIVED  
BLM  
P.O. Box 2088  
Santa Fe, NM 87504-2088

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

DISTRICT III  
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV  
PO Box 2088, Santa Fe, NM 87504-2088

AMENDED REPORT

98 DEC -3 PM 2:46

### WELL LOCATION AND ACREAGE DEDICATION PLAN

*API Number		*Pool Code 72319	*Pool Name Blanco Mesaverde
*Property Code 009258	*Property Name SAN JUAN 30-5 UNIT		*Well Number 71M
*OGRID No. 017654	*Operator Name PHILLIPS PETROLEUM COMPANY		*Elevation 6493'

#### <sup>10</sup> Surface Location

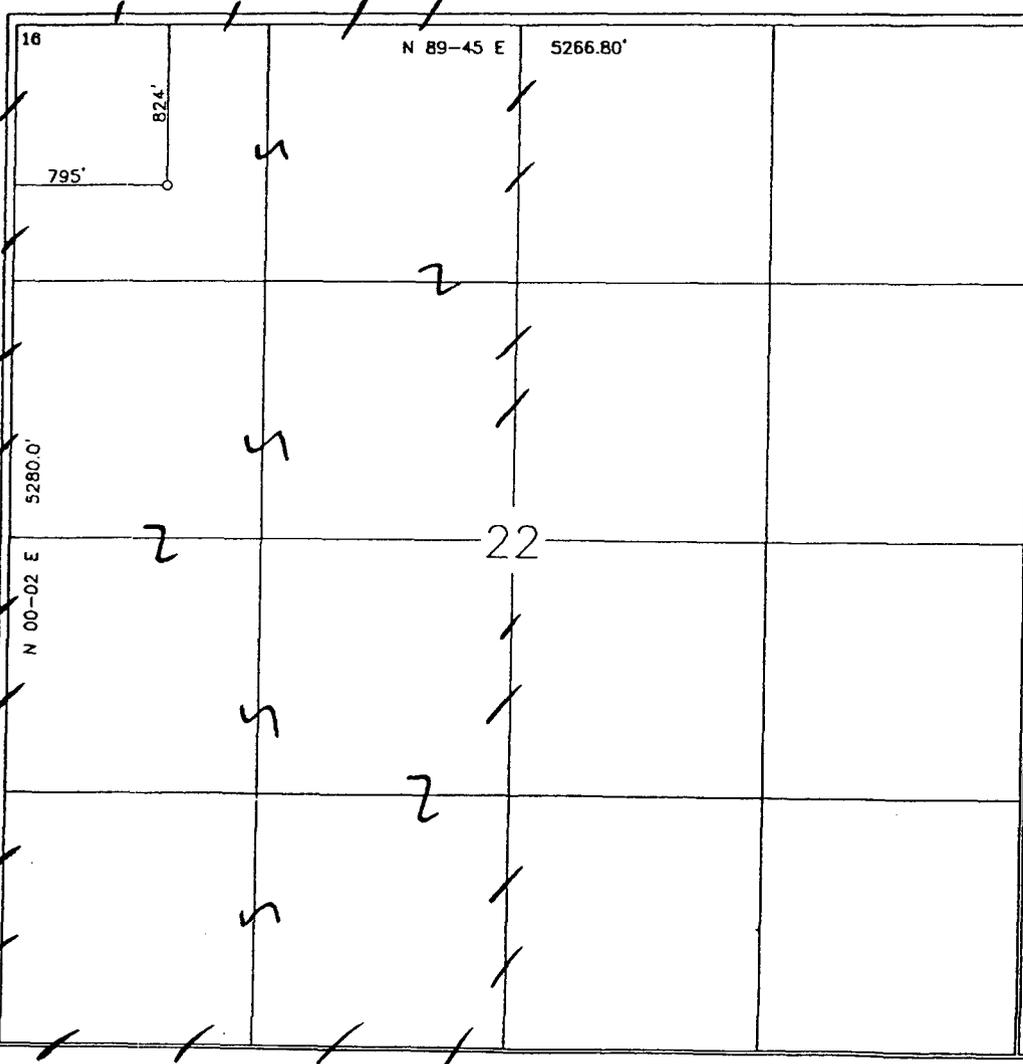
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	22	30-N	5-W		824	NORTH	795	WEST	RIO ARRIBA

#### <sup>11</sup> 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
D									

**Dedicated Acres 320 W/2	**Joint or Infill I	**Consolidation Code U	**Order No.
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*Richard Allred*  
Signature

Richard Allred  
Printed Name

Drilling Superintendent  
Title

11-23-98  
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

Professional Seal  
8894



8894  
Certificate Number



# PHILLIPS PETROLEUM COMPANY

FARMINGTON, NEW MEXICO 87401  
5525 HWY. 64 NBU 3004

September 28, 1999

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 #71 M

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 12<sup>th</sup> 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 months and that the production will not be stabilized on the Mesaverde for several months.

### Dakota Production Forecast

October 1999	17056	November 1999	16283
December 1999	16600	January 2000	16374
February 2000	15117	March 2000	15949
April 2000	15231	May 2000	15532
June 2000	14834	July 2000	15129
August 2000	14930	September 2000	14262

For example, if the total volume for November 1999 were 26,083, then the Dakota would be allocated 16,283 mcf and the Mesaverde 9,800 mcf. And subsequently, the Dakota would be allocated  $(16,283/26,083)$  or 62.43 % and the Mesaverde would be allocated  $(9,800/26,083)$  or 37.57%.

Sincerely,

PHILLIPS PETROLEUM COMPANY

Clint Hutchinson  
Reservoir Engineer

CH/pc

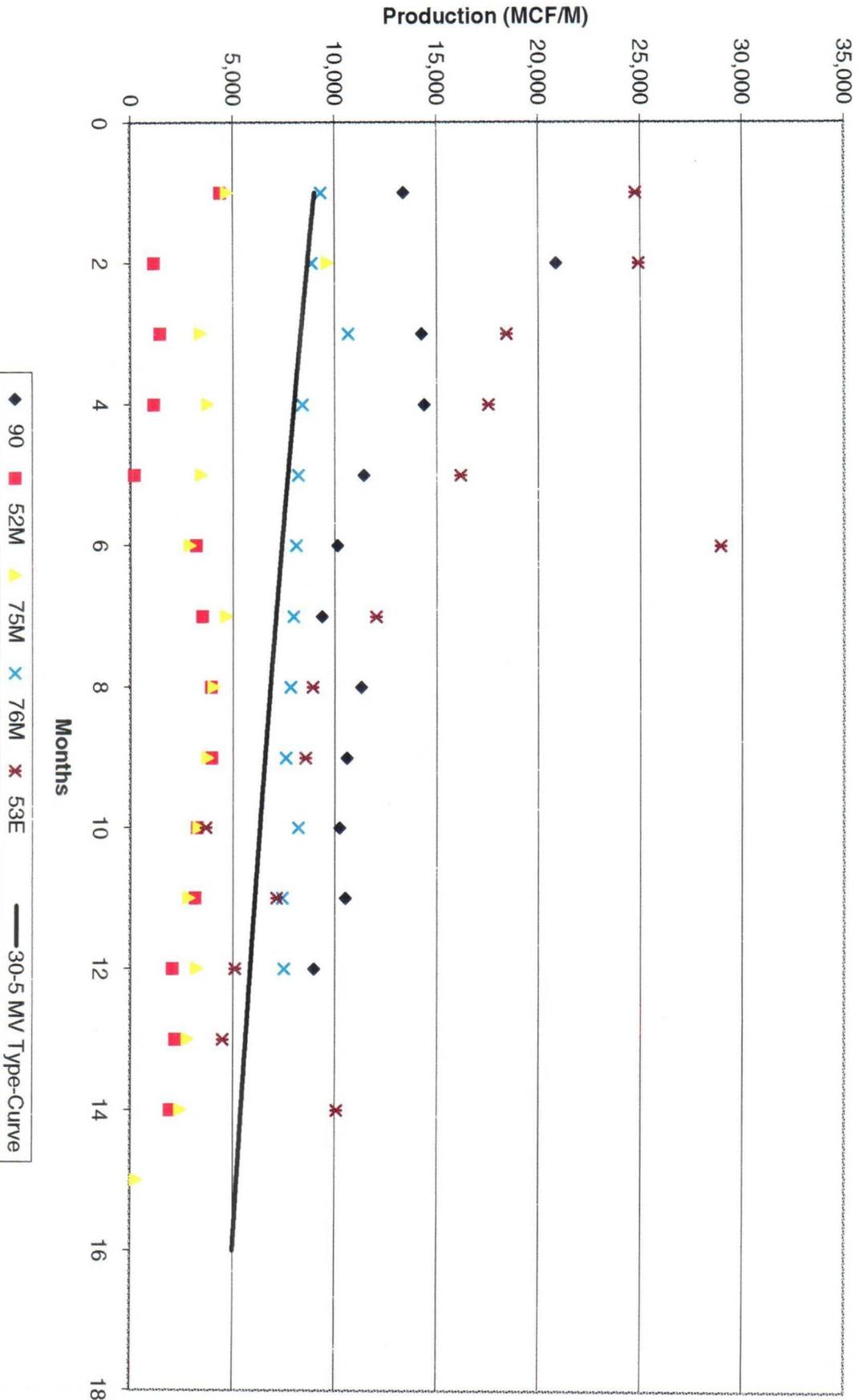
cc: OCD - Aztec  
BLM - Farmington  
NM Commissioner of Public Lands - Santa Fe

Dakota Production Forecast for 30-5 Unit  
Well #71M

Year	Month	Gas (MCF)
Oct-99	1	17056
Nov-99	2	16283
Dec-99	3	16600
Jan-00	4	16374
Feb-00	5	15117
Mar-00	6	15949
Apr-00	7	15231
May-00	8	15532
Jun-00	9	14834
Jul-00	10	15129
Aug-00	11	14930
Sep-00	12	14262
Oct-00	13	14548
Nov-00	14	13898
Dec-00	15	14178
Jan-01	16	13995
Feb-01	17	12486
Mar-01	18	13656

Initial Rate            554 MCF/D

### 30-5 Unit Mesaverde



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

DATE: SEPTEMBER 21, 1999

WELL NAME: SAN JUAN 30-5 # 71M  
FORMATION: DAKOTA

TYPE TEST: STATIC GRADIENT

COUNTY: RIO ARRIBA  
STATE: NEW MEXICO

TOTAL DEPTH: 7959'  
PERFS: M.P. @ 7862'  
TUBING SIZE: 2 3/8 TO 7874'  
CASING SIZE:  
PACKER:  
OTHER: 1.81 FN @ 7843'  
RAN PRESSURE @ 11:00

CASING PRESSURE: 1100  
TUBING PRESSURE: 1040  
OIL LEVEL:  
WATER LEVEL: 7694'  
TEMPERATURE:  
ELEMENT NO.  
ELEMENT RANGE 0 TO 3000

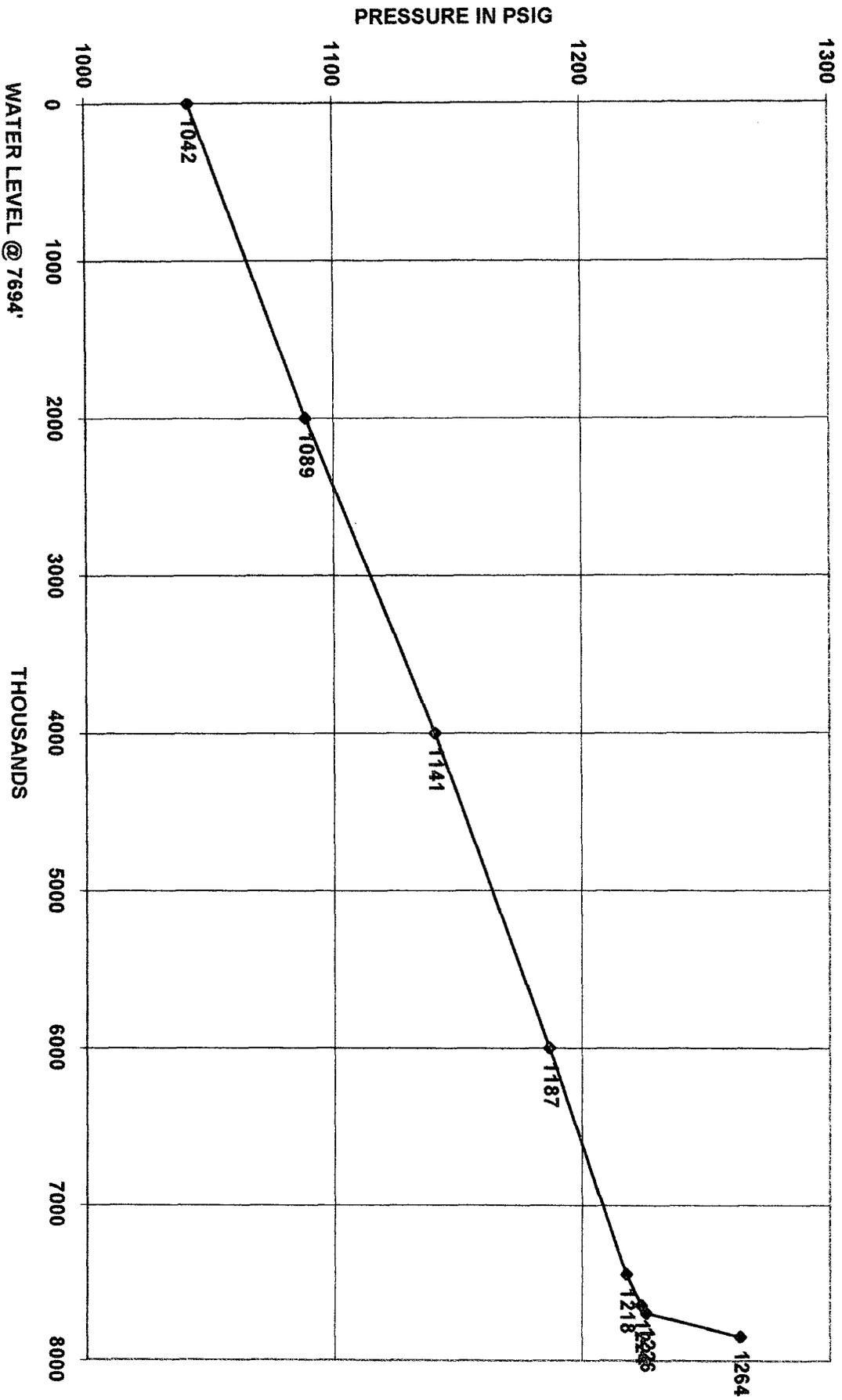
WELL STATUS: SHUT IN

DEPTH IN FEET	PRESSURE PSIG	GRADIENT PSI/FOOT
0	1042	
2000	1089	0.024
4000	1141	0.026
6000	1187	0.023
7443	1218	0.022
7643	1224	0.030
7843	1264	0.200

RAN SLM @

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

PHILLIPS PETROLEUM SAN JUAN 30-5 # 71M  
DATE: SEPTEMBER 21, 1999





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