DATE IN 2/23/00 | SUSPENSE 3/14/00 | ENGINEER DC | LOGGED BY KV | TYPE DHC

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

2040 South Pacheco, Santa Fe, NM 87505

2680

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]

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FEB 23 2000
OIL CONSERVATION DIVISION

[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.

Mark Stodola	Mark Stodola	Reservoir Engr.	2/18/00
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

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 — 5525 Hwy. 64 Farmington, N.M. 87401
Operator — Address

San Juan 29-6 Unit #87M — Unit O Section 33, T29N, 6W — Rio Arriba
Lease — Well No. — Unit Ltr. - Sec - Twp - Rge — County

OGRID NO. 017654 Property Code 009256 API NO. 30-039-26187 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 72319		Basin Dakota 71599
2. Top and Bottom of Pay Section (Perforations)	4022-5710		7639-7807
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) 750 psi (est.) b. (Original) 1280 psi (est.)	a. b.	a. 730 psig (24-hr. shut-in) b. 3130 psi (est.)
6. Oil Gravity (°API) or Gas BTU Content	1200 Btu/scf.		1020 Btu/scf.
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: Estimated will Rates: be 500 mcfd	Date: Rates:	Date: 1/27/00 Rates: 107 mcfd 5 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? ___ Yes ___ No
Have all offset operators been given written notice of the proposed downhole commingling? X Yes ___ No

11. Will cross-flow occur? ___ Yes X 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? 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 Engineer DATE 2/18/00

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

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

February 21, 2000

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 #87M

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 Basin Dakota interval has been producing for months and it will take several months for the Blanco Mesaverde production to stabilize.

Dakota Forecast

March 2000	2,912	April 2000	2,990
May 2000	2,970	June 2000	2,855
July 2000	2,931	August 2000	2,818
September 2000	2,893	October 2000	2,874
November 2000	2,579	December 2000	2,838
January 2001	2,728	February 2001	2,801

For example, if the total volume for March 2000 were 18,412 mcf, then the Dakota would be allocated 2,912 mcf and the Mesaverde 15,500 mcf. And subsequently, the Dakota would be allocated (2,912/18,412) or 15.82%, and Mesaverde would be allocated (15,500/18,412) or 84.18%.

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
David Valdez - Burlington

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

RECEIVED
BLM
99 MAY 24 PM 1:10
070 FARMINGTON, NM

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
009257	SAN JUAN 29-6	87M
⁷ OGRID No.	⁸ Operator Name	⁹ Elevation
017654	PHILLIPS PETROLEUM COMPANY	6501'

¹⁰ Surface Location

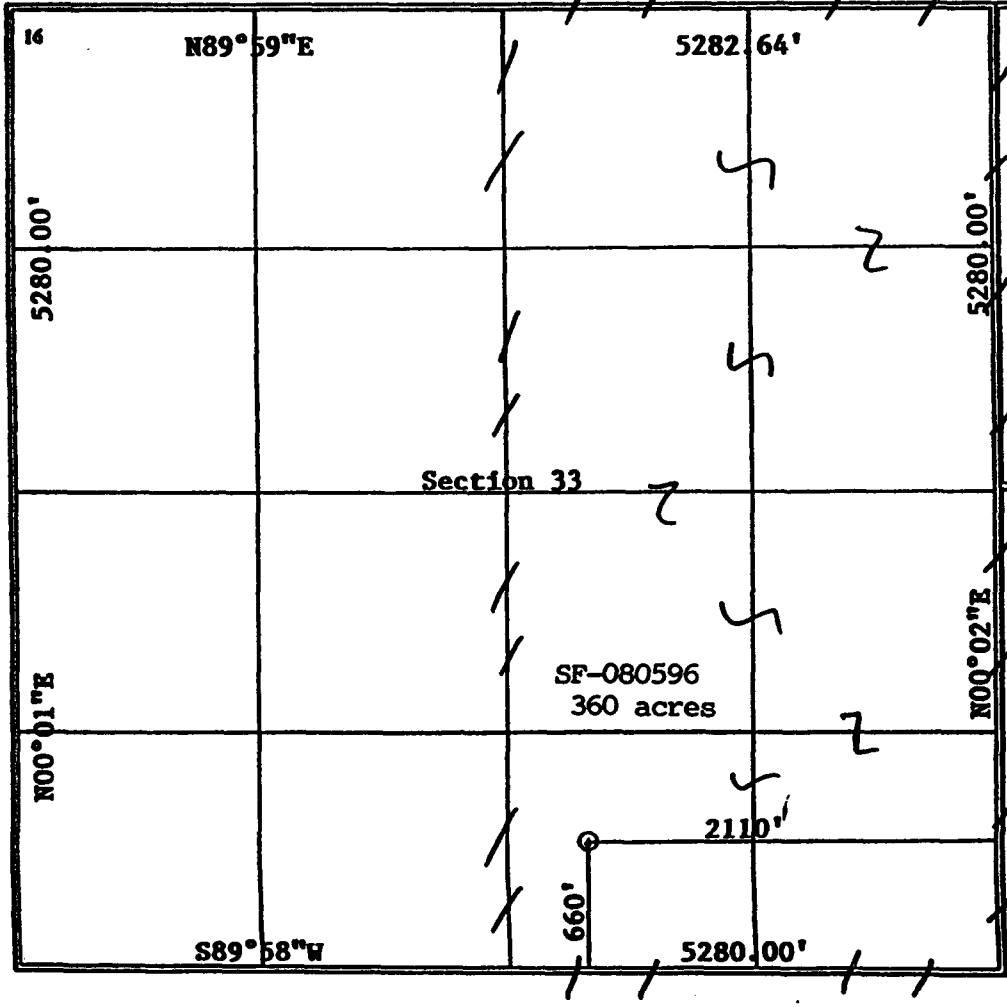
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	33	29N	6W		660'	SOUTH	2110'	EAST	RIO ARRIBA

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
O									

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
320 E/2	I	U	Unorthodox location & DHC applications have been submitted

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
May 20, 1999
Date

¹⁸ SURVEYOR CERTIFICATION

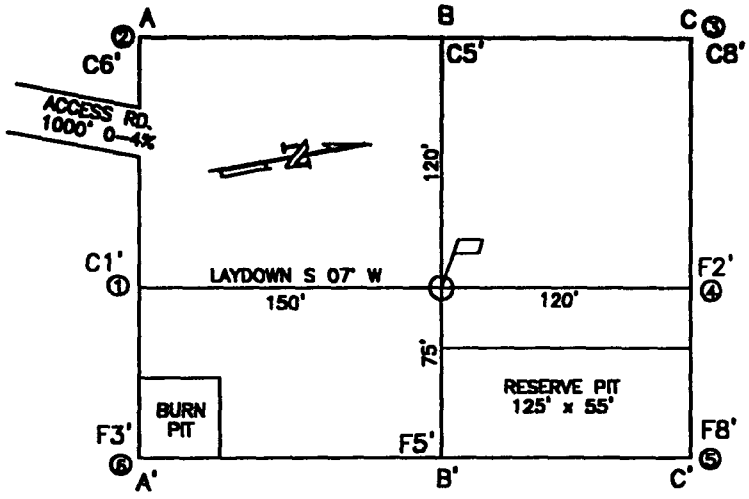
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

03/23/99
Date of Survey

Signature and Seal of Professional Surveyor:

HENRY P. BRADBURST, JR. NEW MEXICO 7152 REGISTERED PROFESSIONAL SURVEYOR

Certificate Number



ELEVATION A–A'

			C/L	
6521				
6511				
6501				
6491				
6481				

B–B'

			C/L	
6521				
6511				
6501				
6491				
6481				

C–C'

			C/L	
6521				
6511				
6501				
6491				
6481				

COMPANY: PHILLIPS PETROLEUM COMPANY

LEASE: SAN JUAN 29–6 UNIT No.87M

FOOTAGE: 660' FSL, 2110' FEL UNIT O

SEC. 33 TWN. 29–N RNG. 06–W N.M.P.M.

COUNTY, RIO ARRIBA STATE, N.M.

ELEVATION: 6501

LATITUDE: 36–40–36

LONGITUDE: 107–27–59

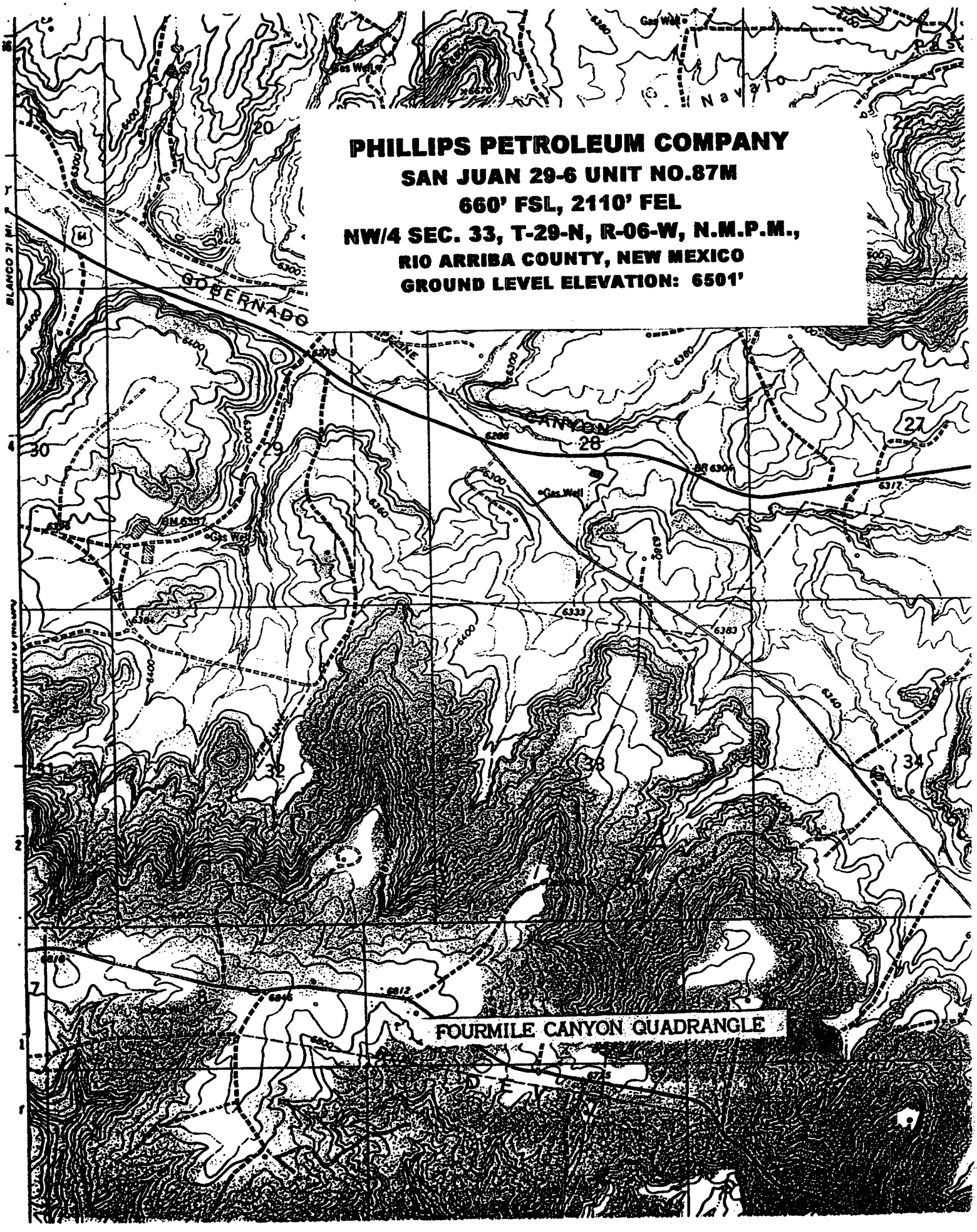
PHILLIPS 66

PHILLIPS PETROLEUM COMPANY
FARMINGTON, NEW MEXICO

SURVEYED: 3/23/99	REV. DATE:	APP. BY H.B.
DRAWN BY: T.G.	DATE DRAWN: 3/30/99	FILE NAME: P007701

UNITED FIELD SERVICES INC.

P.O. BOX 3651
FARMINGTON, NM 87499
OFFICE: (505)334-0408


PHILLIPS PETROLEUM COMPANY
SAN JUAN 29-6 UNIT NO.87M
660' FSL, 2110' FEL
NW/4 SEC. 33, T-29-N, R-06-W, N.M.P.M.,
RIO ARRIBA COUNTY, NEW MEXICO
GROUND LEVEL ELEVATION: 6501'
FOURMILE CANYON QUADRANGLE
GOBERNADO
CANYON
Gas Well
Navajo
20
27
28
29
30
31
32
33
34
6400
6300
6200
6100
6000

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

DATE: FEBRUARY 9, 2000

WELL NAME: SAN JUAN 29-6 # 87M
FORMATION: DAKOTA

TYPE TEST: STATIC GRADIENT

COUNTY: RIO ARRIBA
STATE: NEW MEXICO

TOTAL DEPTH:
PERFS: MID PERF 7757'
TUBING: 2 3/8" 7615'
CASING SIZE:
PACKER:
OTHER: 1.81" FN @ 7584'
PRESSURED UP @ 07:30

CASING PRESSURE: 650
TUBING PRESSURE: 620
OIL LEVEL:
WATER LEVEL:
TEMPERATURE:
ELEMENT NO. 86484
ELEMENT RANGE 0 TO 3000

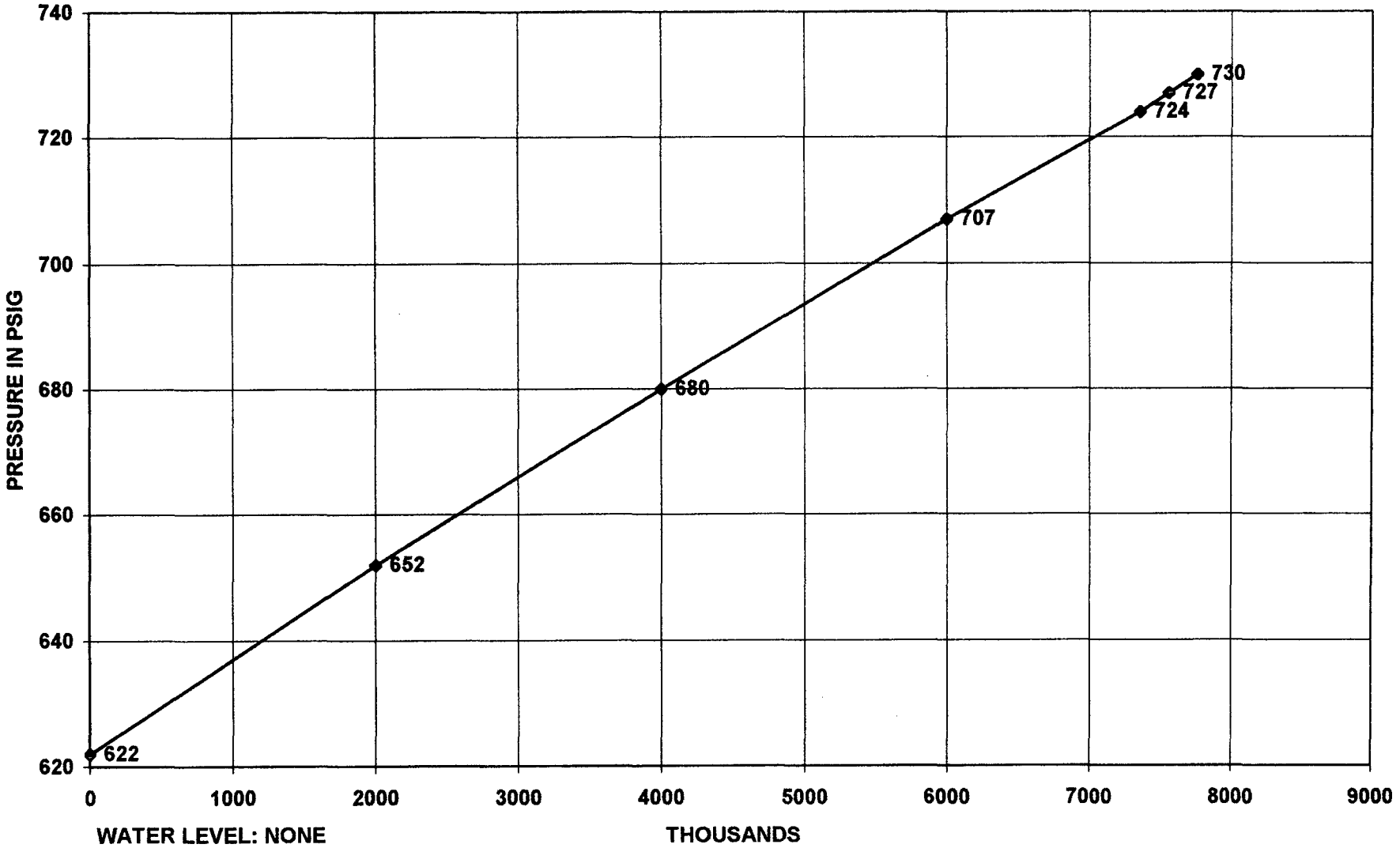
WELL STATUS: SHUT IN

DEPTH IN FEET	PRESSURE PSIG	GRADIENT PSI/FOOT
0	622	
2000	652	0.015
4000	680	0.014
6000	707	0.014
7357	724	0.012
7557	727	0.015
7757	730	0.015

TD @ 7820'

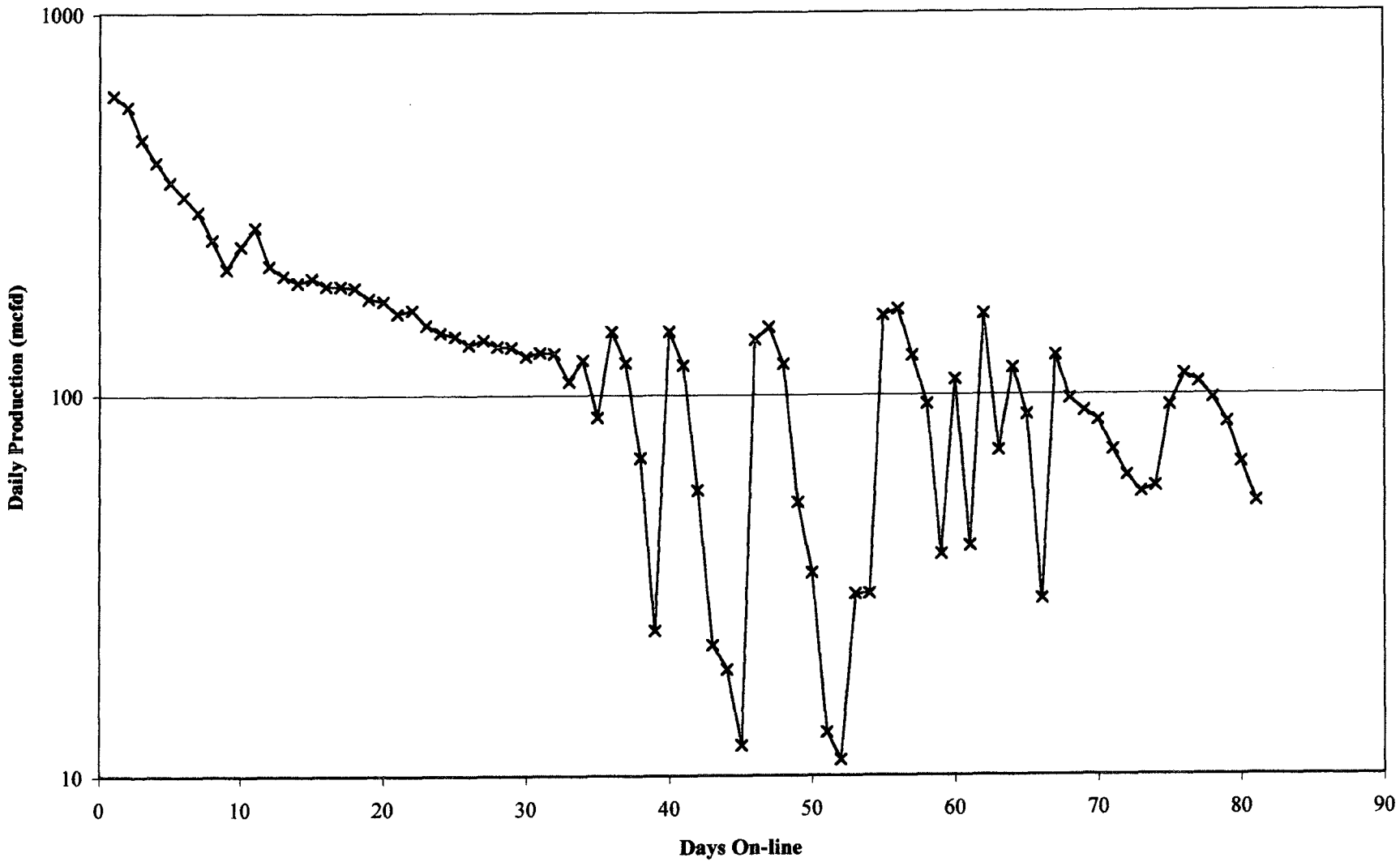
H & H WIRELINE SERVICE INC.
P. O. BOX 899
FLORA VISTA, NEW MEXICO 87415
OPERATOR: CHARLES HUGHES
UNIT NO. T-11

PHILLIPS PETROLEUM: SAN JUAN 29-6 # 87M
DATE: FEBRUARY 9, 2000



WATER LEVEL: NONE

San Juan 29-6 Unit #87M Dakota - Daily Rate vs. Days On-line



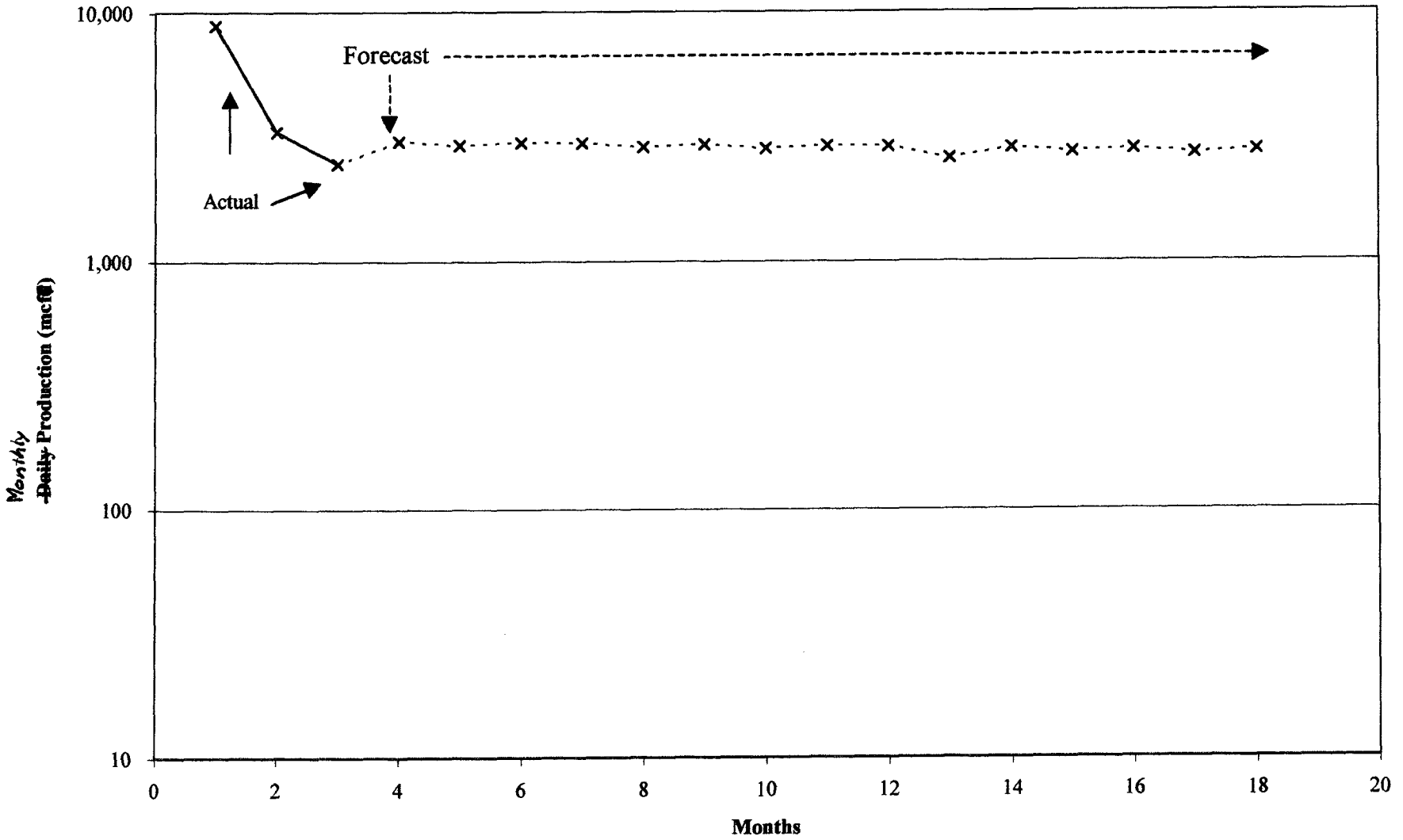
29-6 Unit #87M Dakota Forecast

Initial Production Rate	=	*100 MCFD*
Hyperbolic Exponent	=	*0.33*
Decline Rate	=	*8 %*

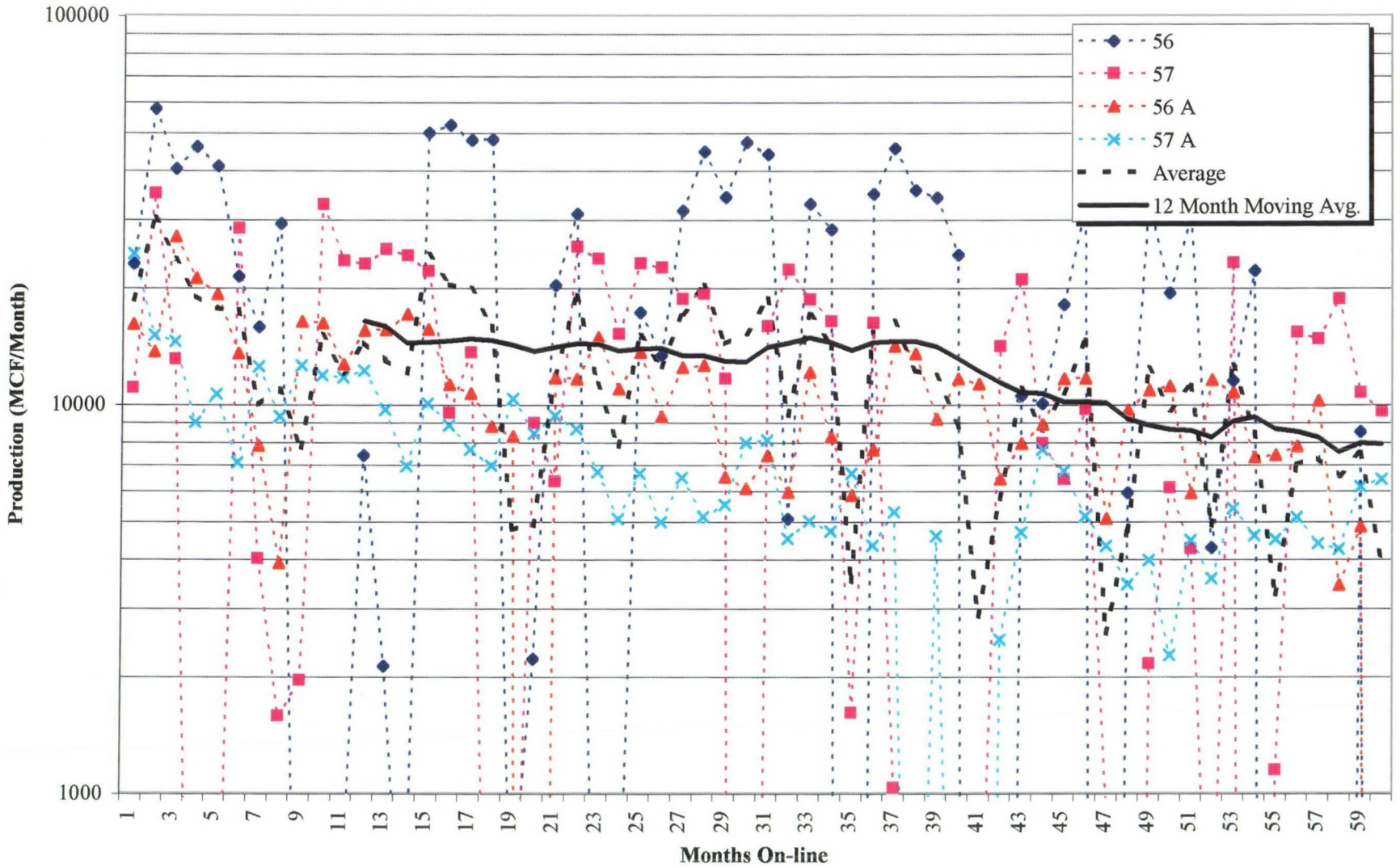
	Month	***Monthly MCF***	
1999	Nov	***8,877***	actual
	Dec	***3,305***	actual
2000	Jan	***2,457***	actual
	Feb	***3,029***	
	Mar	***2,912***	
	Apr	***2,990***	
	May	***2,970***	
	Jun	***2,855***	
	Jul	***2,931***	
	Aug	***2,818***	
	Sep	***2,893***	
	Oct	***2,874***	
	Nov	***2,579***	
	Dec	***2,838***	
2001	Jan	***2,728***	
	Feb	***2,801***	
	Mar	***2,693***	
	Apr	***2,765***	

Use subtraction method for +/- 12 months based on this Dakota forecast.

San Juan 29-6 Unit #87M Dakota - Monthly Production and Forecast



San Juan 29-6 Unit #87M Area Mesaverde Production
First Five Years



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