

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

2040 South Pacheco, Santa Fe, NM 87505



2516

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.

Mark Stodola  
 Print or Type Name

Mark Stodola  
 Signature

Reservoir Engr.  
 Title

10/22/99  
 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 87505-6429Form C-107-A  
New 3-12-96

## APPROVAL PROCESS:

☒ Administrative ☐ Hearing

## EXISTING WELLBORE

☒ YES ☐ NO

## APPLICATION FOR DOWNHOLE COMMINGLING

Phillips Petroleum Company 5525 Hwy. 64, Farmington, New Mexico 87401  
Operator Address  
San Juan 29-6 Unit #51 A D, Section 31, T29N, R6W Rio Arriba County, NM  
Lease Well No. Unit Ltr. - Sec - Twp - Rge County  
OGRID NO. 017654 Property Code 009257 API NO. 30-039-21088 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	72439 S. Blanco PC, Ext.		72319 Blanco Mesaverde
2. Top and Bottom of Pay Section (Perforations)	3,653' - 3,836'		5,270' - 5,860'
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) 1103 psig b. (Original) 1200 psi (est.)	a.  b.	a. 303 psig (24 hr) b. 1280 psi (est.)
6. Oil Gravity ( $^{\circ}$ API) or Gas BTU Content	1100 btu/scf		1200 btu/scf
7. Producing or Shut-In?	Producing		shut-in
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: 7/31/99 Rates: 279 mcf/d, 1 bwp/d
* If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date: 10/14/99 Rates: 300 mcf/d	Date: Rates:	Date: Rates:
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. NMOC 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 10/22/99

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

District I  
PO Box 1988, Hobbs, NM 88241-1988  
District II  
811 South First, Artesia, NM 88210  
District III  
1000 Rio Bravo 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

Form C-102  
Revised October 18, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

99 JUL -2 AM 10:38. ☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-039-21088		Pool Code 72439	Pool Name S. Blanco Pictured Cliffs, Ext.
Property Code .009257	Property Name San Juan 29-6 Unit		Well Number 51A
OGRID No. 017654	Operator Name PHILLIPS PETROLEUM COMPANY		Elevation 6689'

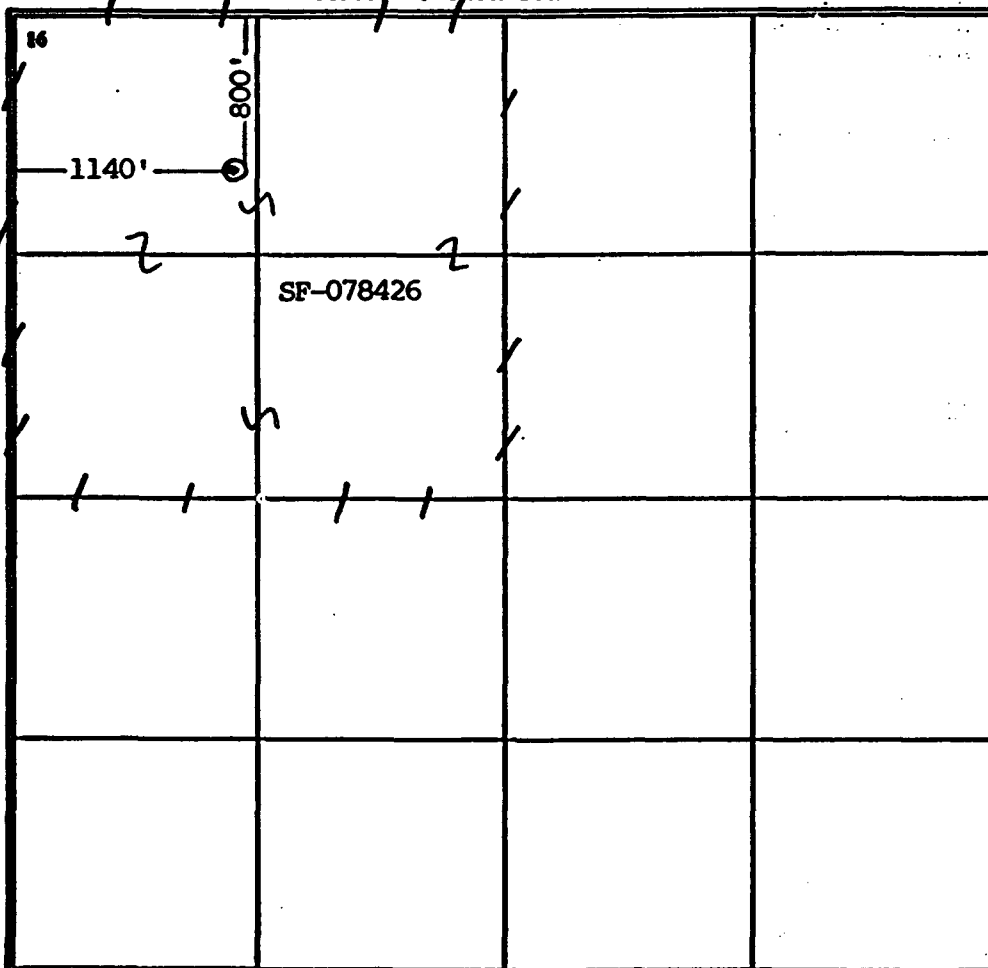
10 Surface Location

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
D	31	29N	6W		800	North	1140	West	Rio Arriba

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
D									
Dedicated Acres 160 N/W/4		Joint or Infill		Consolidation Code U		Order No.			

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 30, 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.

April 18, 1975  
Date of Survey  
See original Mesaverde C102  
signed by Fred B. Kerr, Jr.  
dated 4/18/75  
Signature and Seal of Professional Surveyor

3950  
Certificate Number

**MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION**

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

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

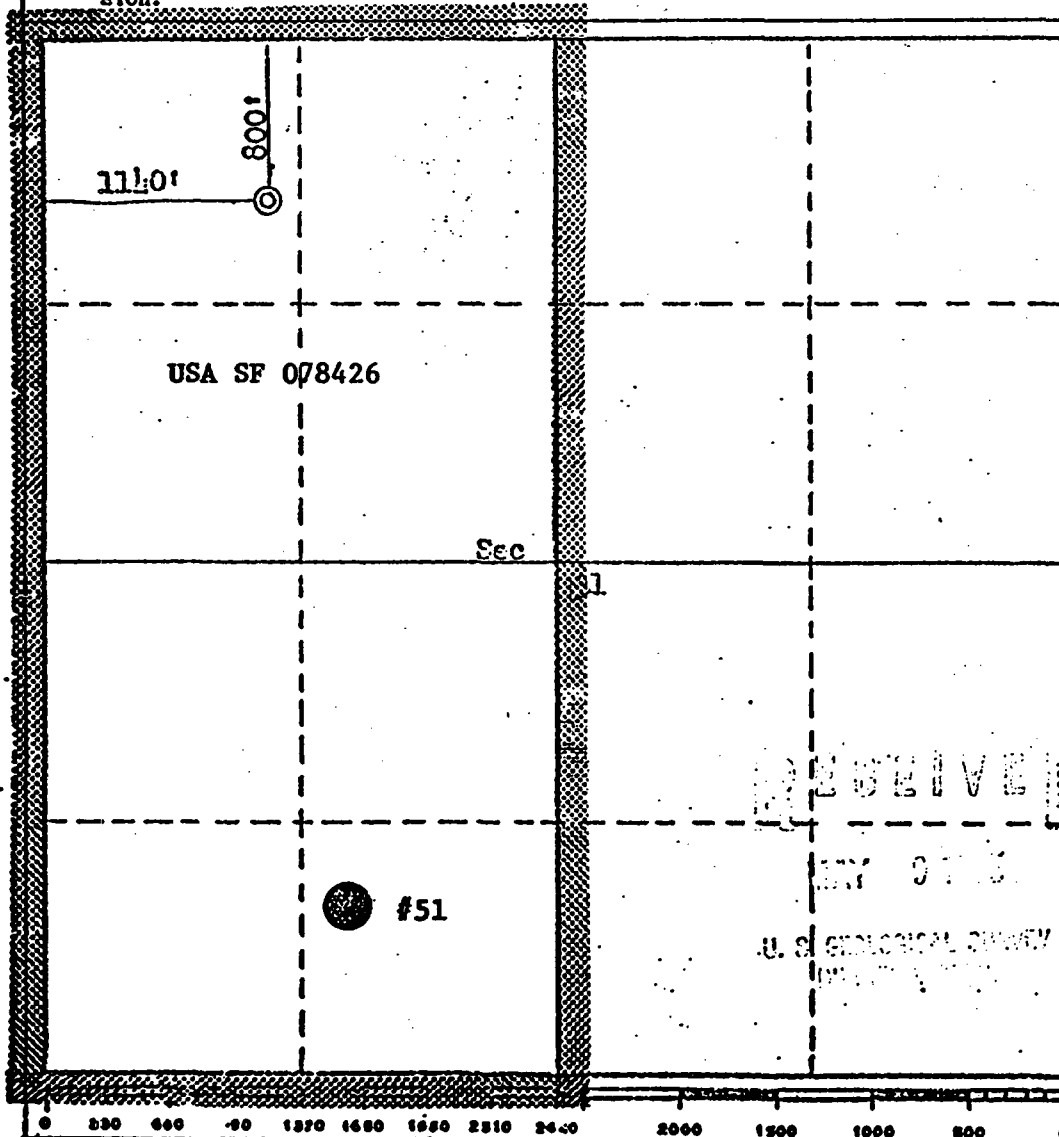
Operator <b>Northwest Pipeline Corporation</b>			Lease <b>San Juan 29-6 Unit</b>		Well No. <b>51A</b>
Unit Letter <b>D</b>	Section <b>31</b>	Township <b>29N</b>	Range <b>6W</b>	County <b>BLM</b>	
Actual Footage Location of Wells: <b>800</b> feet from the <b>North</b> line and <b>1110</b> feet from the <b>West</b> line			<div style="text-align: right;"> <b>RECEIVED</b>  <b>99 JUL -2 AM 10:38</b>  <b>Rio Arriba</b> </div>		
Ground Level Elev. <b>6689</b>	Producing Formation <b>Mesa Verde</b>	Pool <b>Blanco Mesa Verde</b>		Dedicated Acreage: <b>320</b> 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.) NW/4, NW/4, Sec 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.

*O.B. Whitenburg*  
 Name  
**O.B. Whitenburg** is  
 Position  
**Sr. Drilling Engineer**  
 Company  
**Northwest Pipeline Corp.**  
 Date  
**May 7, 1975**

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 18, 1975**  
 Registered Professional Engineer and/or Land Surveyor  
*Fred B. Korr Jr.*  
**Fred B. Korr Jr.**  
 Certificate No.  
**3950**



## PHILLIPS PETROLEUM COMPANY

FARMINGTON, NEW MEXICO 87401  
5525 HWY. 64 NBU 3004

October 22, 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 #51A

Dear Sirs:

Phillips is proposing to utilize the subtraction method on the subject well for between six and twelve months after actual commingling occurs. After a six to 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 Mesaverde interval has been producing for years and that the production will not be stabilized on the Pictured Cliffs for several months.

### Pictured Cliffs Forecast

December 1999	8,471	January 2000	8,364
February 2000	7,464	March 2000	8,166
April 2000	7,806	May 1999	7,967
June 2000	7,722	July 2000	7,774
August 2000	7,679	September 2000	7,443
October 2000	7,494	November 2000	7,265

For example, if the total volume for January 2000 were 16,734 mcf, then the Pictured Cliffs would be allocated 8,364 mcf and the Mesaverde 8,370 mcf. And subsequently, the Pictured Cliffs would be allocated  $(8,364/16,734)$  or 49.98 %, and Mesaverde would be allocated  $(8,370/16,734)$  or 50.02%.

Sincerely,

PHILLIPS PETROLEUM COMPANY

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: JUNE 3, 1999

WELL NAME: SAN JUAN 29-6 # 51A  
FORMATION: MESA VERDE

TYPE TEST: STATIC GRADIENT

COUNTY: RIO ARRIBA  
STATE: NEW MEXICO

TOTAL DEPTH:  
PERFS: TO  
TUBING SIZE: 2 3/8 TO 5842'  
CASING SIZE: TO  
PACKER:  
OTHER: SN @ 5812'  
ENGAGED @ 10:05

CASING PRESSURE:  
TUBING PRESSURE: 220  
OIL LEVEL:  
WATER LEVEL: 5709'  
TEMPERATURE:  
ELEMENT NO.  
ELEMENT RANGE 0 TO 3500

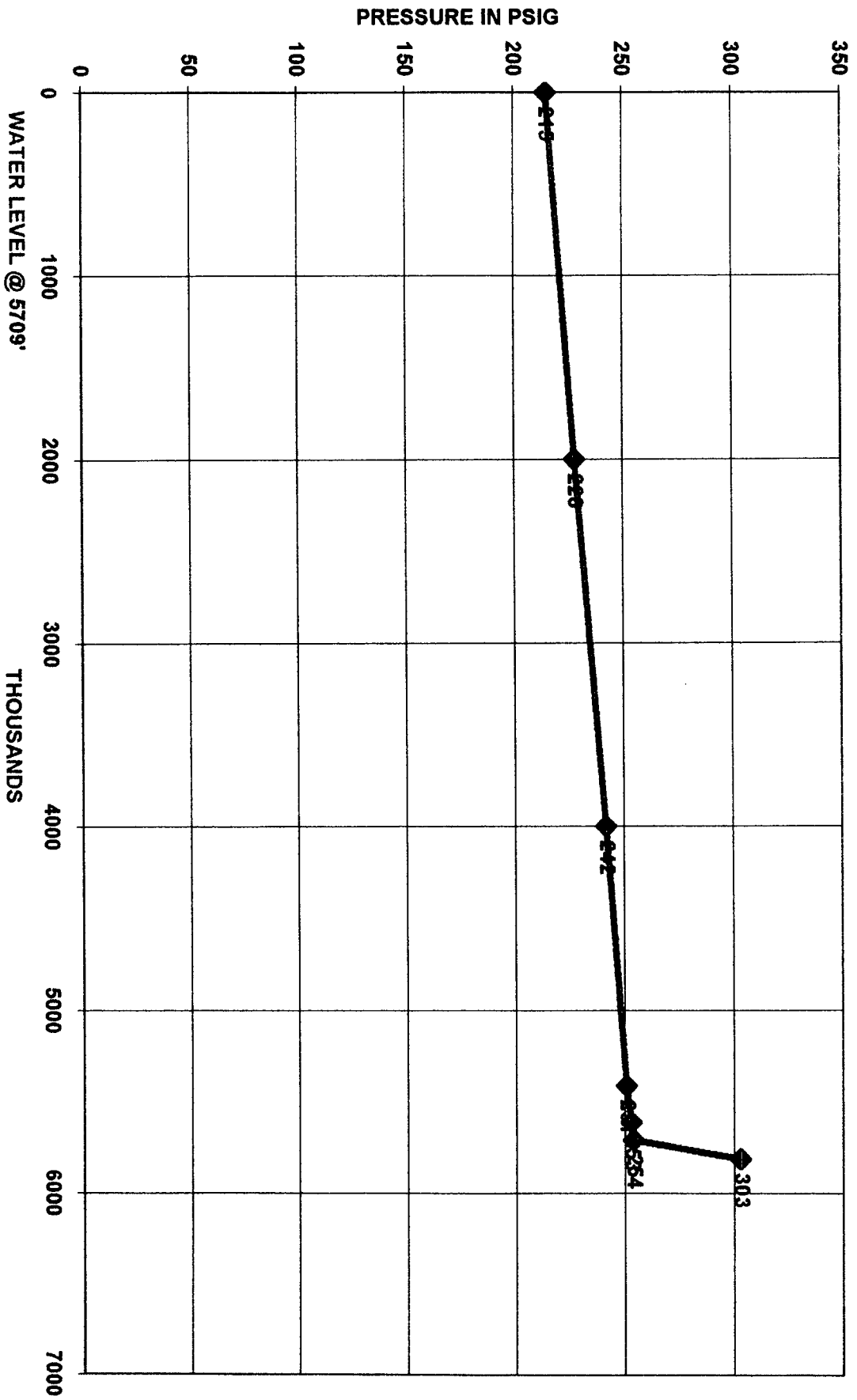
WELL STATUS: SHUT IN

DEPTH IN FEET	PRESSURE PSIG	GRADIENT PSI/FOOT
0	215	
2000	228	0.006
4000	242	0.007
5412	251	0.007
5612	253	0.010
5812	303	0.250

RAN SLM TO 5910'

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 # 51A  
DATE: JUNE 3, 1999



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

DATE: AUGUST 23, 1999

WELL NAME: SAN JUAN 29-6 # 51A  
FORMATION: PICTURE CLIFF

TYPE TEST: STATIC GRADIENT

COUNTY: RIO ARRIBA  
STATE: NEW MEXICO

TOTAL DEPTH: PBTD 4196'  
PERFS: MP @ 3745'  
TUBING SIZE: 2 3/8 TO 3804'  
CASING SIZE: TO  
PACKER:  
OTHER: 2.25 SN @ 3773'  
ENGAGED @ 09:10

CASING PRESSURE:  
TUBING PRESSURE: 655  
OIL LEVEL:  
WATER LEVEL: 2351'  
TEMPERATURE:  
ELEMENT NO.  
ELEMENT RANGE 0 TO 3500

WELL STATUS: SHUT IN

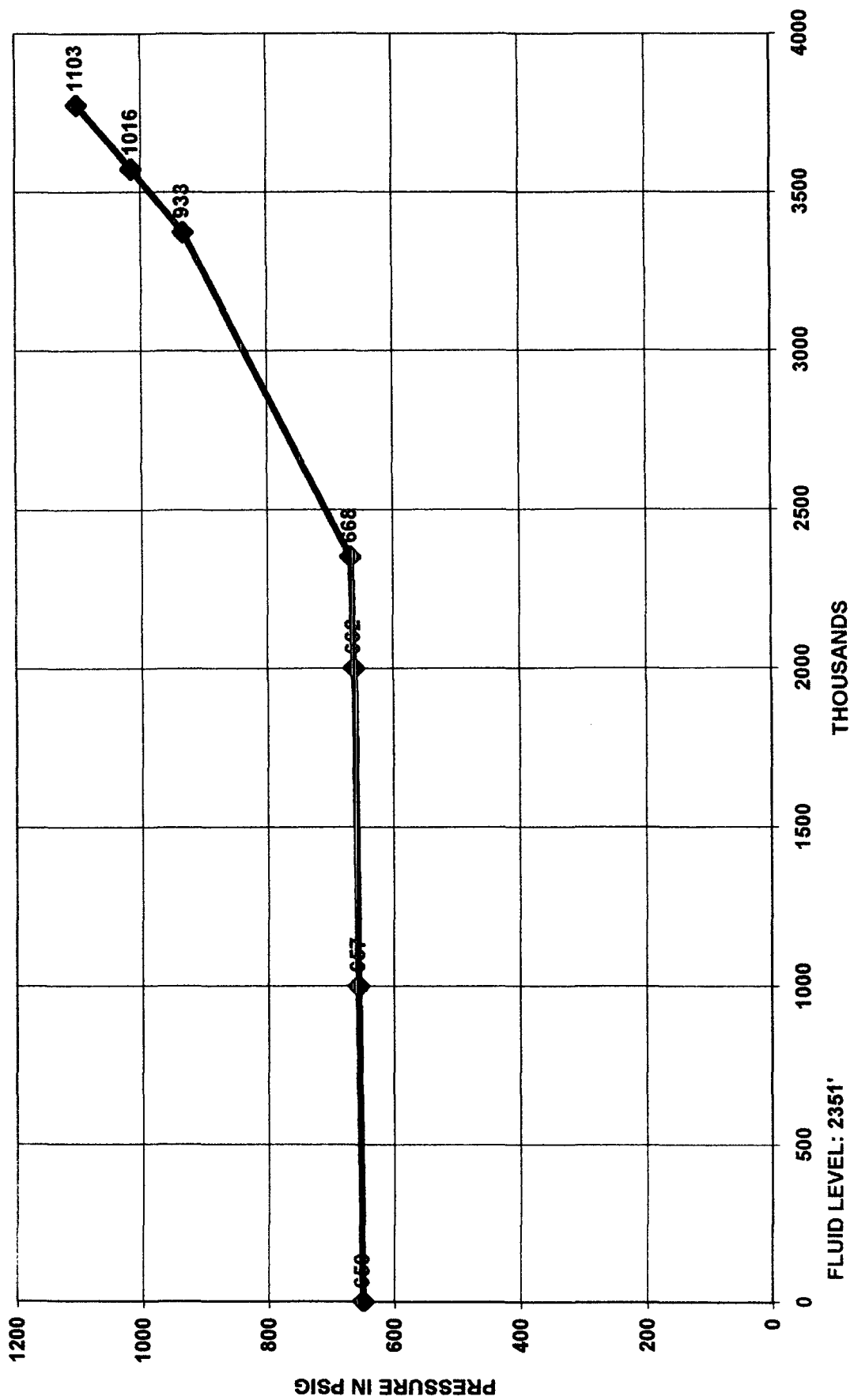
DEPTH IN FEET	PRESSURE PSIG	GRADIENT PSI/FOOT
0	650	
1000	657	0.007
2000	662	0.005
3373	933	0.198
3573	1016	0.415
3773	1103	0.430

RAN TD @ 4179'

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



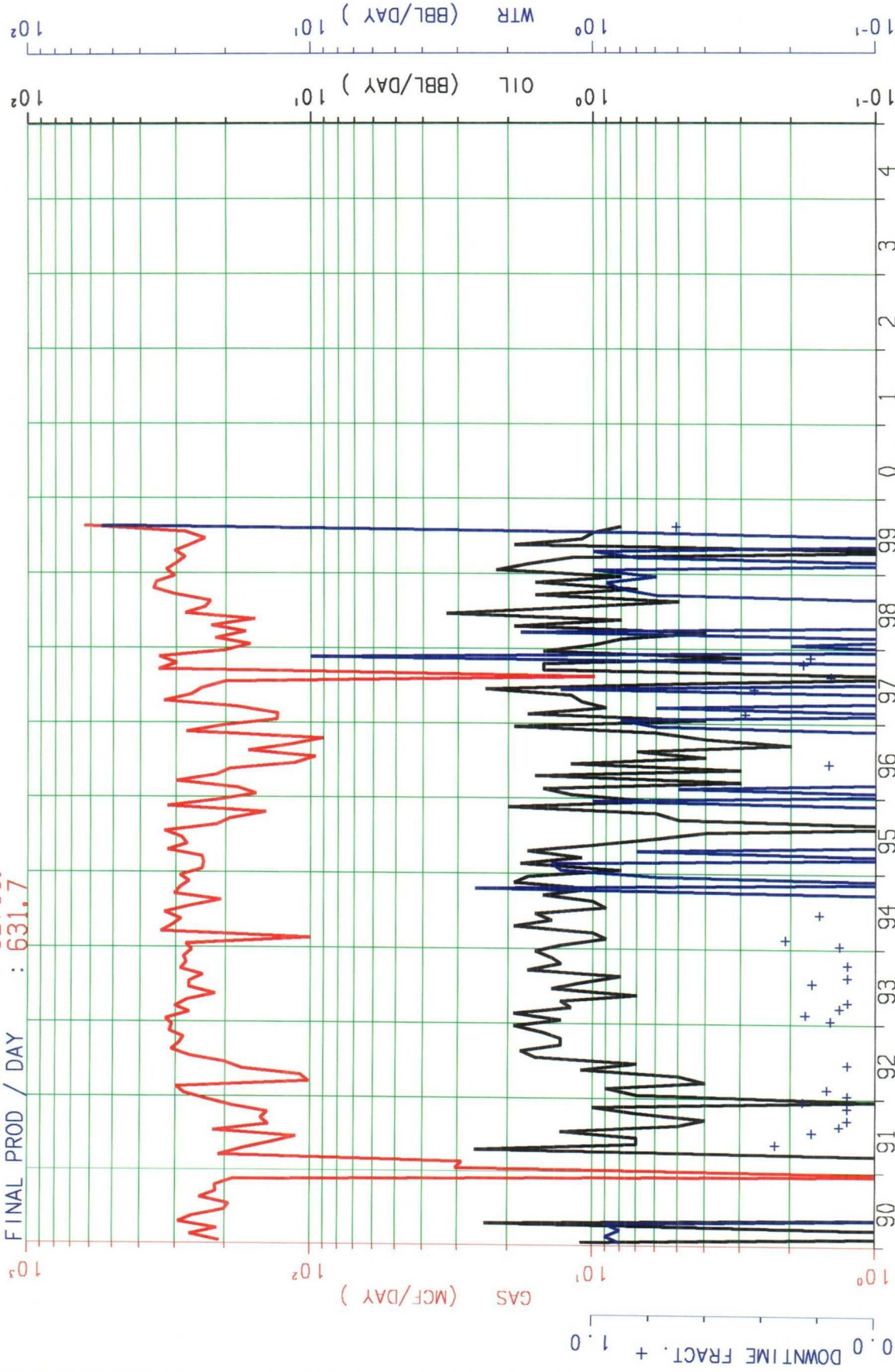
PHILLIPS PETROLEUM SAN JUAN 29-6 # 51A  
DATE: AUGUST 23, 1999



INITIAL PROD / DAY : 381.0  
 REMAINING LIFE : 0.75  
 HYPR(0.33) DECL % : 67.45  
 CUM PRODUCTION : 82758.  
 FINAL PROD / DAY : 631.7

10/98-6/99

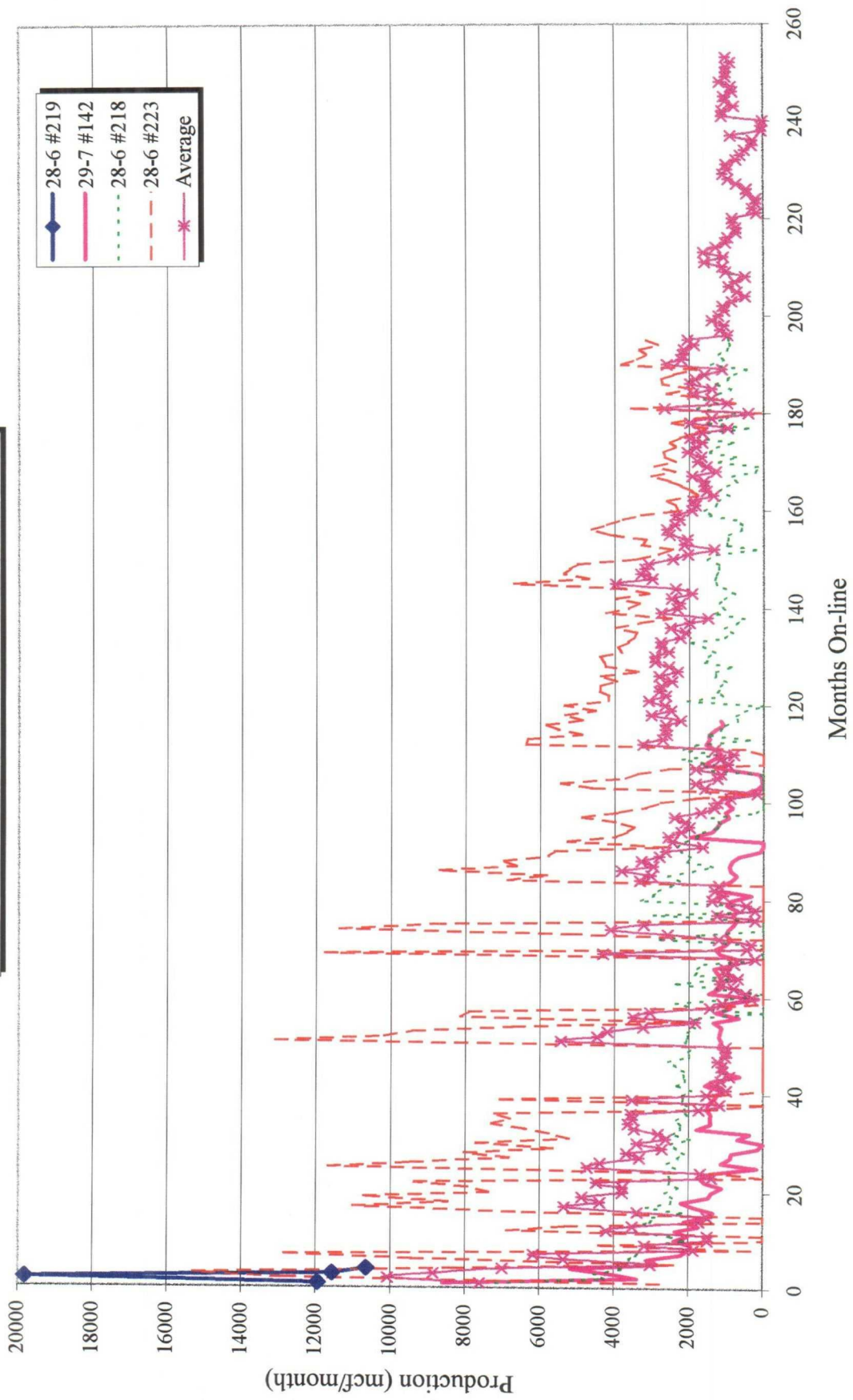
Current Cums  
 782249. MCF GAS  
 3327. BBL OIL  
 1409. BBL WTR



LEASE- 650112 : SAN JUAN 29-6 MESA VERDE  
 RESVR- 002 : BLANCO MESAVERDE  
 WELL - 00051A CUM MMCF= 2280.

F034301  
 ZONE-650112002000051AF034301  
 API-30039210880000 THRU 99/08

Pictured Cliffs Production  
(Area near SW corner of San Juan 29-6 Unit)



### San Juan 29-6 #51A Pictured Cliffs Forecast

<i>Initial Production Rate</i>	=	275	MCFD
<i>Hyperbolic Exponent</i>	=	0.33	
<i>Decline Rate</i>	=	15.000	%

Month #	Days	Cum. Days	Initial q MCFD	Final q MCFD	Average q MCFD	Cum. MCF	<i>Monthly MCF</i>
Dec-99	31	31	275	272	273	8,471	<b>8,471</b>
Jan-00	31	62	272	268	270	16,835	<b>8,364</b>
Feb-00	28	90	268	265	267	24,300	<b>7,464</b>
Mar-00	31	121	265	262	263	32,466	<b>8,166</b>
Apr-00	30	151	262	259	260	40,271	<b>7,806</b>
May-00	31	182	259	255	257	48,238	<b>7,967</b>
Jun-00	30	212	255	252	254	55,960	<b>7,722</b>
Jul-00	31	243	252	249	251	63,734	<b>7,774</b>
Aug-00	31	274	249	246	248	71,413	<b>7,679</b>
Sep-00	30	305	246	243	245	78,856	<b>7,443</b>
Oct-00	31	336	243	240	242	86,350	<b>7,494</b>
Nov-00	30	366	240	238	239	93,615	<b>7,265</b>
Dec-00	31	397	238	235	236	100,931	<b>7,316</b>
Jan-01	31	428	235	232	233	108,159	<b>7,228</b>
Feb-01	28	456	232	229	231	114,613	<b>6,454</b>
Mar-01	31	487	229	227	228	121,678	<b>7,065</b>
Apr-01	30	518	227	224	225	128,528	<b>6,850</b>
May-01	31	549	224	221	223	135,427	<b>6,900</b>

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