

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

2040 South Pacheco, Santa Fe, NM 87505



2517

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

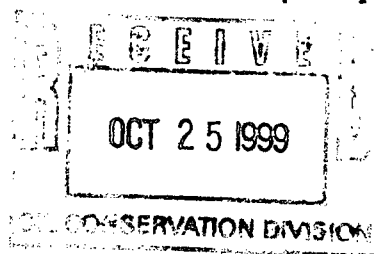
Check One Only for [B] or [C]

[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 Hyw. 64, Farmington, New Mexico 87401
Operator Address
San Juan 29-6 Unit #53A O, Sec. 31, T29N, R6W Rio Arriba County, NM
Lease Well No. Unit Ltr. - Sec - Twp - Rge County
OGRID NO. 017654 Property Code 009257 API NO. 30-039-21086 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 Pictured Cliffs Ext.		72319 Blanco Mesaverde
2. Top and Bottom of Pay Section (Perforations)	3,667-3,838'		5,418-5,988'
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) 1184 psig b. (Original) 1200 psi (est.).	a. b.	a. 347 psig (24-hr) b. 1280 psi (est.)
6. Oil Gravity (°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: 7/15/99 Rates: 196 mcf/d, 1bwpd
* If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date: 10/14/99 Rates: 495 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. 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 10/22/99

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

2040 South Pacheco, Santa Fe, NM 87505

99 JUL -2 AM 10:37 ☐ AMENDED REPORT

070 FARMINGTON, NM

API Number 30-039-21086		Pool Code 77440	070 FARMINGTON, NM Well Name Gobernador Pictured Cliffs	
Property Code 009257	Property Name San Juan 29-6 Unit			Well Number 53A
OGRID No. 017654	Operator Name PHILLIPS PETROLEUM COMPANY			Elevation 6805

¹⁰ Surface Location

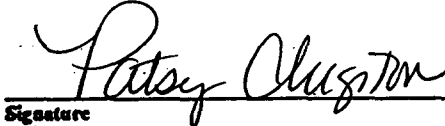
UL or lot no.	Section	Township	Range	Lot	Feet from the	North/South line	Feet from the	East/West line	County
0	31	29N	6W		800	South	1570	East	Rio Arriba

" Bottom Hole Location If Different From Surface

[illegible]

" Dedicated Across	" Joint or Infill	" Consolidation Code	" Order No.
160 SE/4		U	

**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**

16				17 OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</i>
				 Signature Patsy Clugston Printed Name Regulatory Assistant Title June 30, 1999 Date
		/ / / /		18 SURVEYOR CERTIFICATION <i>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.</i>
		/ / / /	1570' 800' NM-03040-A	4-18-75 Date of Survey Signature and Seal of Professional Surveyor: See original Mesaverde C102 signed by Fred B. Kerr, Jr. dated 4/18/75 Certificate Number

**NEL EXICO OIL CONSERVATION COMMISSIO
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102
Supersedes C-128
Effective 1-4-65

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

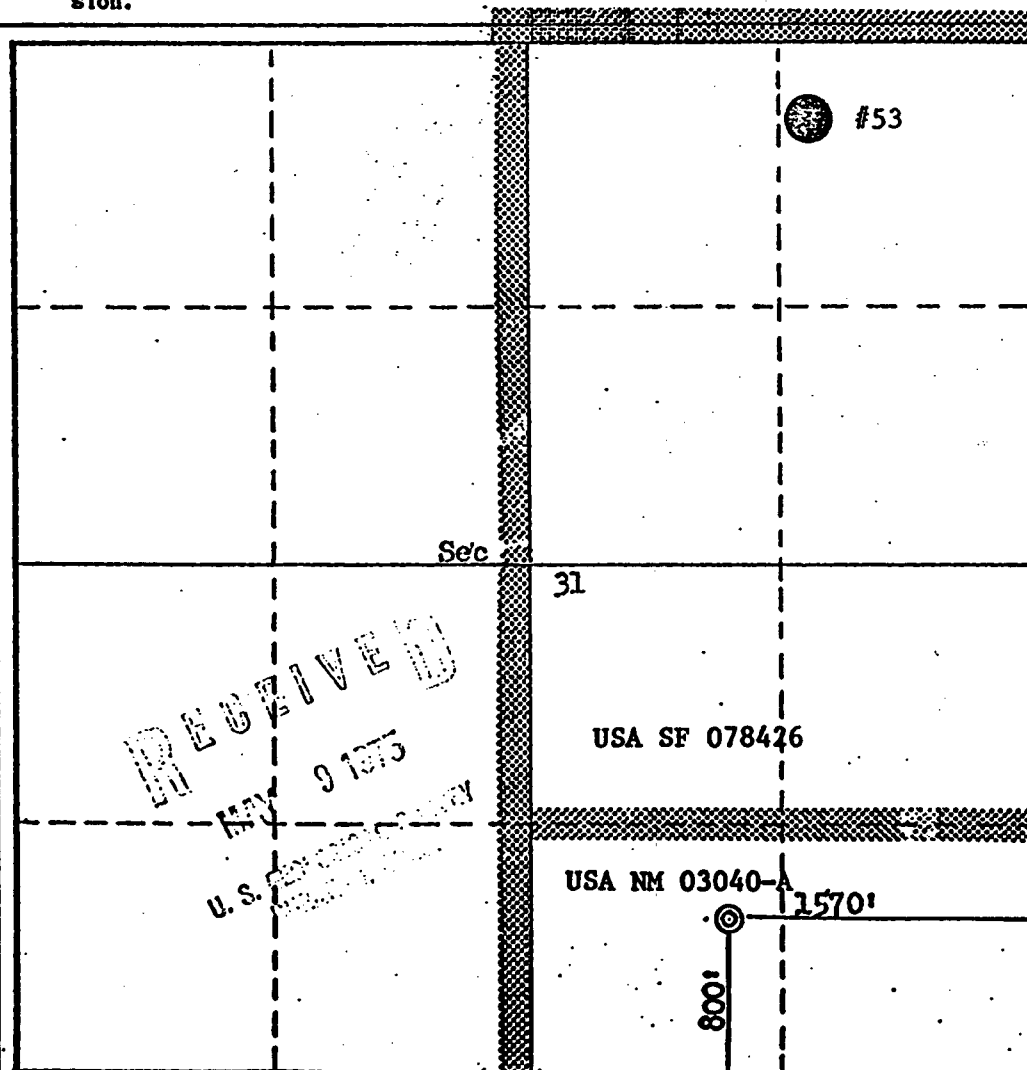
Operator Northwest Pipeline Corporation			Lease San Juan 29-6 Unit		Well No. 53A
Unit Letter 0	Section 31	Township 29N	Range 99W	County Rio Arriba	
Actual Footage Location of Well: 800 feet from the South line and 1570 FARMINGTON, NM feet from the East line					
Ground Level Elev. 6805	Producing Formation Mesa Verde	Pool Blanco Mesa Verde		Dedicated Acreage: 320 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/4, SE/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 Jr

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. Kerr

Certificate No.



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 #53A

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	13,792	January 2000	13,481
February 2000	11,918	March 2000	12,916
April 2000	12,228	May 1999	12,364
June 2000	11,870	July 2000	11,839
August 2000	11,586	September 2000	11,128
October 2000	11,105	November 2000	10,669

For example, if the total volume for January 2000 were 19,361 mcf, then the Pictured Cliffs would be allocated 13,481 mcf and the Mesaverde 5,880 mcf. And subsequently, the Pictured Cliffs would be allocated $(13,481/19,361)$ or 69.63%, and Mesaverde would be allocated $(5,880/19,361)$ or 30.37%.

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 # 53A
FORMATION: MESA VERDE

TYPE TEST: STATIC GRADIENT

COUNTY: RIO ARRIBA
STATE: NEW MEXICO

TOTAL DEPTH:
PERFS:
TUBING SIZE: 2 3/8 TO 5987'
CASING SIZE:
PACKER:
OTHER: SN @ 5986'
RAN PRESSURE @ 11:30

CASING PRESSURE:
TUBING PRESSURE: 110
OIL LEVEL:
WATER LEVEL: 4871'
TEMPERATURE:
ELEMENT NO.
ELEMENT RANGE 0 TO 3500

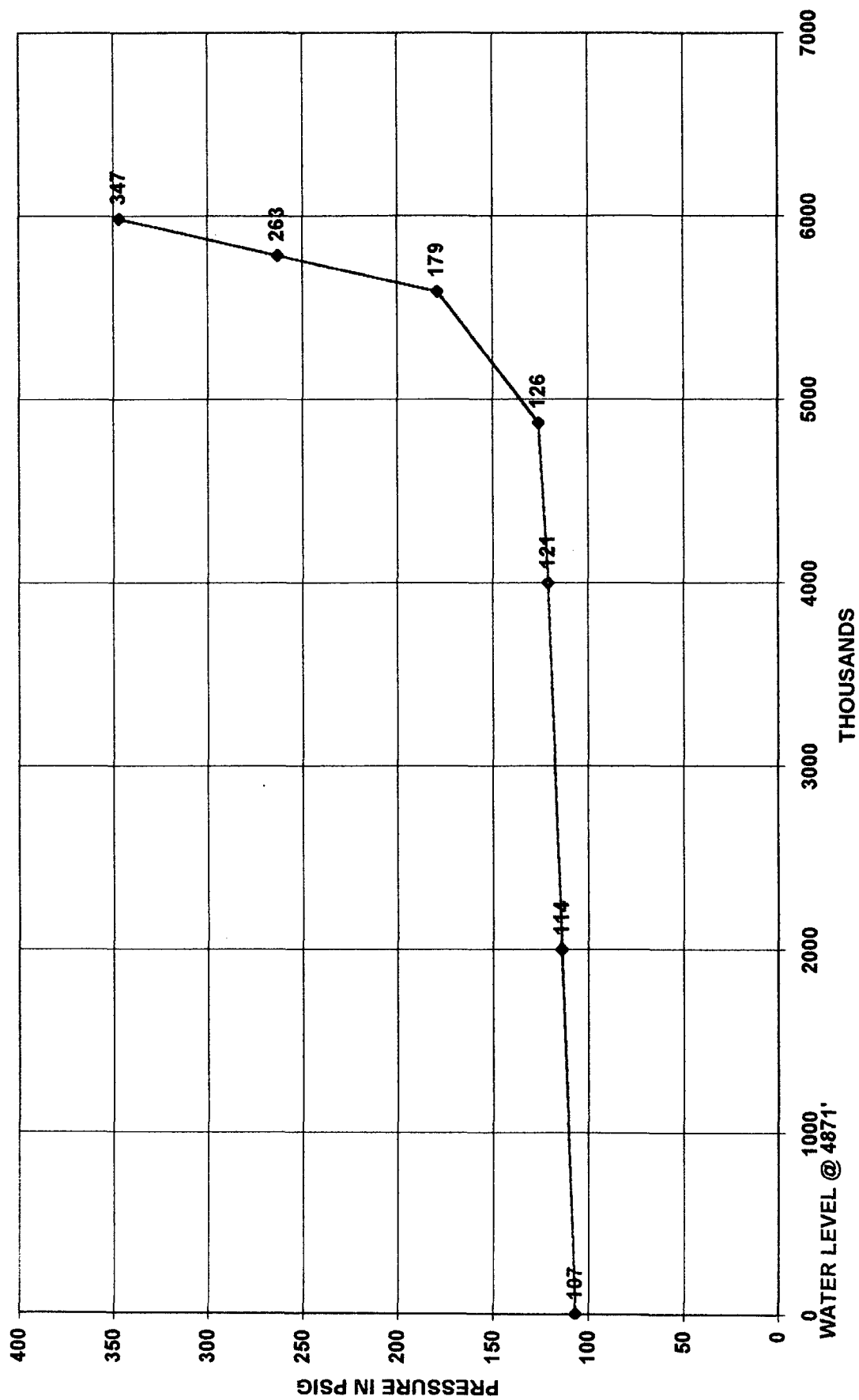
WELL STATUS: SHUT IN

DEPTH IN FEET	PRESSURE PSIG	GRADIENT PSI/FOOT
0	107	
2000	114	0.004
4000	121	0.004
5586	179	0.037
5786	263	0.420
5986	347	0.420

RAN SLM @ 6016'

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 # 53A
DATE: JUNE 3, 1999



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

DATE: AUGUST 11, 1999

WELL NAME: SAN JUAN 29-6 # 53
FORMATION: PICTURE CLIFF

TYPE TEST: STATIC GRADIENT

COUNTY: RIO ARriba
STATE: NEW MEXICO

TOTAL DEPTH: PBTD 4485'
PERFS: MP 3753'
TUBING SIZE: 2 3/8" TO 3804'
CASING SIZE:
PACKER:
OTHER:

CASING PRESSURE: 1050
TUBING PRESSURE: 0
OIL LEVEL:
WATER LEVEL: 1134
TEMPERATURE:
ELEMENT NO.
ELEMENT RANGE 0 TO 3000

PRESSURED UP @ 08:05

WELL STATUS: SHUT IN

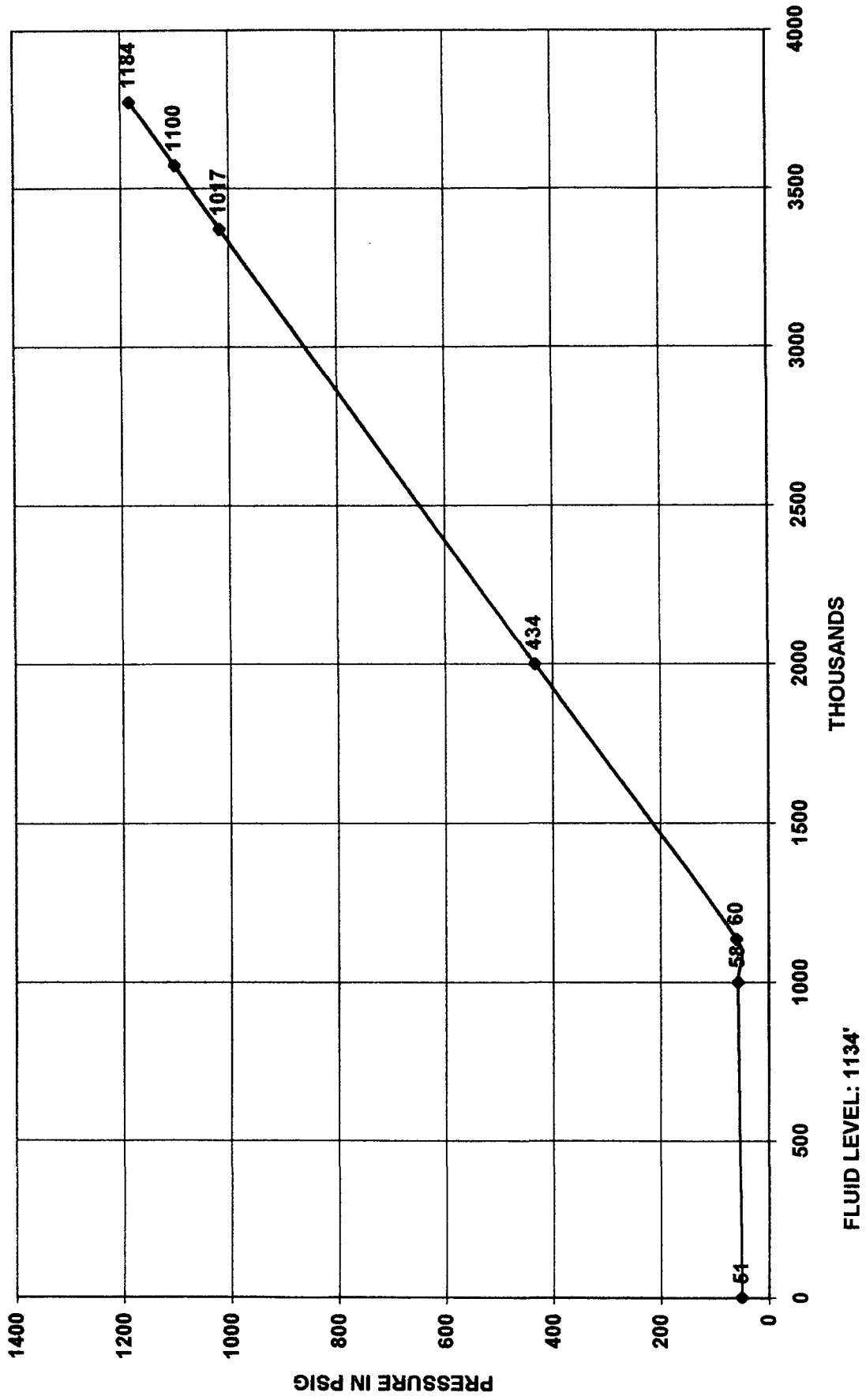
DEPTH IN FEET	PRESSURE PSIG	GRADIENT PSI/FOOT
0	51	
1000	58	0.007
2000	434	0.376
3372	1017	0.424
3572	1100	0.420
3772	1184	0.425

RAN TD TO 4381'

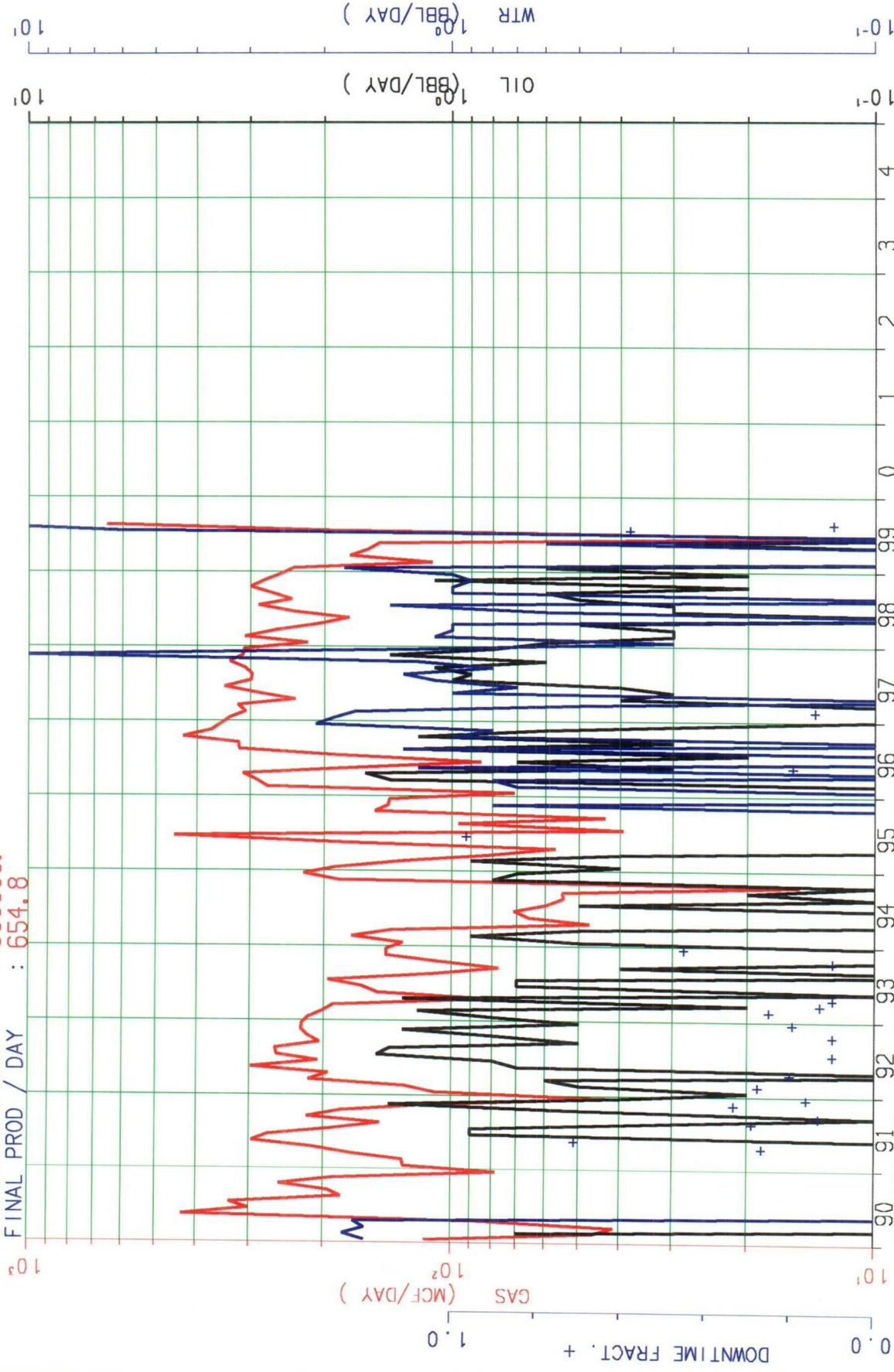
H & H WIRELINE SERVICE INC.
P. O. BOX 899
FLORA VISTA, NEW MEXICO 87415
OPERATOR: CHARLES HUGHES
UNIT NO. T-11

PHILLIPS PETROLEUM SAN JUAN 29-6 #53A

DATE: AUGUST 11, 1999



1/90-8/99
 INITIAL PROD / DAY : 4084.7
 REMAINING LIFE : 9.67
 HYPR(0.33) DECL % : 27.44
 CUM PRODUCTION : 666599.
 FINAL PROD / DAY : 654.8
 Current Cums
 666599. MCF GAS
 1362. BBL OIL
 1953. BBL WTR

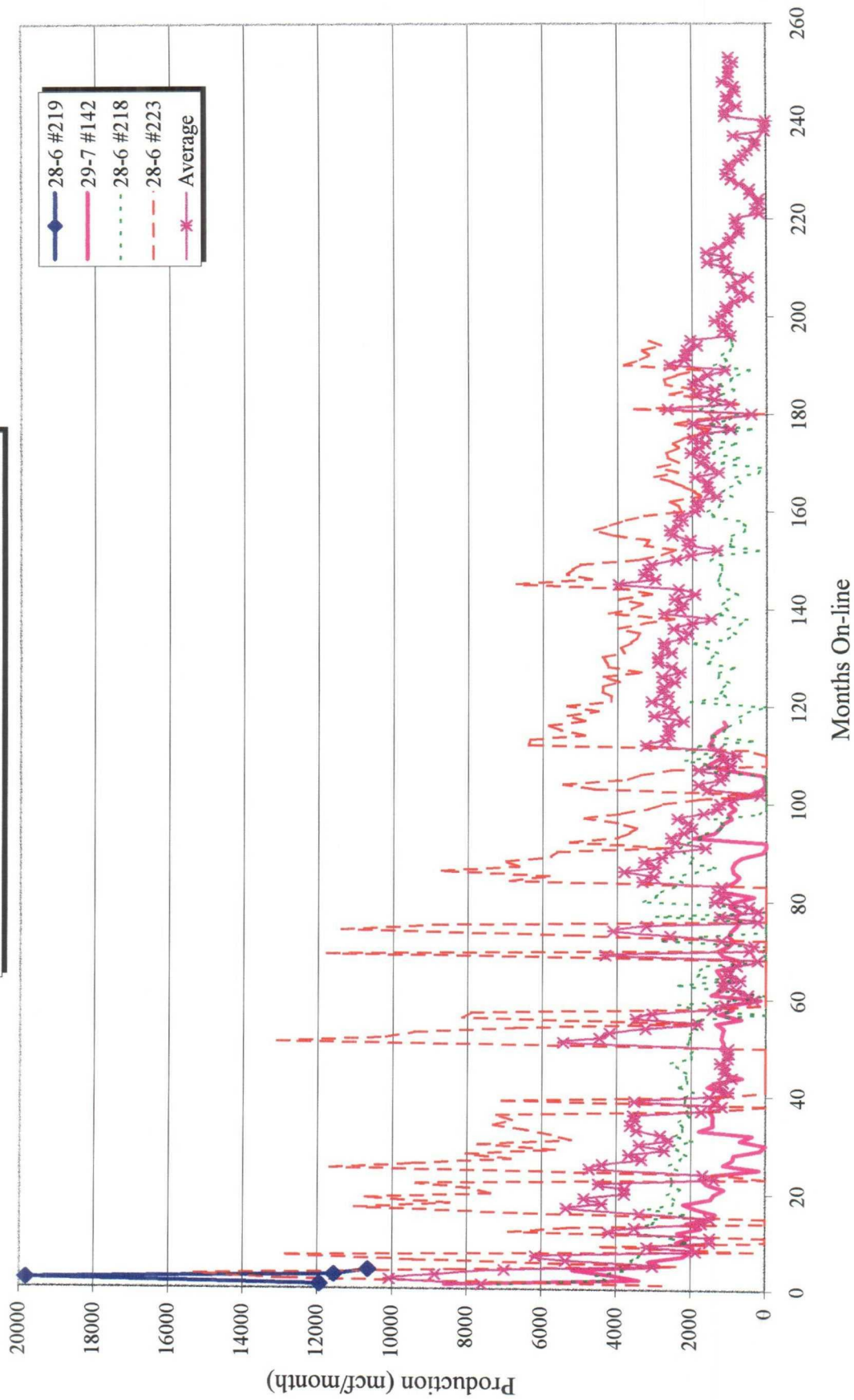


AVERAGE ON TIME = 0.952

LEASE- 650112 : SAN JUAN 29-6 MESA VERDE
 RESVR- 002 : BLANCO MESAVERDE
 WELL - 00053A CUM MMCF= 2046.

F031001
 ZONE-650112002000053AF031001
 API-30039210860000 THRU 99/08

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



San Juan 29-6 #53A Pictured Cliffs Forecast

<i>Initial Production Rate</i>	=	450	MCFD
<i>Hyperbolic Exponent</i>	=	0.33	
<i>Decline Rate</i>	=	27.000	%

Month #	Days	Cum. Days	Initial q MCFD	Final q MCFD	Average q MCFD	Cum. MCF	<i>Monthly MCF</i>
Dec-99	31	31	450	440	445	13,792	13,792
Jan-00	31	62	440	430	435	27,273	13,481
Feb-00	28	90	430	421	426	39,191	11,918
Mar-00	31	121	421	412	416	52,106	12,916
Apr-00	30	151	412	403	407	64,335	12,228
May-00	31	182	403	394	399	76,699	12,364
Jun-00	30	212	394	386	390	88,569	11,870
Jul-00	31	243	386	378	382	100,408	11,839
Aug-00	31	274	378	370	374	111,994	11,586
Sep-00	30	305	370	362	366	123,122	11,128
Oct-00	31	336	362	355	358	134,227	11,105
Nov-00	30	366	355	347	351	144,896	10,669
Dec-00	31	397	347	340	344	155,546	10,649
Jan-01	31	428	340	333	337	165,975	10,429
Feb-01	28	456	333	327	330	175,210	9,236
Mar-01	31	487	327	320	324	185,236	10,026
Apr-01	30	518	320	314	317	194,876	9,640
May-01	31	549	314	308	311	204,505	9,629

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