



OCT 28 1996

CONSERVATION DIVISION

DHC 11/18/96  
1422

Southern

Rockies

Business

Unit

October 23, 1996

Mr. William J. LeMay, Director  
New Mexico Oil Conservation Division  
2040 S. Pacheco Street  
P. O. Box 6429  
Santa Fe, NM 87505

**Application for Exception to Rule 303-A**  
**Downhole Commingling**  
**Pollock Com E #1R Well**  
**Unit J Section 28-T29N-R10W**  
**Basin Fruitland and Aztec Pictured Cliffs Pools**  
**San Juan County, New Mexico**

Enclosed please find an administrative application form (C-107-A) and attachments for downhole commingling for the captioned well. By copy of this application by certified mail, return receipt requested, Amoco is notifying all offset operators in the formations captioned above as well as all affected interest owners if the ownership of those formations is not common. The Division Director may approve the proposed downhole commingling in the absence of a valid objection from any offset operator or any interest owner in those instances where ownership is not common in the zones to be commingled within 20 days after the receipt of the application if, in his opinion, waste will not result thereby, and correlative rights will not be violated.

Should there be questions concerning this matter, please contact me at (303) 830-5344.

Sincerely,

Pamela W. Staley

Enclosures

cc: Steve Webb  
Pat Archuleta  
Wellfile  
Proration File

Frank Chavez, Supervisor  
NMOCD District III  
1000 Rio Brazos Road  
Aztec, NM 87410

OIL CONSERVATION DIVISION

DISTRICT II  
811 South First St., Artesia, NM 88210-2835

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

APPROVAL PROCESS:

☒ Administrative ☐ Hearing

DISTRICT III  
1000 Rio Brazos Rd. Aztec, NM 87410-1693

EXISTING WELLBORE  
☒ YES ☐ NO

APPLICATION FOR DOWNHOLE COMMINGLING

Amoco Production Company

PO Box 800 Denver, CO 80201

Operator	Address	County
Pollock Com E	J28, T29N-R10W	San Juan
Lease	Well No.	Unit Ltr. - Sec Twp - Rge
	1R	

OGRID NO.	Property Code	000366	API NO.	3004524247	Federal	State	(and/or) Fee	X
-----------	---------------	--------	---------	------------	---------	-------	--------------	---

Spacing Unit Lease Types: (check 1 or more)

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zone	Lower Zone
1. Pool Name and Pool Code	Basin Fruitland 71629		Aztec Pictured Cliffs 71280
2. Top and Bottom of Pay Section (Perforations)	Estimated: 1580'-1790'		Estimated 1800-1840'
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	(Current) 180 psia a. (Original) 350 psia b.	a. b.	209 psia 700 psia
6. Oil Gravity (° API) or Gas BTU Content	925 BTU		1100 BTU
7. Producing or Shut-In?	New Zone		New Zone
Production Marginal? (yes or no)	No		Yes
• If Shut-In, give data 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 and oil/gas/water rates of recent test (within 60 days)	Date: Rates:	Date: Rates:	Date: Rates:
8. Fixed Percentage Allocation Formula -% for each zone	Oil: 0 % Gas 76 %	Oil: % Gas %	Oil: 100 % Gas 24 %

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) \_\_\_\_\_

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. SEE ATTACHED
- \* 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	TITLE	DATE
	Regulatory Affairs Engineer	10/23/96
TYPE OR PRINT NAME	TELEPHONE NO. ( 303 )	830-5344
Pamela W. Staley		

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

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

<sup>1</sup> API Number 3004524247	<sup>2</sup> Pool Code 71280	<sup>3</sup> Pool Name Aztec Pictured Cliffs
<sup>4</sup> Property Code 000366	<sup>5</sup> Property Name <i>Pollock com E</i> Harold B. Chapson	<sup>6</sup> Well Number 1R
<sup>7</sup> OGRID No. 000778	<sup>8</sup> Operator Name Amoco Production Company	<sup>9</sup> Elevation 5510'

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

UI or lot no. J	Section 28 32	Township 29N	Range 10W	Lot.Idn	Feet from the 1800	North/South Line South	Feet from the 1650	East/West Line East	County San Juan
--------------------	---------------------	-----------------	--------------	---------	-----------------------	---------------------------	-----------------------	------------------------	--------------------

### <sup>11</sup> Bottom Hole Location If Different From Surface

UI or lot no.	Section	Township	Range	Lot.Idn	Feet from the	North/South Line	Feet from the	East/West Line	County
<sup>12</sup> Dedicated Acres 160	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order Number						

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

<sup>16</sup> <b>RECEIVED</b> SEP 27 1996 <b>OIL CON. DIV.</b> <b>DIST. 3</b>					<sup>17</sup> OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief
					Signature <i>Patty Haebele</i> Printed Name Patty Haebele Staff Assistant Title 9/24/96 Date
				<sup>18</sup> 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.	
				3/14/80 Date of Survey	
				Signature and Seal of Professional Surveyor:  on file 3950 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

OIL CONSERVATION DIVISION

2040 South Pacheco  
Santa Fe, NM 87505

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

<sup>1</sup> API Number 3004524247	<sup>2</sup> Pool Code 71629	<sup>3</sup> Pool Name Basin Fruitland Coal
<sup>4</sup> Property Code 000366	<sup>5</sup> Property Name <i>Pollock com B</i> Harold B. Chapson	<sup>6</sup> Well Number 1R
<sup>7</sup> GRID No. 000778	<sup>8</sup> Operator Name Amoco Production Company	<sup>9</sup> Elevation 5510'

<sup>10</sup> Surface Location

UI or lot no. J	Section 28 32	Township 29N	Range 10W	Lot.Idn	Feet from the 1800	North/South Line South	Feet from the 1650	East/West Line East	County San Juan
--------------------	---------------------	-----------------	--------------	---------	-----------------------	---------------------------	-----------------------	------------------------	--------------------

<sup>11</sup> Bottom Hole Location If Different From Surface

UI or lot no.	Section	Township	Range	Lot.Idn	Feet from the	North/South Line	Feet from the	East/West Line	County
<sup>12</sup> Dedicated Acres 320	<sup>13</sup> Joint or Infill		<sup>14</sup> Consolidation Code		<sup>15</sup> Order Number				

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

<sup>16</sup> <b>RECEIVED</b> SEP 27 1996 <b>OIL CON. DIV.</b> DIST. 3					<sup>17</sup> OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief
					Signature <i>Patty Haelele</i> Patty Haelele Printed Name Staff Assistant Title 9/24/96 Date
					<sup>18</sup> 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.  3/14/80 Date of Survey  Signature and Seal of Professional Surveyer:  on file 3950 Certificate Number

1650'

1800'

**Pressures**

<b>POLLOCK COME #1R Downhole Commingling Data</b>								
<b>Estimated Reservoir Pressures:</b>								
<b>Pictured Cliffs:</b>								
				Calculated				
		SIWHP	Mid-perf	Res. Press.				
Well Name	SI Date	psig	Depth, ft	psia				
Armenta GC A #1	Sep-96	175	1829	224				
Maddox GC A #1	Sep-96	148	1845	197				
Sanchez GC #1	May-96	160	1800	208				
M. Pollock GC #1	1981	210	1840	259	Same 1/4 section, PxA in 1981			
G.F. Bruington #1	1988	200	1836	249	SW/4, same section, PxA in 1988			
<b>Anticipated Reservoir Pressure:</b>			<b>209</b>					
<b><u>Fruitland</u></b>								
Morris GC #1	Jan-96	130	1770	177				
<b>Anticipated Reservoir Pressure:</b>			<b>180</b>					
<b>Note: Only FT within reasonable proximity that I have pressure data on.</b>								

Chart1

Well: ARMENTA GC A 001-PC (92388101)

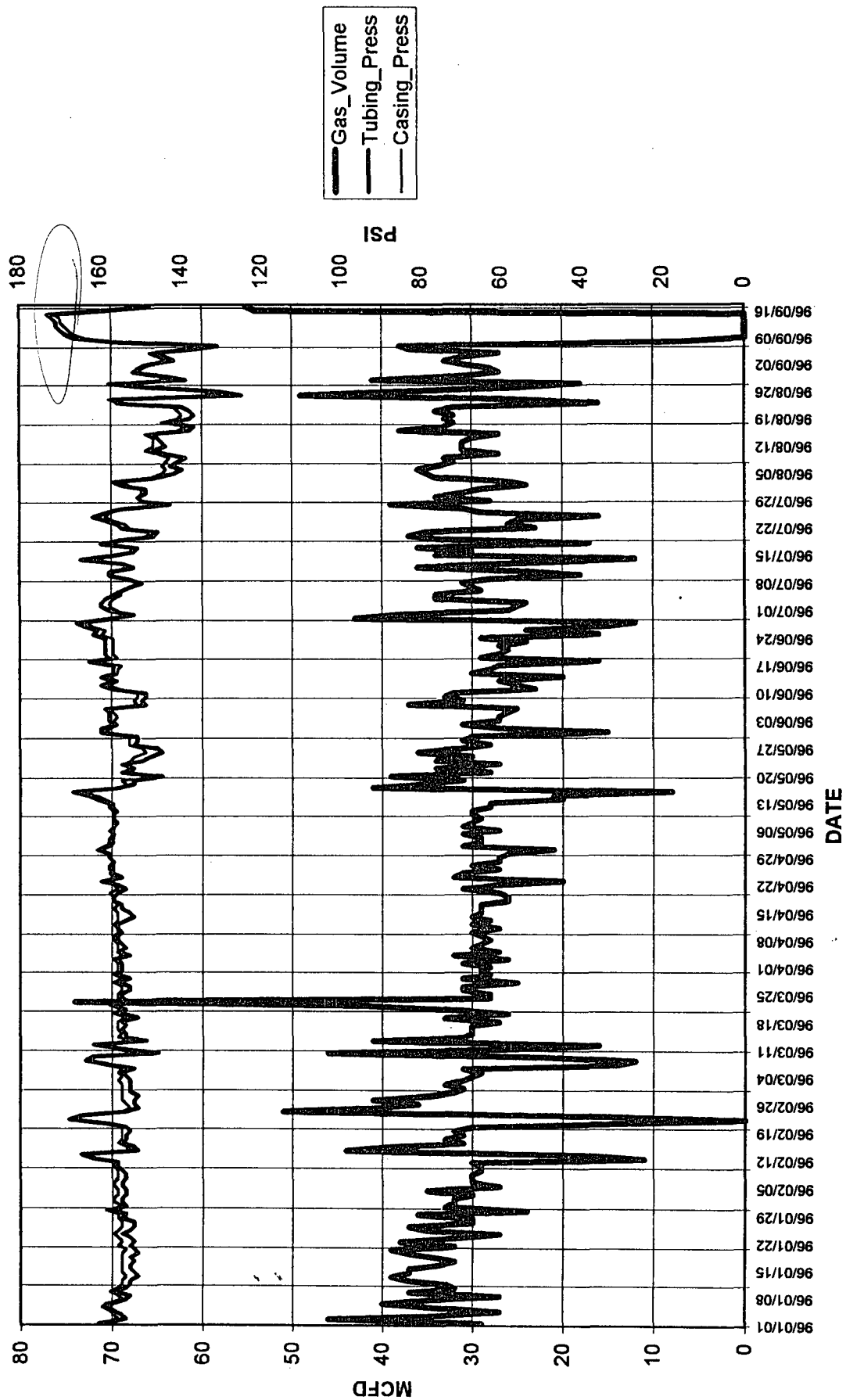


Chart1

Well: MADDOX GC A 001-PC (92426101)

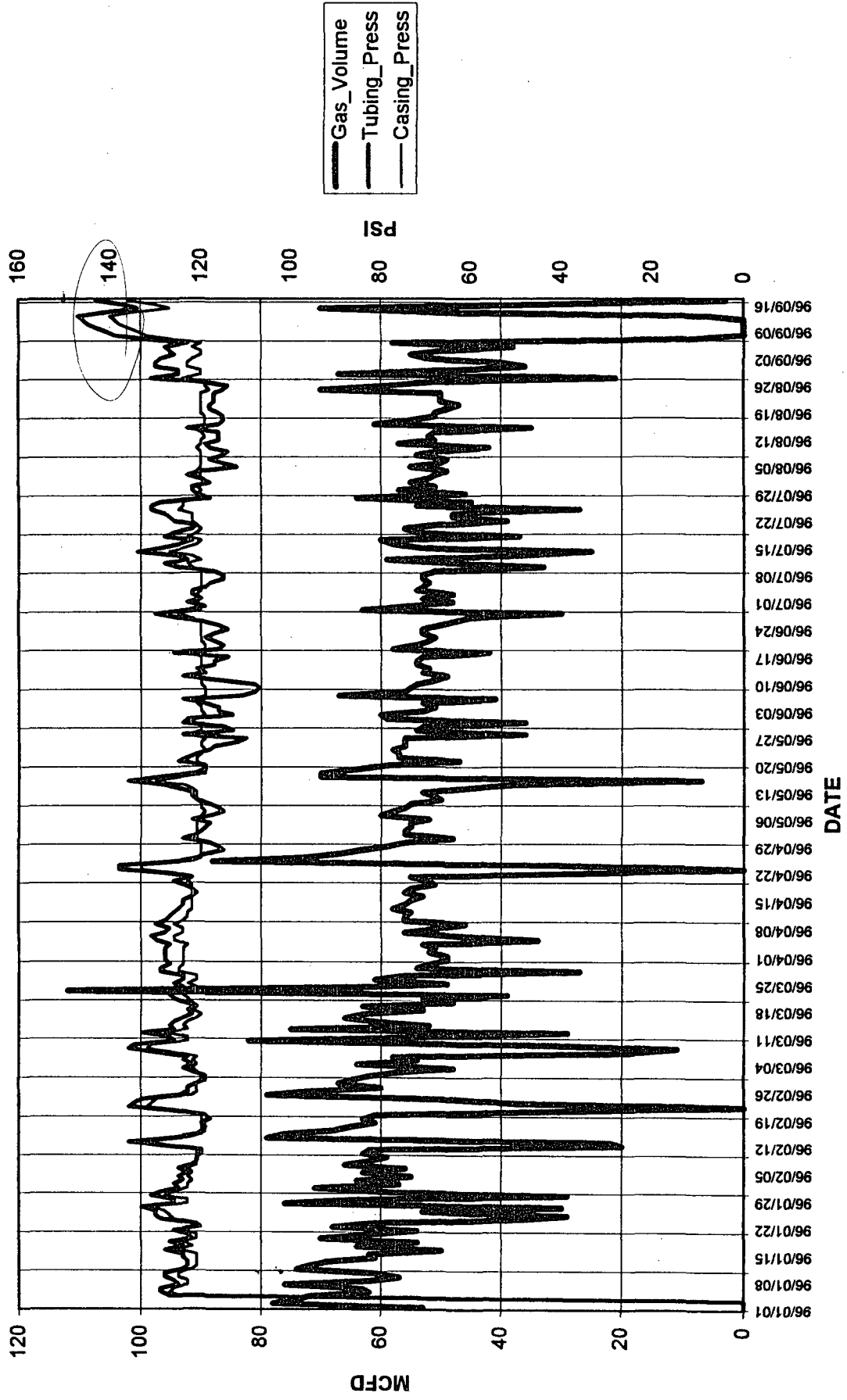


Chart 1

Well: SANCHEZ GC 001-PC (92439701)

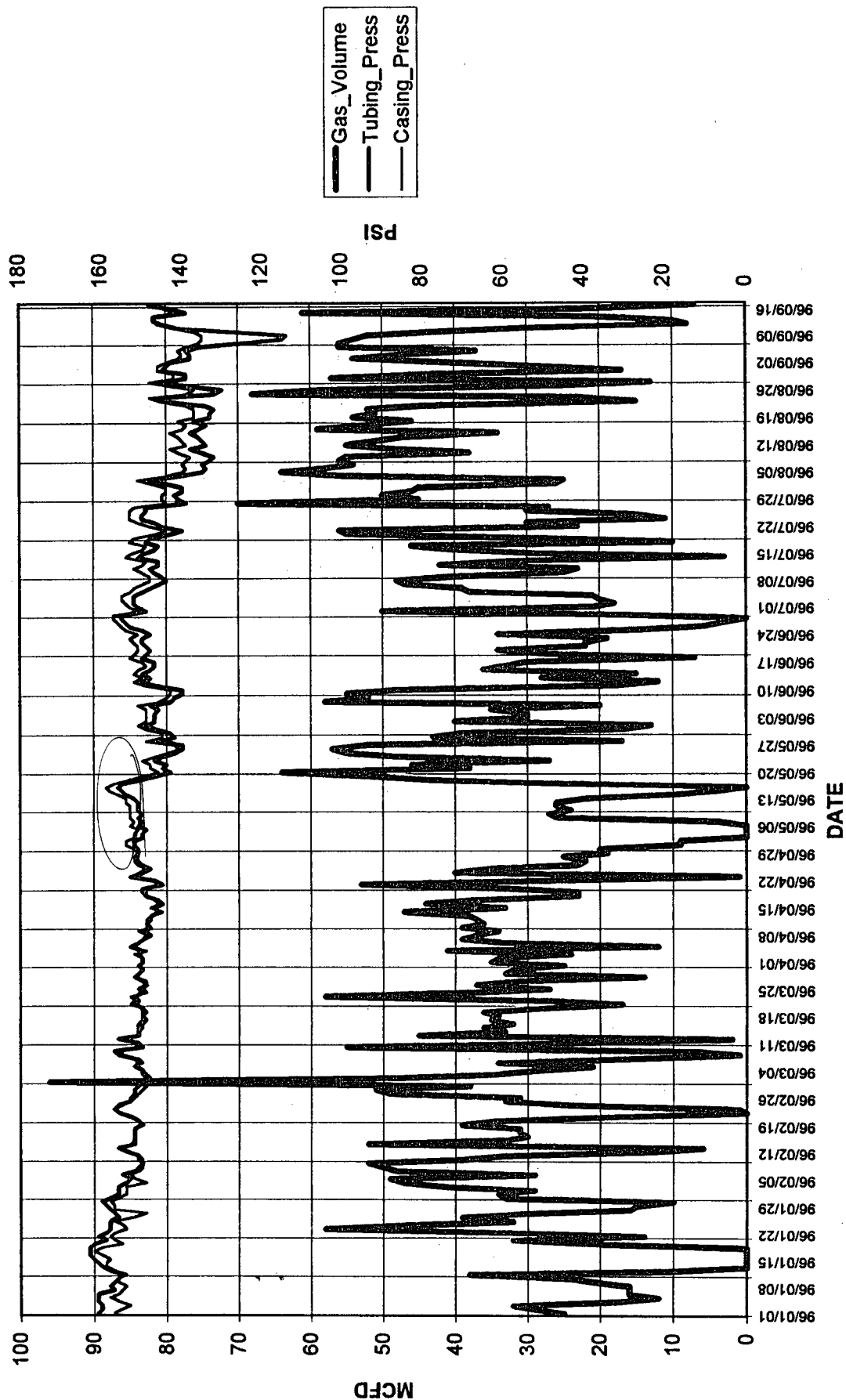
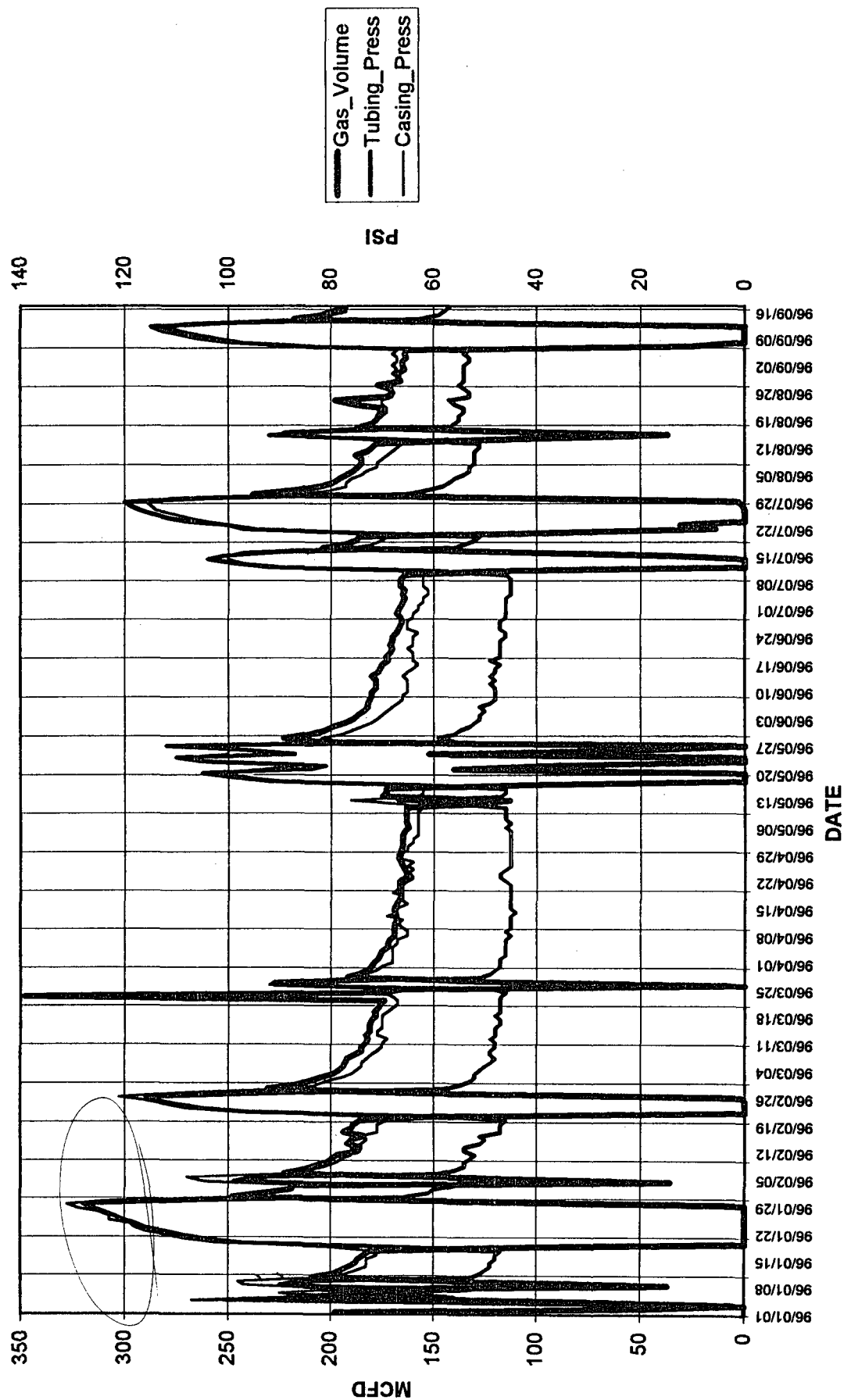




Chart1

Well: MORRIS GC 001-FT (92433902)



# Dwights

240

Lease: M POLLOCK GAS COM 000001

Retrieval Code: 251,045,29N10W28PPKPC

09/18/96

720

800

210

630

700

180

540

600

150

450

500

120

360

400

90

270

300

60

180

200

30

90

100

0

0

0

0 60 120 180 240 300 360 420 480 540 Gas(MMCF)

WHSIP

✕

County: SAN JUAN, NM

F.P. Date: 07/57

BHP/Z

+

WHFP

0

Field: AZTEC (PICTURED CLIFFS) PC

Oil Cum: 0 bbl

Reservoir: PICTURED CLIFFS

Gas Cum: 573.5 mmcf

Operator: AMOCO PRODUCTION CO

Location: 28P 29N 10W

# Dwights

200

Lease: G F BRUINGTON 000001

Retrieval Code: 251,045,29N10W28M00PC

09/18/96

720

8

175

630

7

150

540

6

125

450

5

100

360

4

75

270

3

50

180

2

25

90

1

0

0

0

0 50 100 150 200 250 300 350 400 450 Gas(MMCF)

WHSIP

✕

County: SAN JUAN, NM

F.P. Date: 11/53

BHP/Z

†

WHFP

0

Field: AZTEC (PICTURED CLIFFS) PC

Oil Cum: 0 bbl

Reservoir: PICTURED CLIFFS

Gas Cum: 436.3 mmcf

Operator: HARVEY HELEN LORAINE

Location: 28M 29N 10W

### **ALLOCATION METHOD**

Attached are production curves from surrounding wells in the Pictured Cliffs and the Fruitland formations. Production rates were estimated using these curves and are tabulated on the following page. Allocations are made from those rate predictions and are also shown on the next page. No liquids are anticipated from the Fruitland Coal, so a 100% allocation was made to the Pictured Cliffs formation.

# Decline Rates

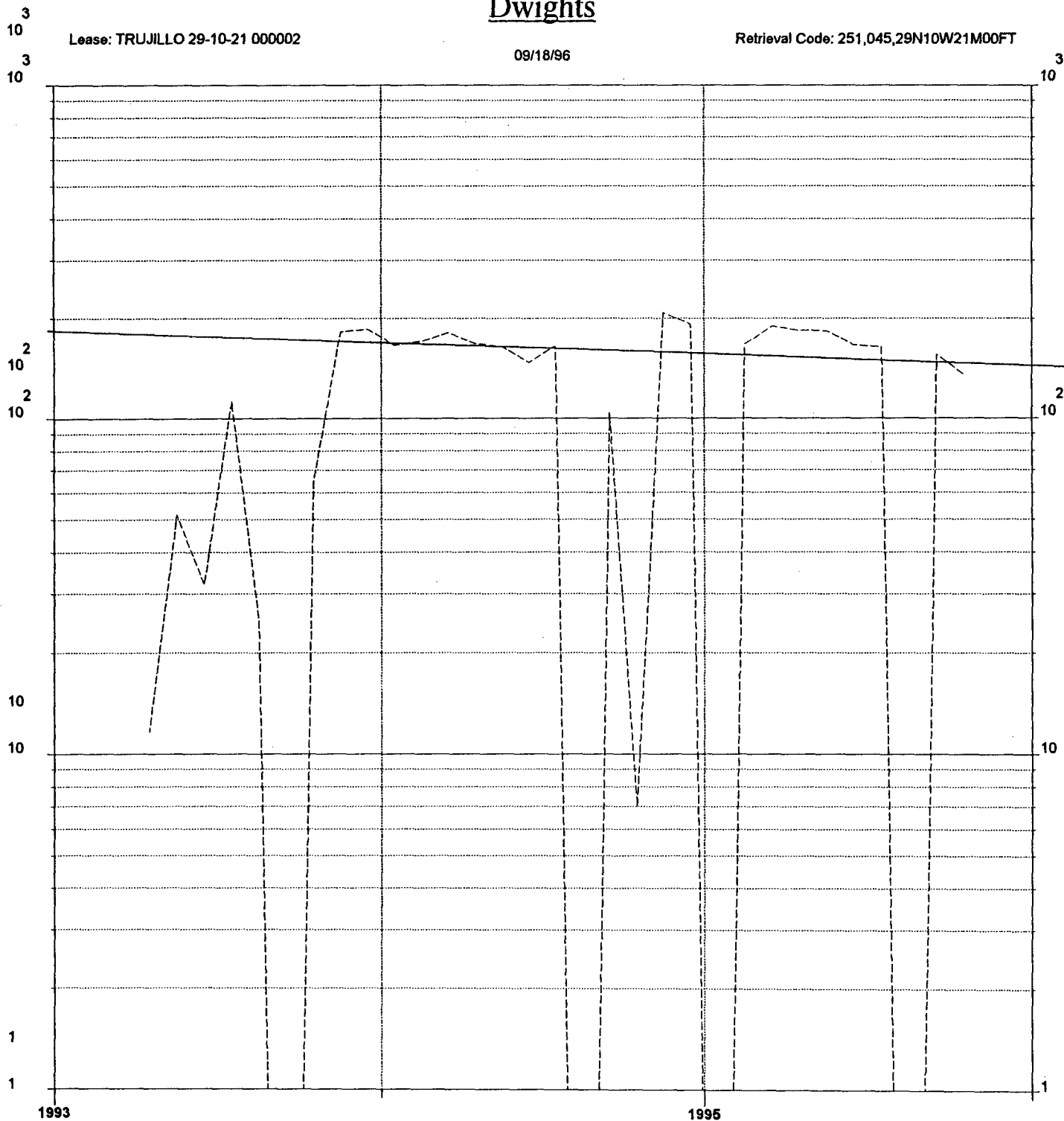
<b>POLLOCK COME #1R Downhole Commingling Data</b>							
<b>Production Allocation</b>							
<b>FT Performance:</b>							
		Exponential					
Well Name	Operator	Decline Rate					
Candelaria #2	SGI	0.061					
Davis #2	SGI	0.084					
State #1	SGI	0.086					
Trujillo #2	SGI	0.084					
Average		<u>0.079</u>					
Estimated IP from offsets:			<b>130 MCFD</b>	Note: Requires wellhead compression			
<b>PC Performance:</b>							
		Exponential					
Well Name	Operator	Decline Rate					
Abrams GC D #1	APC	0.090					
Armenta GC A #1	APC	0.074					
G. F. Bruington #1	PxA	0.102					
M. Pollock GC #1	PxA	0.094					
Maddox GC A #1	APC	0.081					
New Mexico Fed D #1D	Four Star	0.078					
Prespentt GC #1	APC	0.077					
Sanchez GC #1	APC	0.087					
Sullivan #3A	Horace McKay	0.099					
Trujillo GC #1	APC	0.086					
Zachry #8	MOI	0.084					
Zachry #10	MOI	0.070					
Zachry #12	MOI	0.059					
Average		<u>0.083</u>					
Estimated IP from offsets and P/Z vs. Cum Prod:			<b>40 MCFD</b>	Note: Requires wellhead compression			

# Dwights

Lease: TRUJILLO 29-10-21 000002

09/18/96

Retrieval Code: 251,045,29N10W21M00FT



Oil (bbl/day)

County: SAN JUAN, NM

F.P. Date: 04/93

Gas (mcf/day)

Water (bbl/day)

Field: BASIN (FRUITLAND COAL) FT

Oil Cum: 4 bbl

Reservoir: FRUITLAND COAL

Gas Cum: 111.7 mmcf

Operator: S G INTERESTS I LTD

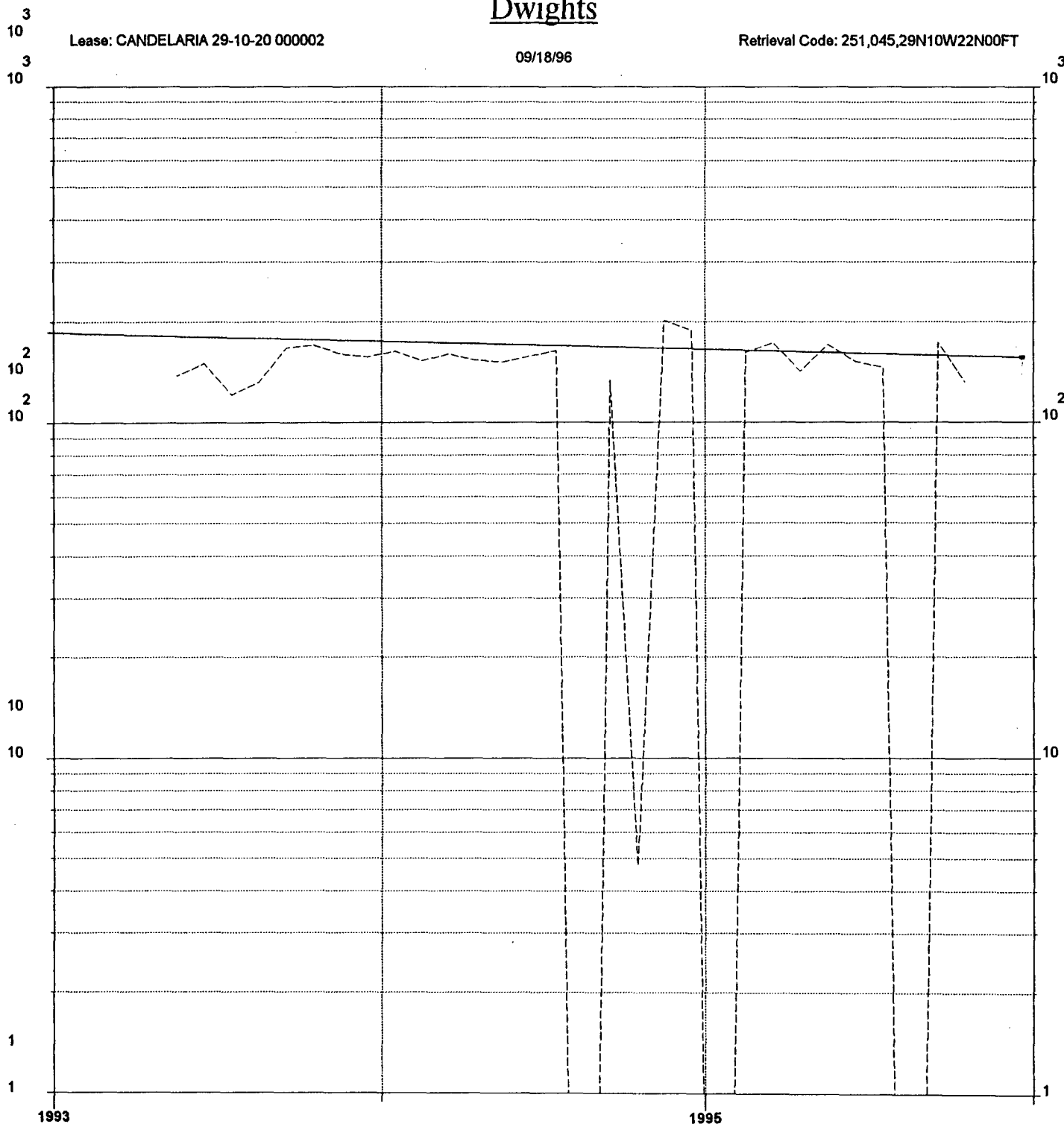
Location: 21M 29N 10W

# Dwights

Lease: CANDELARIA 29-10-20 000002

09/18/96

Retrieval Code: 251,045,29N10W22N00FT



Oil (bbl/day)

County: SAN JUAN, NM

F.P. Date: 05/93

Gas (mcf/day)

Water (bbl/day)

Field: BASIN (FRUITLAND COAL) FT

Oil Cum: 0 bbl

Reservoir: FRUITLAND COAL

Gas Cum: 124.1 mmcf

Operator: S G INTERESTS I LTD

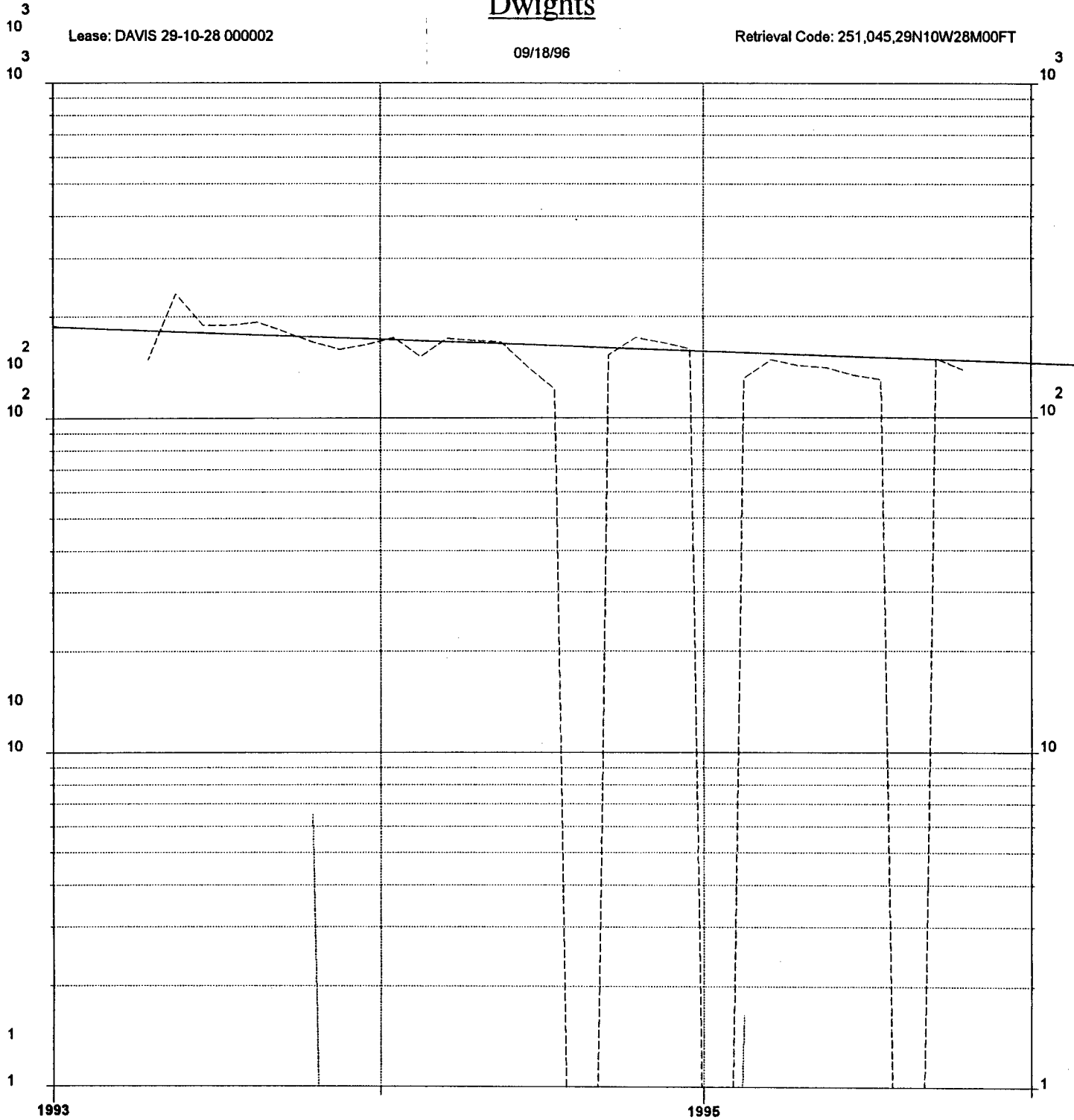
Location: 22N 29N 10W

# Dwights

Lease: DAVIS 29-10-28 000002

09/18/96

Retrieval Code: 251,045,29N10W28M00FT



Oil (bbl/day)

County: SAN JUAN, NM

F.P. Date: 04/93

Gas (mcf/day)

Water (bbl/day)

Field: BASIN (FRUITLAND COAL) FT

Oil Cum: 0 bbl

Reservoir: FRUITLAND COAL

Gas Cum: 136.3 mmcf

Operator: S G INTERESTS I LTD

Location: 28M 29N 10W

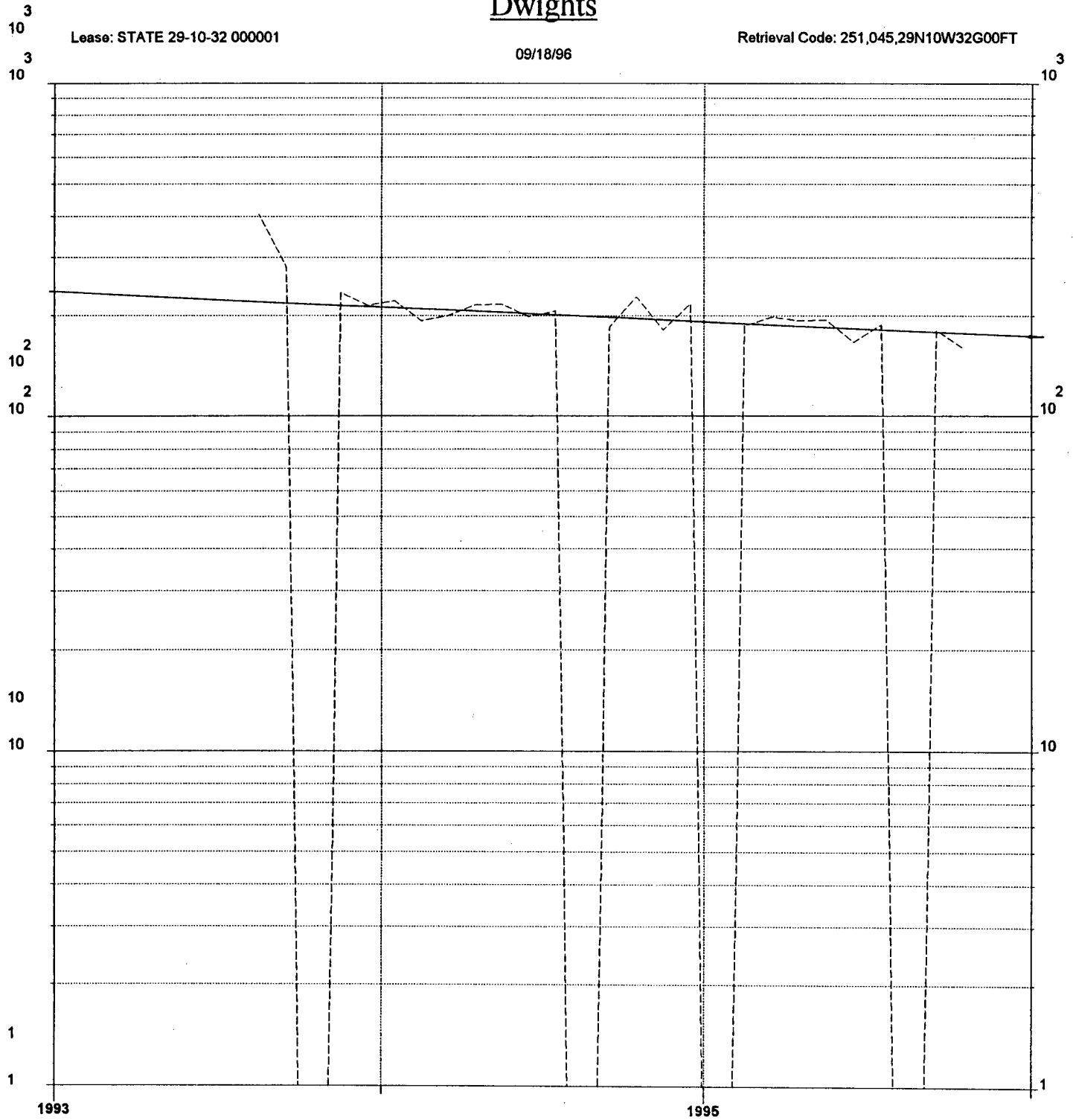


# Dwights

Lease: STATE 29-10-32 000001

09/18/96

Retrieval Code: 251,045,29N10W32G00FT



Oil (bbl/day)

County: SAN JUAN, NM

F.P. Date: 08/93

Gas (mcf/day)

Water (bbl/day)

Field: BASIN (FRUITLAND COAL) FT

Oil Cum: 0 bbl

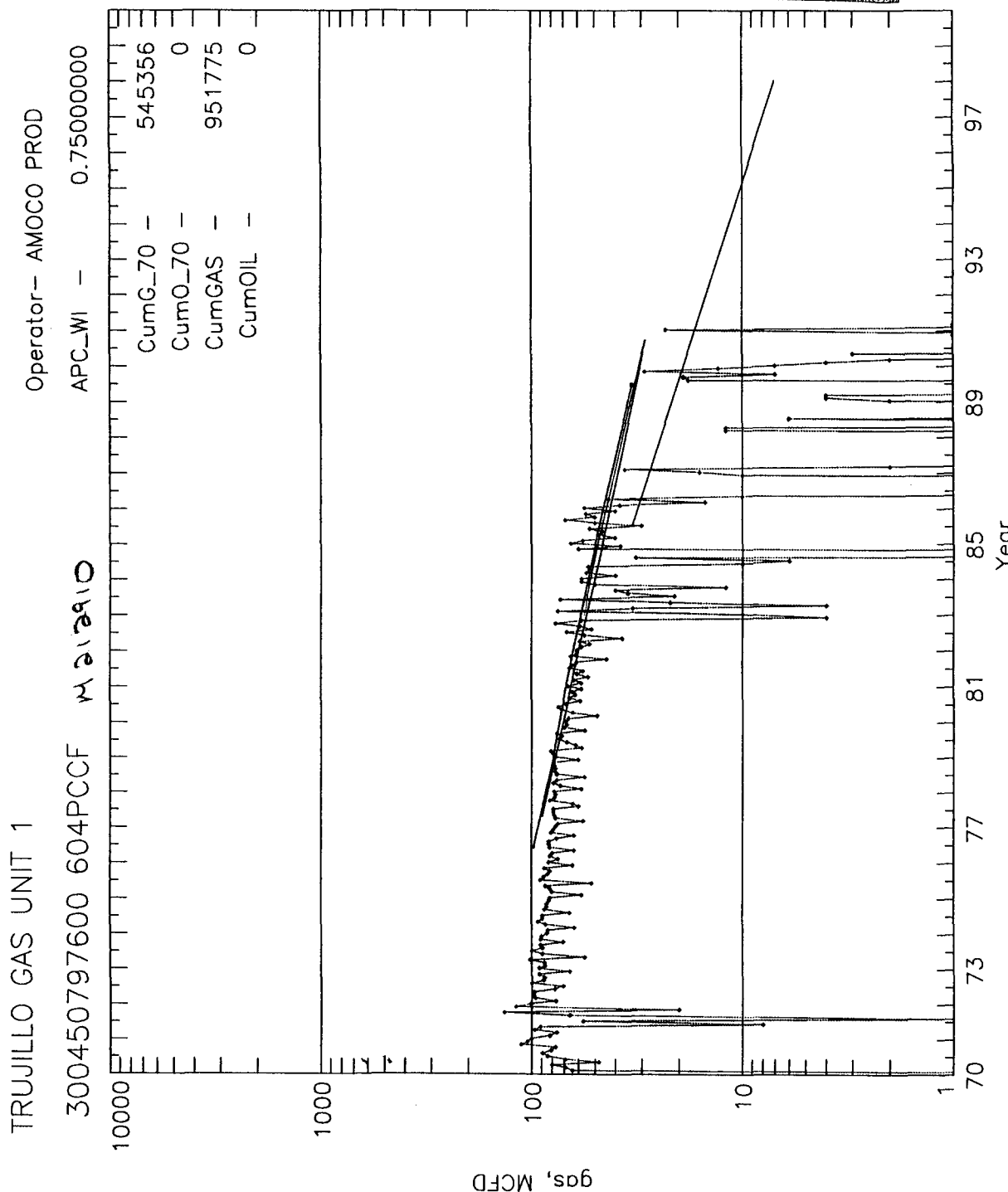
Reservoir: FRUITLAND COAL

Gas Cum: 147.7 mmcf

Operator: S G INTERESTS I LTD

Location: 32G 29N 10W

For: zslw11  
 Engr: zalc14



For: zslw11  
 Engr: zalc14

# PRESPENTT GAS UNIT 1

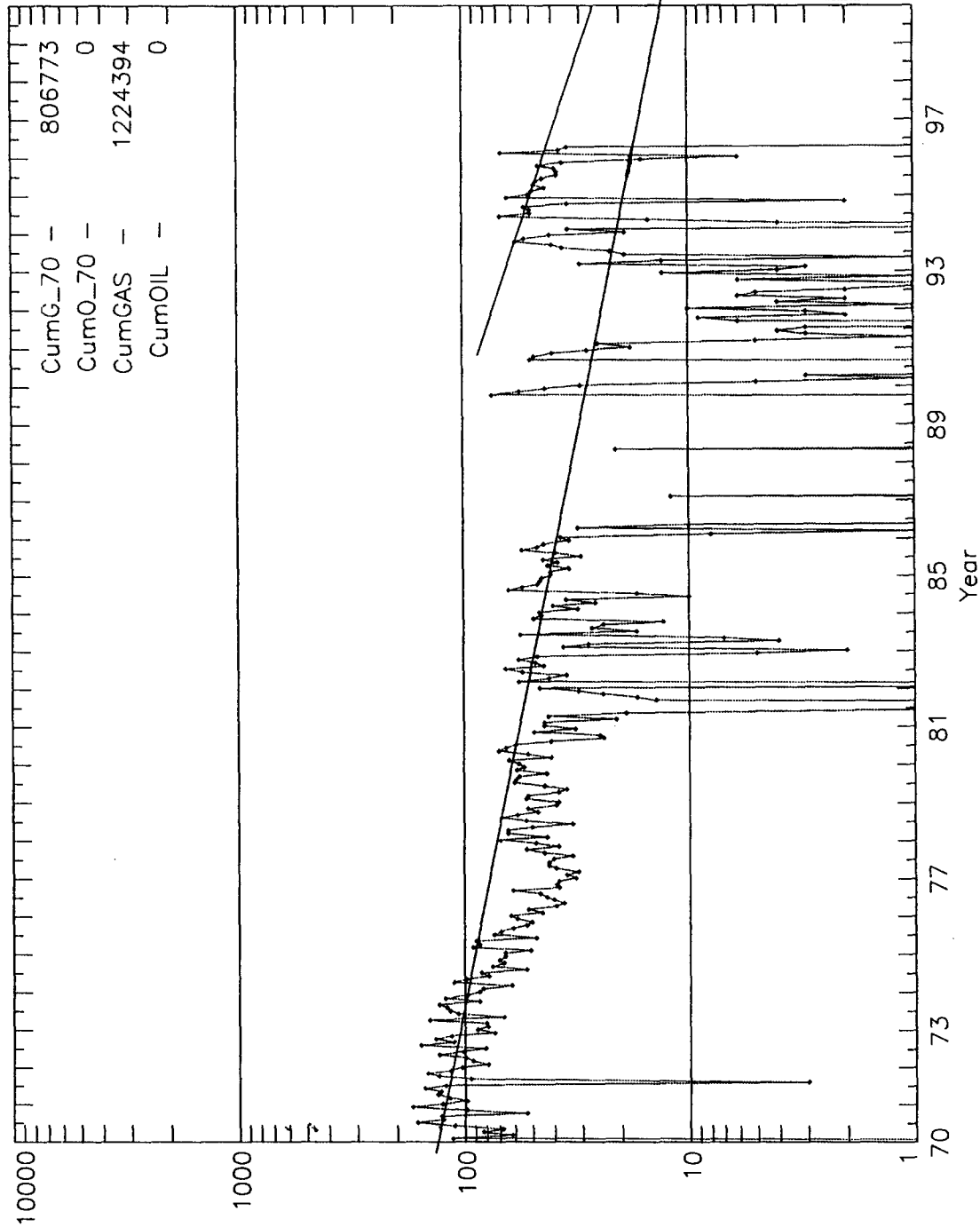
Operator- AMOCO PROD

300450795200 604PCCF 0212910

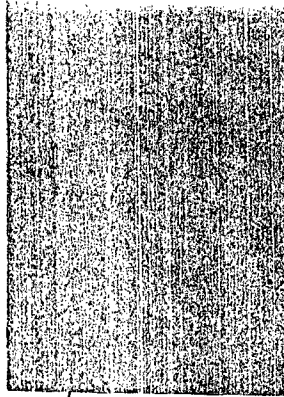
APC\_WI - 1.0000000

CumG_70 -	806773
CumO_70 -	0
CumGAS -	1224394
CumOIL -	0

gas, MCFD



Reserves



For: zslw11  
Engr: zalc14

GC A

ARMENTA #

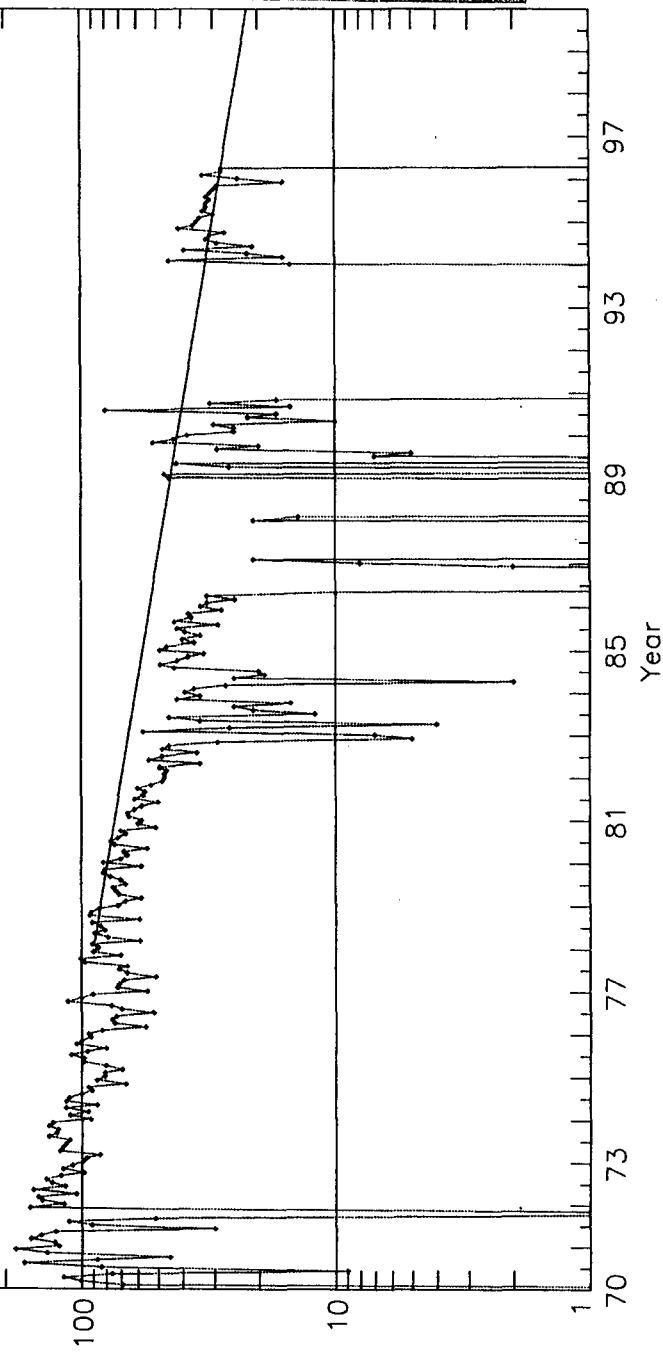
Operator-- AMOCO PROD

APC\_WI - 0.75000000

300450792600 604PCCF Data

CumG_70 -	565356
CumO_70 -	0
CumGAS -	1050768
CumOIL -	0

gas, MCFD



Reserves

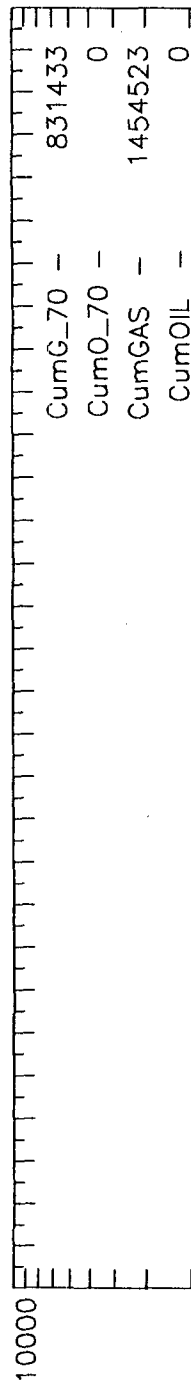
For: zslw11  
Engr: zalc14

MADDOX GAS UNIT 1<sup>A</sup>

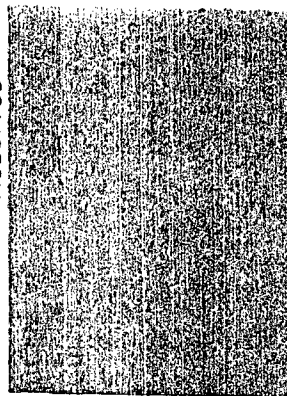
Operator- AMOCO PROD

300450778600 604PCCF M 27 29 10

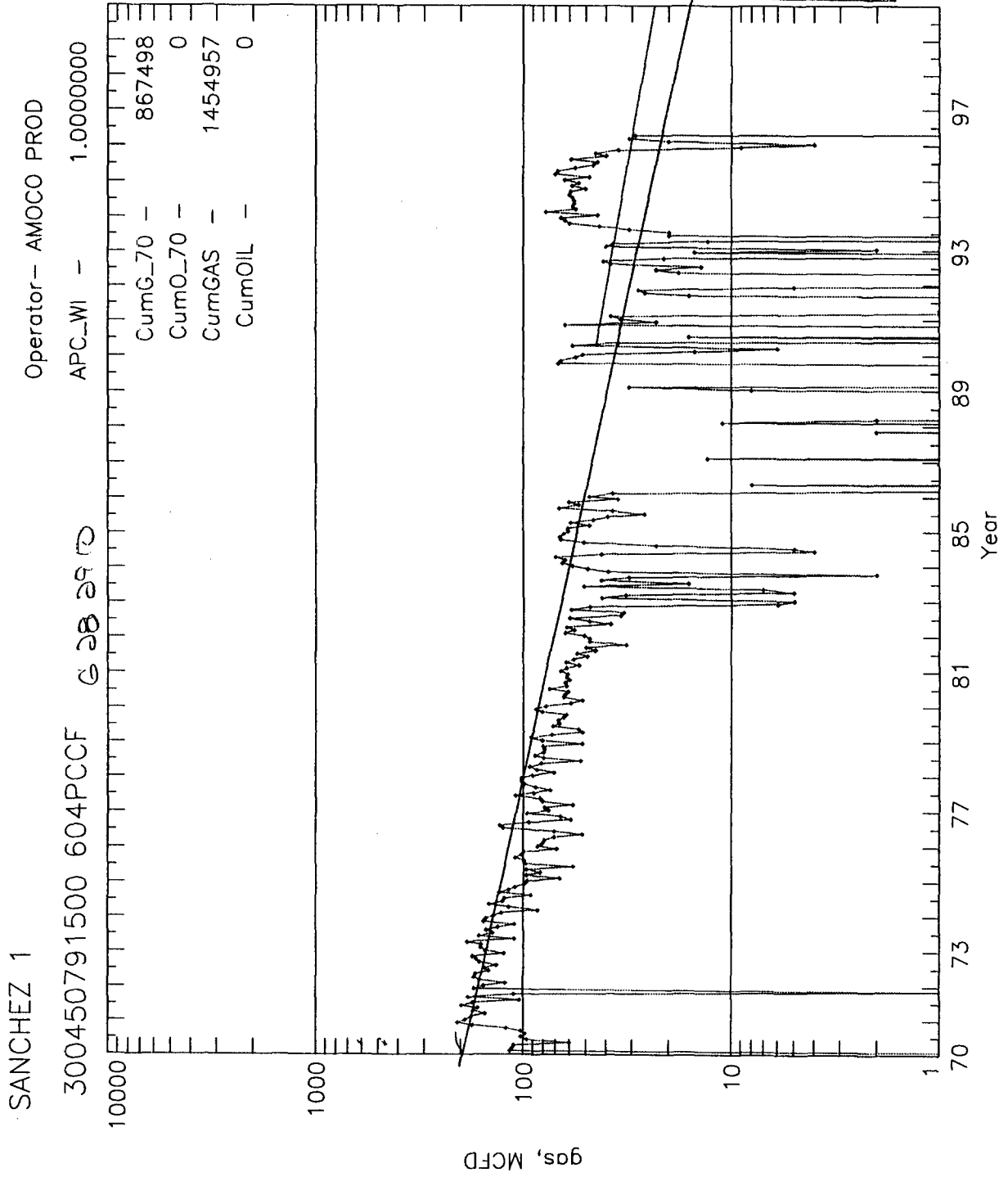
APC\_WI - 1.0000000



Reserves



For: zslw11  
Engr: zalc14



For: zslw11  
 Engr: zslw11

GC

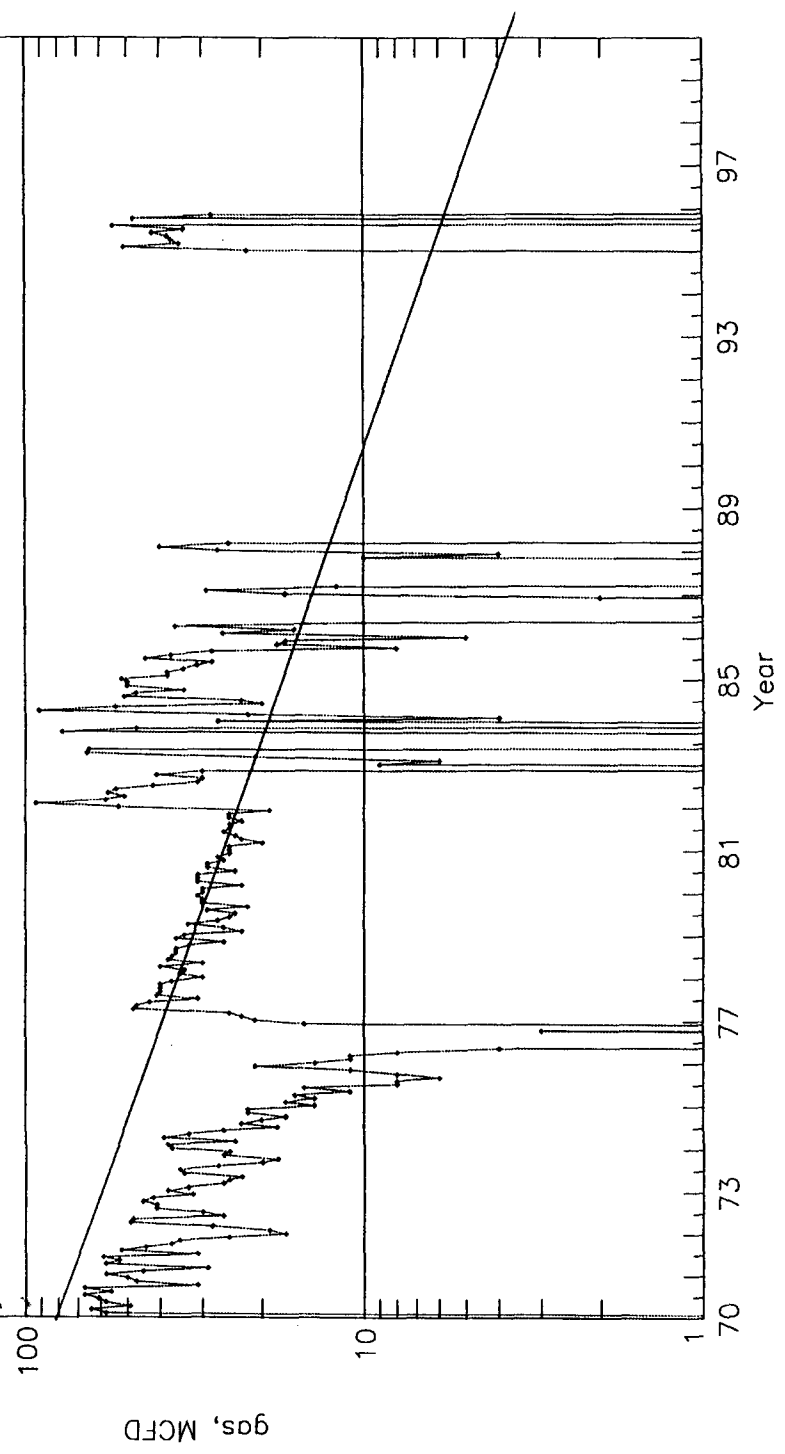
BRUINGTON POOL UNIT 1

Operator- HARVEY FRANCIS L

300450778400 604PCCF W 282910

APC\_WI - 0.0000000

CumG_70 -	246044
CumO_70 -	0
CumGAS -	448222
CumOIL -	0



Last Op. Forecast by None in None

For: zslw11  
 Engr: zslw11

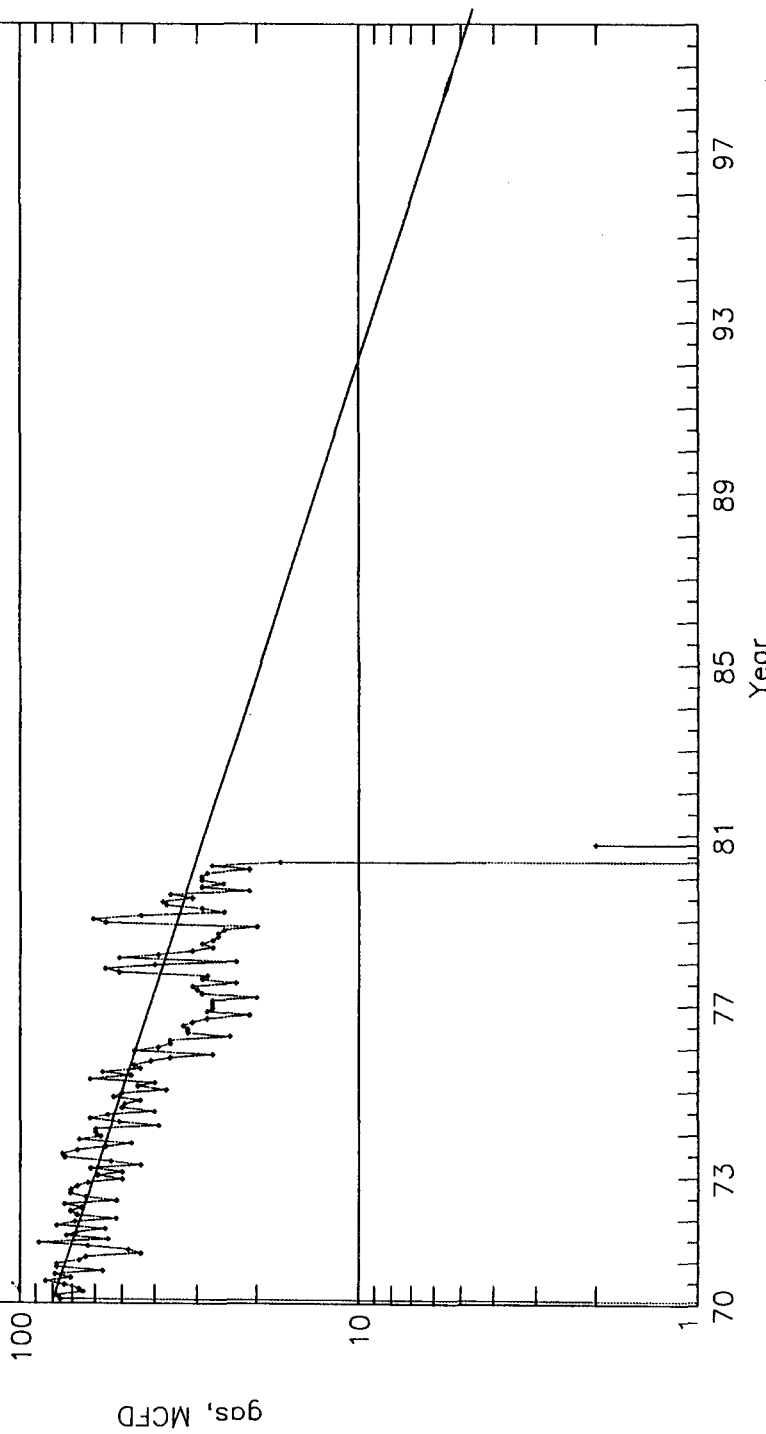
W POLLACK#1

Operator- AMOCO PROD

300450777800 604PCCF 00000000

APC\_WI - 1.00000000

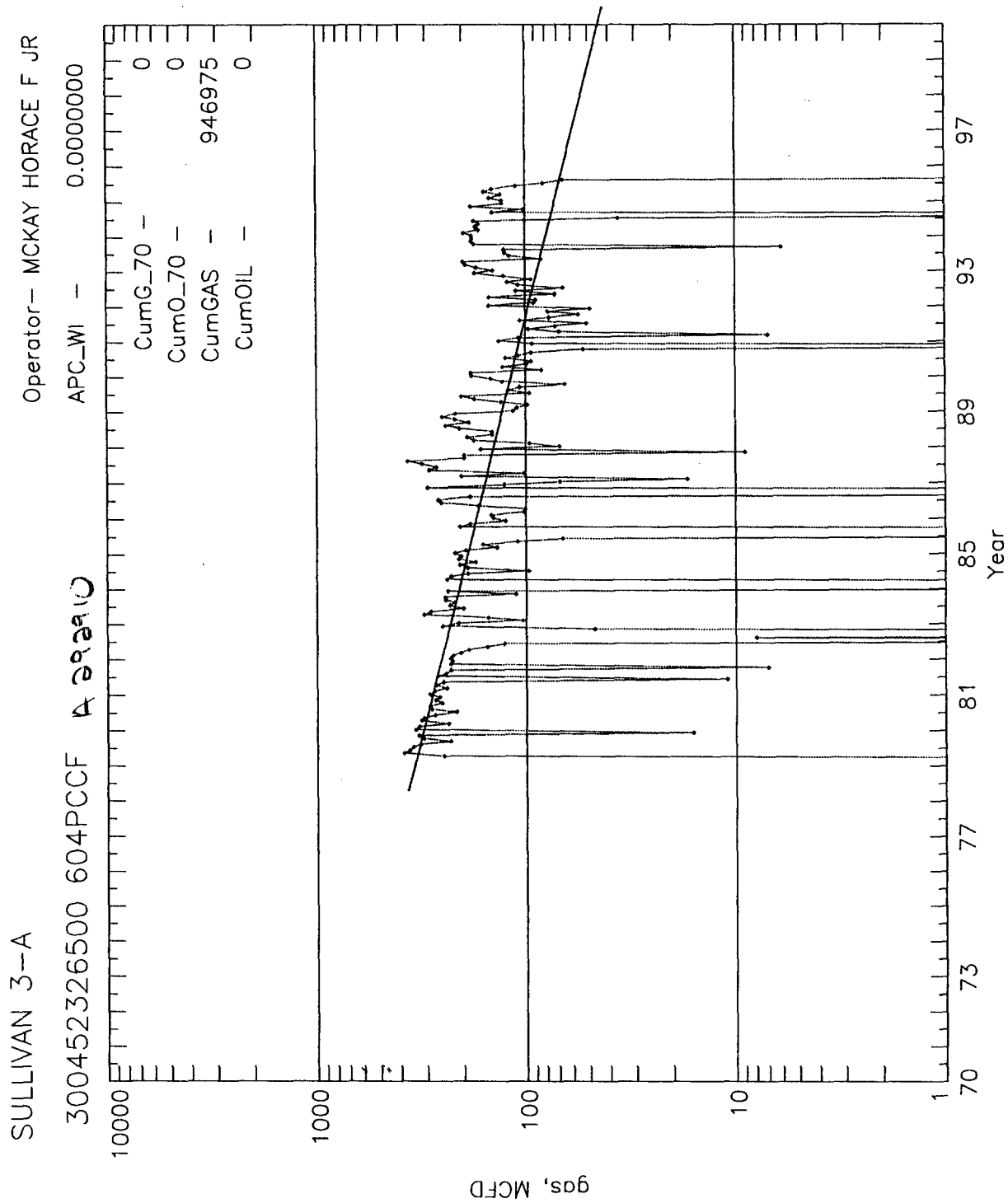
CumG_70 -	393147
CumO_70 -	0
CumGAS -	573530
CumOIL -	0



Last Op. Forecast by None in None

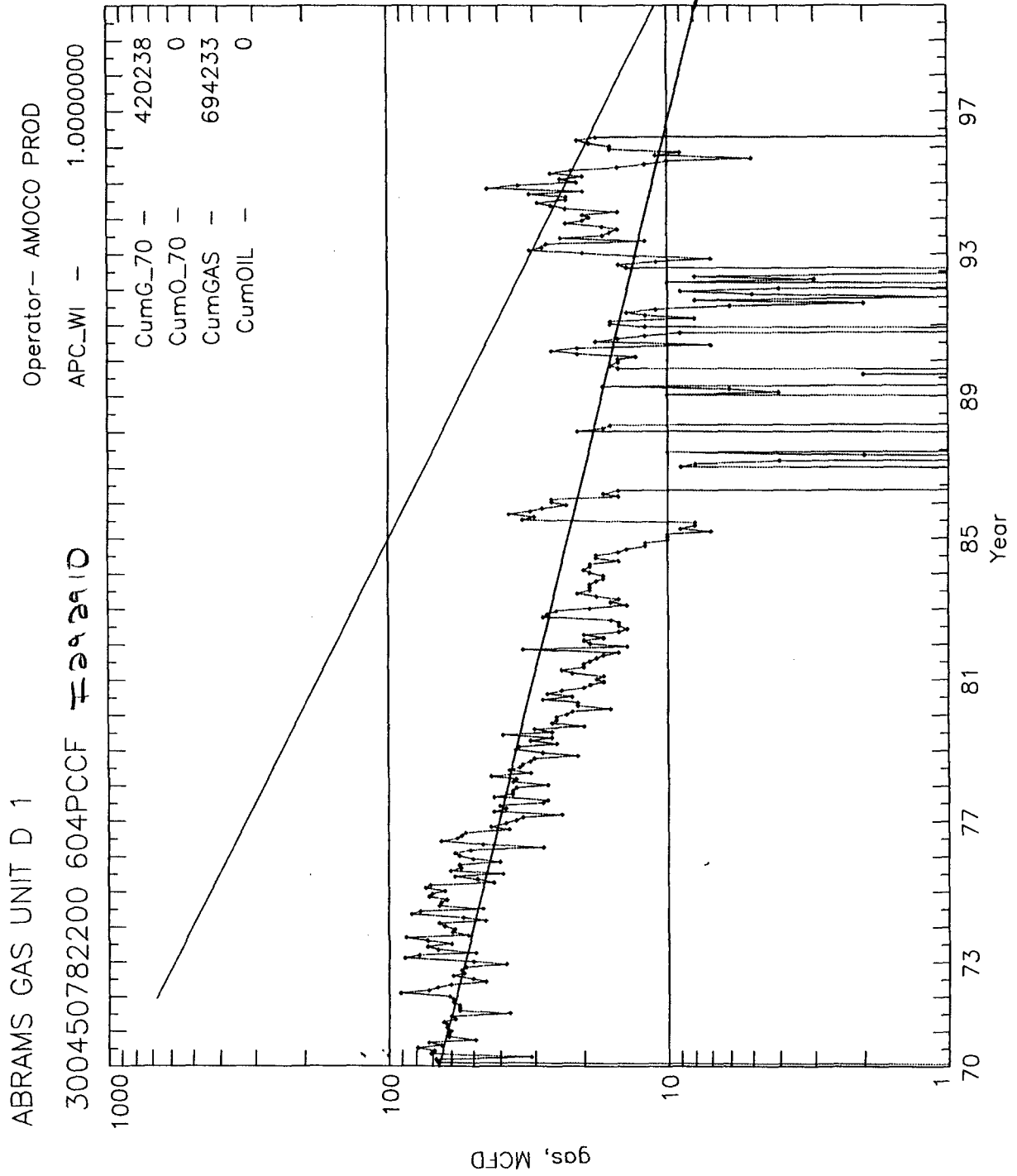


For: zslw11  
Engr: zslw11



Last Op. Forecast by None in None

For: zslw11  
Engr: zslw11



For: zslw11  
Engr: zslw11

ZACHRY 8

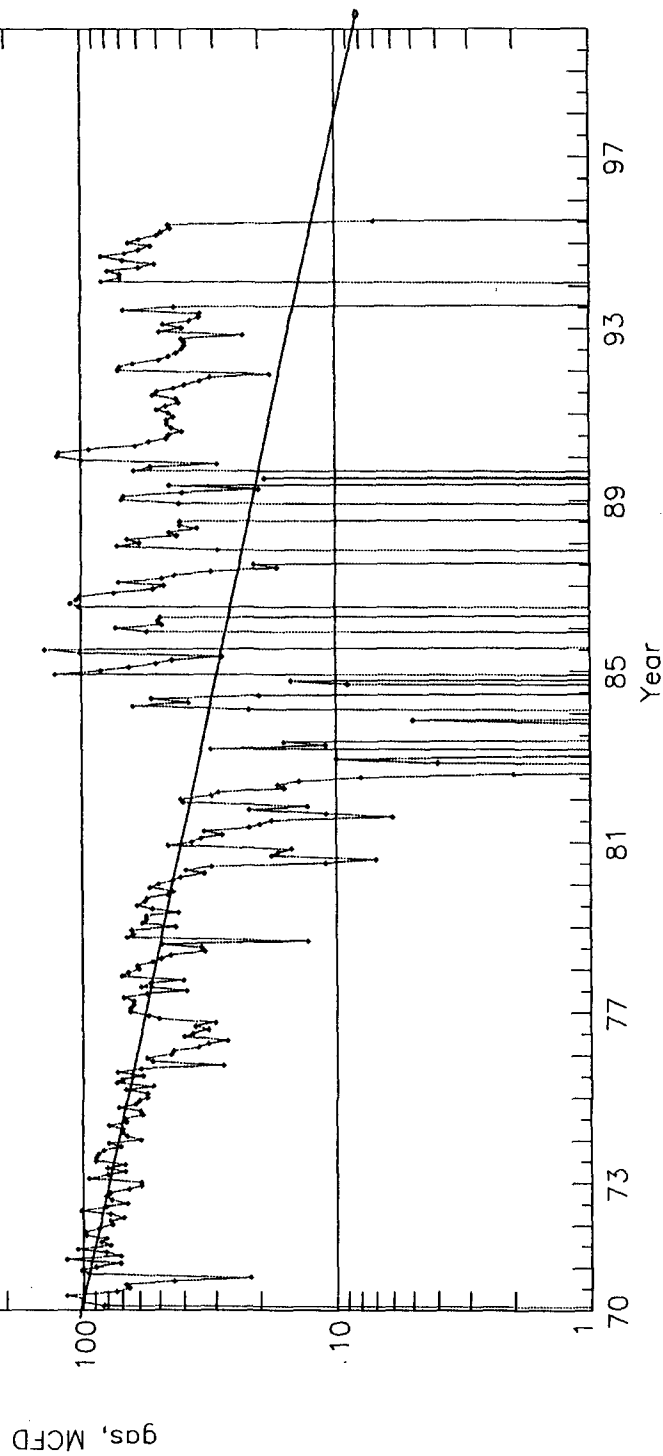
Operator- MERIDIAN OIL INCORPORATED

300450772600 604PCCF A 332910

APC\_WI - 0.0000000

CumG_70 -	517310
CumO_70 -	0
CumGAS -	967084
CumOIL -	0

+3 FT coal  
w/GS



Last Op. Forecast by None in None

For: zslw11  
 Engr: zslw11

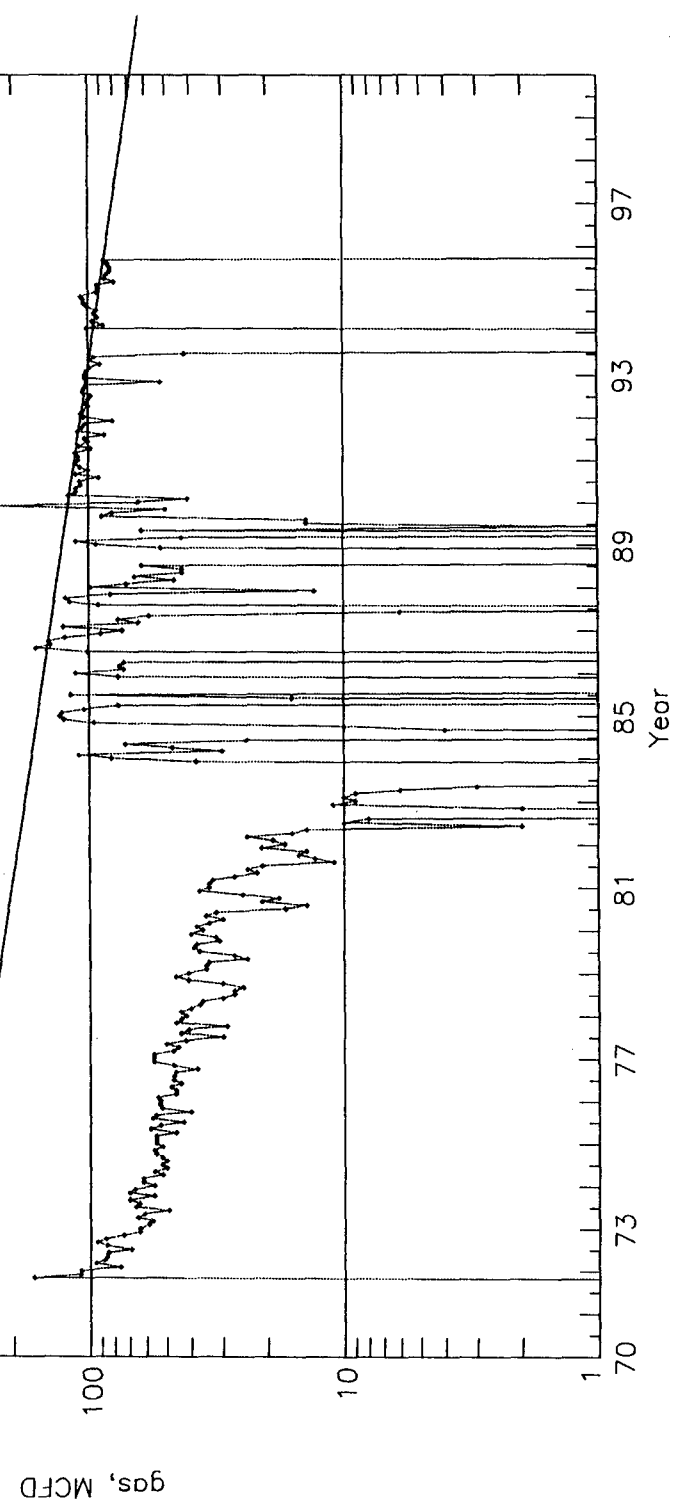
ZACHRY 12

Operator- MERIDIAN OIL INCORPORATED

300452080100 604PCCF F 332910

APC\_WI - 0.0000000

CumG_70	-	0
CumO_70	-	0
CumGAS	-	508461
CumOIL	-	0



Last Op. Forecast by None in None

For: zslw11

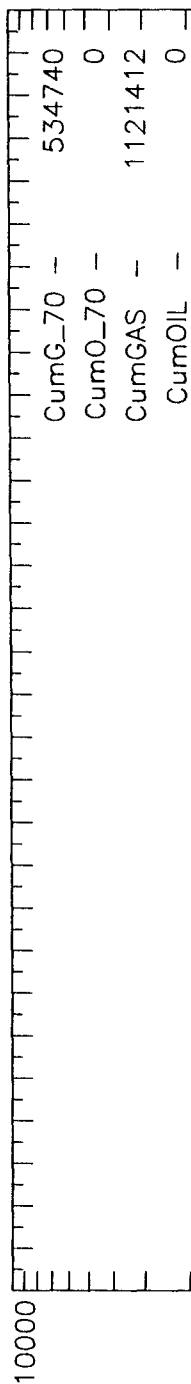
Engr: zslw11

ZACHERY 10

Operator-- MERIDIAN OIL INCORPORATED

300450772700 604PCCF D 342910

APC\_WI -- 0.0000000



gos, MCFD

Year

Last Op. Forecast by None in None

**OFFSET OPERATORS**  
**Pollock Com E #1R Well**

Burlington Resources Oil and Gas Co.  
P.O. Box 4289  
Farmington, NM 87499

S G Interest I Ltd.  
811 Dallas Suite 1505  
Houston, Texas 77002