

MARTIN YATES, III  
1912 - 1985  
FRANK W. YATES  
1936 - 1986



105 SOUTH FOURTH STREET  
ARTESIA, NEW MEXICO 88210  
TELEPHONE (505) 748-1471

DHC RELEASE 1-17-94  
S. P. YATES  
CHAIRMAN OF THE BOARD  
JOHN A. YATES  
PRESIDENT  
RECEIVED  
PEYTON YATES  
EXECUTIVE VICE PRESIDENT  
'90 DE 29  
RANDY G. PATTERSON  
SECRETARY  
DENNIS G. KINSEY  
TREASURER

December 28, 1993

State of New Mexico  
OIL CONSERVATION DIVISION  
P. O. Box 2088  
Santa Fe, NM 87501  
ATTN: Mr. David Catanach

Dear Mr. Catanach,

Enclosed are the necessary documents for obtaining approval for the downhole commingling of the Long Arroyo OD State #1 located in Unit I of Section 14, Township 14 South, Range 27 East.

Should you have any questions, please feel free to contact me at (505) 748-4182. Thank you.

Sincerely,

Brian Collins  
Engineer

BC/th

Enclosures

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December 28, 1993

State of New Mexico  
OIL CONSERVATION DIVISION  
Drawer DD  
Artesia, NM 88210

Gentlemen,

Enclosed are the necessary documents for obtaining approval for the downhole commingling of the Long Arroyo OD State #1 located in Unit I of Section 14, Township 14 South, Range 27 East.

Should you have any questions, please feel free to contact me at (505) 748-4182. Thank you.

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TREASURER

December 28, 1993

Commissioner of Public Lands  
Oil/Gas and Minerals Division  
P. O. Box 1148  
Santa Fe, NM 87504-1148

Attn: Mr. Pete Martinez

Dear Mr. Martinez,

Enclosed are the necessary documents and the \$30.00 filing fee for obtaining approval for the downhole commingling of the Long Arroyo OD State #1 located in Unit I of Section 14, Township 14 South, Range 27 East.

Should you have any questions, please feel free to contact me at (505) 748-4182. Thank you.

Sincerely,

Brian Collins  
Engineer

BC/th

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DENNIS G. KINSEY  
TREASURER

December 28, 1993

Toreador Royalty Corporation  
400 N. St. Paul, #730  
Dallas, TX 75201-0730

Gentlemen:

Enclosed please find a copy of the application for commingling the Long Arroyo OD State #1 located in Unit I of Section 14-T14S-R27E. This copy of the application to commingle fulfills our requirement to notify offset operators per NMOCD Rule 303 D (10).

Should you have any questions, please feel free to contact me at (505) 748-4182.

Sincerely,

Brian Collins  
Engineer

BC/th

Enclosures

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DENNIS G. KINSEY  
TREASURER

December 28, 1993

Phillips Petroleum Company  
4001 Penbrook  
Odessa, TX 79762

Gentlemen:

Enclosed please find a copy of the application for commingling the Long Arroyo OD State #1 located in Unit I of Section 14-T14S-R27E. This copy of the application to commingle fulfills our requirement to notify offset operators per NMOCD Rule 303 D (10).

Should you have any questions, please feel free to contact me at (505) 748-4182.

Sincerely,

A handwritten signature in cursive script that reads 'Brian Collins'.

Brian Collins  
Engineer

BC/th

Enclosures

**Application for Downhole Commingling**  
**Long Arroyo OD State #1**  
**Unit I Sec. 14-T14S-R27E**  
**Chaves County, New Mexico**

Reason for Application: Yates Petroleum Corporation respectfully requests approval to commingle the Morrow from 7853'-7858' with the Strawn from 7587'-7744'. Our intention is to maximize gas recovery from the Strawn and prevent mineral resource waste.

1> Name and Address of the Operator:

Yates Petroleum Corporation  
105 South Fourth Street  
Artesia, NM 88210  
ATTN: Brian Collins

2> Lease Name, Well Number, Well Location, Name of the Pools to be Commingled:

Long Arroyo OD State #1  
Unit I Sec. 14-T14S-R27E  
2310'FSL & 660'FEL  
Pools: Springer Basin Atoka Morrow  
Undesignated Strawn

3> A plat of the area showing the acreage dedicated to the well and the ownership of all offsetting leases.

See Attachment A (map).

4> A current (within 30 days) 24-hour productivity test on Division Form C-116 showing the amount of oil, gas, and water produced from each zone.

See attached production data. (Attachment B)  
Morrow: Typically 50 MCFPD.  
Strawn: Approximately 200 MCFPD.

5> A production decline curve for both zones showing that for a period of at least one year a steady rate of decline has been established for each zone which will permit a reasonable allocation of the commingled production to each zone for statistical purposes. (This requirement may be dispensed within the case of a newly completed or recently completed well which has little or no production history. However, a complete description of treating testing, etc., of each zone, and a prognostication of future production from each zone shall be submitted.)

See attached production data (Attachment B) and workover summary (Attachment C).  
See also the attached reserve estimates derived from the P/Z versus cumulative production technique. (Attachment E).

6> Estimated bottom-hole pressure for each artificially lifted zone. A current (within 30 days) measured bottomhole pressure for each zone capable of flowing.

7> A description of the fluid characteristics of each zone showing that the fluids will not be incompatible in the well-bore.

8> A computation showing that the value of the commingled production will not be less than the sum of the values of the individual streams.

9> A formula for the allocation of production to each of the commingled zones and a description of the factors or data used in determining such formula.

Strawn: Gas  $\frac{22 \text{ MMCF}}{241 \text{ MMCF}} = 9.13\%$  say 9%  
Oil = 9%

The offset operators for this area were notified of the proposed commingling of the Long Arroyo OD State #1.

[illegible]



ENG502

INTERNAL PRODUCTION REPORT

PRODUCTION DATE: November, 1993

PAGE 1

8:07:58 12/02/93

WELL: 36900 001 S1 GAS LONG ARROYO OO STATE #1  
FIELD: 862 SPRINGER BASIN  
LOCATION:  
PUMPER:

OPENING STOCK: 15.89  
CLOSING STOCK: 15.89

| DAY | TP | CP | CHOK | METER | URF | STATIC | DIFF | WATER | OIL | GAS | PULLED | SOLD | REMARKS |
|-----|----|----|------|-------|-----|--------|------|-------|-----|-----|--------|------|---------|
|-----|----|----|------|-------|-----|--------|------|-------|-----|-----|--------|------|---------|

|    |       |   |       |       |       |       |      |     |     |     |  |  |  |
|----|-------|---|-------|-------|-------|-------|------|-----|-----|-----|--|--|--|
| 01 | 1720/ | 0 | 00/00 |       |       |       |      | .00 | .00 | 0   |  |  |  |
| 02 | 600/  | 0 | 12/64 | 2.000 | .500  | 540.0 | 4.0  | .00 | .00 | 530 |  |  |  |
| 03 | 600/  | 0 | 07/64 | 2.000 | .500  | 540.0 | 25.0 | .00 | .00 | 240 |  |  |  |
| 04 | 380/  | 0 | 12/64 | 2.000 | .500  | 520.0 | 4.0  | .00 | .00 | 76  |  |  |  |
| 05 | 500/  | 0 | 12/64 | 2.000 | 1.000 | 500.0 | 2.0  | .00 | .00 | 207 |  |  |  |
| 06 | 520/  | 0 | 12/64 | 2.000 | 1.000 | 520.0 | 1.0  | .00 | .00 | 149 |  |  |  |
| 07 | 850/  | 0 | 12/64 | 2.000 | 1.000 | 560.0 | 1.0  | .00 | .00 | 37  |  |  |  |
| 08 | 1150/ | 0 | 12/64 | 2.000 | 1.500 |       |      | .00 | .00 | 0   |  |  |  |
| 09 | 510/  | 0 | 12/64 | 2.000 | 1.000 | 560.0 | 2.0  | .00 | .00 | 219 |  |  |  |
| 10 | 620/  | 0 | 12/64 | 2.000 | 1.000 | 620.0 | 2.0  | .00 | .00 | 172 |  |  |  |
| 11 | 580/  | 0 | 12/64 | 2.000 | 1.000 | 580.0 | 1.0  | .00 | .00 | 157 |  |  |  |
| 12 | 500/  | 0 | 12/64 | 2.000 | 1.000 | 560.0 |      | .00 | .00 | 0   |  |  |  |
| 13 | 580/  | 0 | 12/64 | 2.000 | .500  | 580.0 | 1.0  | .00 | .00 | 25  |  |  |  |
| 14 | 0/    | 0 | 00/00 |       |       |       |      | .00 | .00 | 0   |  |  |  |
| 15 | 600/  | 0 | 12/64 | 2.000 | 1.500 | 600.0 | 3.0  | .00 | .00 | 277 |  |  |  |
| 16 | 640/  | 0 | 12/64 | 2.000 | 1.000 | 640.0 | 1.0  | .00 | .00 | 165 |  |  |  |
| 17 | 540/  | 0 | 12/64 | 2.000 | 1.500 | 540.0 |      | .00 | .00 | 0   |  |  |  |
| 18 | 550/  | 0 | 12/64 | 2.000 | 1.500 | 550.0 | 1.0  | .00 | .00 | 37  |  |  |  |
| 19 | 540/  | 0 | 12/64 | 2.000 | 1.500 | 540.0 | 1.0  | .00 | .00 | 152 |  |  |  |
| 20 | 540/  | 0 | 12/64 | 2.000 | 1.500 | 540.0 |      | .00 | .00 | 0   |  |  |  |
| 21 | 520/  | 0 | 12/64 | 2.000 | 1.500 | 520.0 | 1.0  | .00 | .00 | 149 |  |  |  |
| 22 | 0/    | 0 | 00/00 |       |       |       |      | .00 | .00 | 0   |  |  |  |
| 23 | 550/  | 0 | 12/64 | 2.000 | 1.000 | 540.0 | 1.0  | .00 | .00 | 152 |  |  |  |
| 24 | 550/  | 0 | 12/64 | 2.000 | .500  | 540.0 |      | .00 | .00 | 0   |  |  |  |
| 25 | 500/  | 0 | 12/64 | 2.000 | 1.000 | 520.0 |      | .00 | .00 | 0   |  |  |  |
| 26 | 500/  | 0 | 12/64 | 2.000 | 1.000 | 550.0 | 4.0  | .00 | .00 | 515 |  |  |  |
| 27 | 550/  | 0 | 12/64 | 2.000 | 1.000 | 580.0 |      | .00 | .00 | 0   |  |  |  |
| 28 | 540/  | 0 | 12/64 | 2.000 | 1.000 | 540.0 |      | .00 | .00 | 0   |  |  |  |
| 29 | 0/    | 0 | 00/00 |       |       |       |      | .00 | .00 | 0   |  |  |  |
| 30 | 0/    | 0 | 00/00 |       |       |       |      | .00 | .00 | 0   |  |  |  |

TOTALS: .00

3259

.00

PRODUCED 17 DAYS

ATTACHMENT B  
Page 1

STRAWN

ENGR502

INTERNAL PRODUCTION REPORT

PRODUCTION DATE...October, 1993

PAGE

1

11:23:34 12/02/93

WELL..... 36900 001 S1 GAS  
FIELD..... 862 SPRINGER BASIN  
LOCATION...  
PUMPER.....

LONG ARROYO OD STATE #1

YFC

OPENING STOCK... 15.89

CLOSING STOCK... 15.89

ATTACHMENT B  
Page 2

| DAY | TP   | CF | CHOK  | METER | ORF  | STATIC | DIFF | WATER | OIL | GAS | WATER | PULLED | SOLD | REMARKS |
|-----|------|----|-------|-------|------|--------|------|-------|-----|-----|-------|--------|------|---------|
| 01  | 500/ | 0  | 10/64 | 2.000 | .500 | 500.0  | 2.0  | .00   | .00 | 49  |       |        |      |         |
| 02  | 500/ | 0  | 10/64 | 2.000 | .500 | 490.0  | 3.0  | .00   | .00 | 60  |       |        |      |         |
| 03  | 510/ | 0  | 10/64 | 2.000 | .500 | 510.0  | 2.0  | .00   | .00 | 50  |       |        |      |         |
| 04  | 520/ | 0  | 10/64 | 2.000 | .500 | 520.0  | 4.0  | .00   | .00 | 72  |       |        |      |         |
| 05  | 540/ | 0  | 10/64 | 2.000 | .500 | 540.0  | 3.0  | .00   | .00 | 70  |       |        |      |         |
| 06  | 540/ | 0  | 10/64 | 2.000 | .500 | 530.0  | 2.0  | .00   | .00 | 51  |       |        |      |         |
| 07  | 510/ | 0  | 10/64 | 2.000 | .500 | 500.0  | 5.0  | .00   | .00 | 79  |       |        |      |         |
| 08  | 490/ | 0  | 10/64 | 2.000 | .500 | 490.0  | 2.0  | .00   | .00 | 49  |       |        |      |         |
| 09  | 460/ | 0  | 10/64 | 2.000 | .500 | 460.0  | 2.0  | .00   | .00 | 47  |       |        |      |         |
| 10  | 460/ | 0  | 10/64 | 2.000 | .500 | 460.0  | 2.0  | .00   | .00 | 47  |       |        |      |         |
| 11  | 515/ | 0  | 10/64 | 2.000 | .500 | 515.0  | 2.0  | .00   | .00 | 50  |       |        |      |         |
| 12  | 520/ | 0  | 10/64 | 2.000 | .500 | 520.0  | 2.0  | .00   | .00 | 50  |       |        |      |         |
| 13  | 500/ | 0  | 10/64 | 2.000 | .500 | 500.0  | 2.0  | .00   | .00 | 49  |       |        |      |         |
| 14  | 500/ | 0  | 10/64 | 2.000 | .500 | 500.0  | 2.0  | .00   | .00 | 49  |       |        |      |         |
| 15  | 880/ | 0  | 10/64 | 2.000 | .500 | 500.0  | 2.0  | .00   | .00 | 49  |       |        |      |         |
| 16  | 640/ | 0  | 07/64 | 2.000 | .500 | 500.0  | 30.0 | .00   | .00 | 193 |       |        |      |         |
| 17  | 580/ | 0  | 07/64 | 2.000 | .500 | 510.0  | 21.0 | .00   | .00 | 162 |       |        |      |         |
| 18  | 580/ | 0  | 07/64 | 2.000 | .500 | 510.0  | 21.0 | .00   | .00 | 162 |       |        |      |         |
| 19  | 530/ | 0  | 07/64 | 2.000 | .500 | 530.0  | 17.0 | .00   | .00 | 149 |       |        |      |         |
| 20  | 500/ | 0  | 07/64 | 2.000 | .500 | 500.0  | 20.0 | .00   | .00 | 158 |       |        |      |         |
| 21  | 500/ | 0  | 07/64 | 2.000 | .500 | 500.0  | 14.0 | .00   | .00 | 132 |       |        |      |         |
| 22  | 510/ | 0  | 07/64 | 2.000 | .500 | 510.0  | 8.0  | .00   | .00 | 100 |       |        |      |         |
| 23  | 530/ | 0  | 07/64 | 2.000 | .500 | 530.0  | 8.0  | .00   | .00 | 102 |       |        |      |         |
| 24  | 600/ | 0  | 07/64 | 2.000 | .500 | 830.0  |      | .00   | .00 | 0   |       |        |      |         |
| 25  | 520/ | 0  | 07/64 | 2.000 | .500 | 520.0  |      | .00   | .00 | 0   |       |        |      |         |
| 26  | 520/ | 0  | 07/64 | 2.000 | .500 | 520.0  |      | .00   | .00 | 0   |       |        |      |         |
| 27  | 0/   | 0  | 00/00 |       |      |        |      | .00   | .00 | 0   |       |        |      |         |
| 28  | 0/   | 0  | 00/00 |       |      |        |      | .00   | .00 | 0   |       |        |      |         |
| 29  | 0/   | 0  | 00/00 |       |      |        |      | .00   | .00 | 0   |       |        |      |         |
| 30  | 0/   | 0  | 00/00 |       |      |        |      | .00   | .00 | 0   |       |        |      |         |
| 31  | 0/   | 0  | 00/00 |       |      |        |      | .00   | .00 | 0   |       |        |      |         |

MORROW

TOTALS.....

.00

.00

1979

PRODUCED 23 DAYS

ENGR502

INTERNAL PRODUCTION REPORT

PRODUCTION DATE...September, 1993

PAGE 1  
11:23:39 12/02/93

WELL.....36900 001 S1 GAS LONG ARROYO OD STATE #1 YPC OPENING STOCK.. 15.89  
FIELD..... 862 SPRINGER BASIN CLOSING STOCK.. 15.89  
LOCATION..  
PUMPER....

| DAY | TP   | CP | CHOK  | METER | DRF  | STATIC | DIFF | WATER | OIL | GAS | WATER | PULLED | SOLD | REMARKS |
|-----|------|----|-------|-------|------|--------|------|-------|-----|-----|-------|--------|------|---------|
| 01  | 500/ | 0  | 10/64 | 2.000 | .500 | 500.0  | 3.0  | .00   | .00 | 61  |       |        |      |         |
| 02  | 500/ | 0  | 10/64 | 2.000 | .500 | 500.0  | 2.0  | .00   | .00 | 49  |       |        |      |         |
| 03  | 500/ | 0  | 10/64 | 2.000 | .500 | 500.0  | 50.0 | .00   | .00 | 249 |       |        |      |         |
| 04  | 530/ | 0  | 10/64 | 2.000 | .500 | 530.0  | 32.0 | .00   | .00 | 205 |       |        |      |         |
| 05  | 520/ | 0  | 10/64 | 2.000 | .500 | 520.0  | 23.0 | .00   | .00 | 172 |       |        |      |         |
| 06  | 520/ | 0  | 10/64 | 2.000 | .500 | 520.0  | 23.0 | .00   | .00 | 172 |       |        |      |         |
| 07  | 540/ | 0  | 10/64 | 2.000 | .500 | 540.0  | 12.0 | .00   | .00 | 127 |       |        |      |         |
| 08  | 520/ | 0  | 10/64 | 2.000 | .500 | 520.0  | 13.0 | .00   | .00 | 129 |       |        |      |         |
| 09  | 530/ | 0  | 10/64 | 2.000 | .500 | 525.0  | 10.0 | .00   | .00 | 114 |       |        |      |         |
| 10  | 530/ | 0  | 10/64 | 2.000 | .500 | 520.0  | 10.0 | .00   | .00 | 116 |       |        |      |         |
| 11  | 550/ | 0  | 10/64 | 2.000 | .500 | 550.0  | 7.0  | .00   | .00 | 98  |       |        |      |         |
| 12  | 550/ | 0  | 10/64 | 2.000 | .500 | 550.0  | 10.0 | .00   | .00 | 196 |       |        |      |         |
| 13  | 54/  | 0  | 10/64 | 2.000 | .500 | 54.0   | 5.0  | .00   | .00 | 82  |       |        |      |         |
| 14  | 570/ | 0  | 10/64 | 2.000 | .500 | 57.0   | 3.0  | .00   | .00 | 65  |       |        |      |         |
| 15  | 560/ | 0  | 10/64 | 2.000 | .500 | 560.0  | 5.0  | .00   | .00 | 60  |       |        |      |         |
| 16  | 580/ | 0  | 10/64 | 2.000 | .500 | 580.0  | 6.0  | .00   | .00 | 93  |       |        |      |         |
| 17  | 570/ | 0  | 10/64 | 2.000 | .500 | 70.0   | 5.0  | .00   | .00 | 84  |       |        |      |         |
| 18  | 580/ | 0  | 10/64 | 2.000 | .500 | 580.0  | 4.0  | .00   | .00 | 76  |       |        |      |         |
| 19  | 570/ | 0  | 10/64 | 2.000 | .500 | 570.0  | 3.0  | .00   | .00 | 65  |       |        |      |         |
| 20  | 550/ | 0  | 10/64 | 2.000 | .500 | 550.0  | 2.0  | .00   | .00 | 52  |       |        |      |         |
| 21  | 550/ | 0  | 10/64 | 2.000 | .500 | 550.0  | 2.0  | .00   | .00 | 52  |       |        |      |         |
| 22  | 525/ | 0  | 10/64 | 2.000 | .500 | 525.0  | 3.0  | .00   | .00 | 63  |       |        |      |         |
| 23  | 520/ | 0  | 10/64 | 2.000 | .500 | 520.0  | 2.0  | .00   | .00 | 50  |       |        |      |         |
| 24  | 565/ | 0  | 10/64 | 2.000 | .500 | 565.0  | 2.0  | .00   | .00 | 53  |       |        |      |         |
| 25  | 560/ | 0  | 10/64 | 2.000 | .500 | 560.0  | 3.0  | .00   | .00 | 64  |       |        |      |         |
| 26  | 540/ | 0  | 10/64 | 2.000 | .500 | 540.0  | 3.0  | .00   | .00 | 63  |       |        |      |         |
| 27  | 540/ | 0  | 10/64 | 2.000 | .500 | 530.0  | 3.0  | .00   | .00 | 61  |       |        |      |         |
| 28  | 500/ | 0  | 10/64 | 2.000 | .500 | 500.0  | 2.0  | .00   | .00 | 49  |       |        |      |         |
| 29  | 500/ | 0  | 10/64 | 2.000 | .500 | 500.0  | 3.0  | .00   | .00 | 61  |       |        |      |         |
| 30  | 510/ | 0  | 10/64 | 2.000 | .500 | 510.0  | 4.0  | .00   | .00 | 71  |       |        |      |         |

TOTALS....

.00

.00

2852

PRODUCED 30 DAYS

Morrow

YATES PETROLEUM CORPORATION  
 CHRONOLOGICAL DRILLING REPORT  
 Long Arroyo "OD" State #1  
 Unit I  
 14-14S-27E  
 Chaves County, New Mexico

## RECOMPLETION

10-26-93 Tested anchors. Dig pit. Moved in and rigged up pulling unit. Set tank. Rigged up JSI. Set 1.81" check valve in packer at 7820'. Bled down tubing. Loaded with 2% KCL. Tested to 1000 psi, OK. Loaded annulus with 17 bbls. Tested to 500#, OK. Released on/off tool. Reversed tubing cap. Strip on BOP. TOH with tubing. TIH with packer and RBP. Set RBP at 7790'. Pulled up. Strip off BOP. Set packer at 7650'. Nippled up tree. Tested casing to 1000 psi. Swabbed tubing down to 7000'. Prep to perforate Lower Strawn. DC \$6240

10-27-93 <sup>25'</sup> WIH on wireline and perforated Strawn 7742', 43', 44', with 12 holes, with 1-11/16" Enerjet through tubing gun. Small blow, 15# with guns to surface. Bled off - no gas. Had 600' fluid in hole. Swabbed dry with 2' lazy flare. Rigged up treesaver and WCNA. Acidized with 1000 gals 7-1/2% Morrow acid with 1000 scf N2/bbl. Break at 4200#. Avg 3.6 BPM at 4000#. ISDP 3600#, 15 mins 3300#. Flowed to pit. Total load to recover 42 bbls. Opened with 3000# at 12:00 -

|      |         |          |                                 |
|------|---------|----------|---------------------------------|
| 1:00 | 275#    | - 16/64" | unloading water                 |
| 2:00 | 50#     |          | misting, died, started swabbing |
| 3:00 | 4 bbls  | 2 SR     | 5800' scat 1st run, dry 2nd     |
| 4:00 | 1-1/2   | 1 SR     | 5 mins after swab, 2' lazy flr  |
| 5:00 | 1/2 bbl | 1 SR     | 5 mins after swab, 2' lazy flr  |

Shut in. This AM - Overnight SIP 575#. Bled down and made swab run. Had 600' fluid in hole. Prep to move to next Strawn zone. DC \$8569; CC \$14,809

WATER ANALYSIS: 10-26-93

|              |            |             |           |
|--------------|------------|-------------|-----------|
| Spec Gravity | 1.090 @ 68 | Resistivity | .065 @ 75 |
| pH           | 2.1        | Sulfate     | 275       |
| Iron         | 500        |             |           |

10-28-93 Overnight SITP 575#. Bled down. Initial fluid level 6800' scattered. Recovered 2 bbls water, 2' flare. Nippled up BOP. Released packer. Washed balls off RBP. Released RBP. Moved tools. Set RBP at 7695'. Tested to 1500#. Nippled down BOP. Installed tree. Set packer at 7470'. Tested casing to 1000 psi. Swabbed tubing down to 7000'. Rigged up Schlumberger. Perforated Upper Strawn 7587', 88', 89', 90', 97', 98', 99', 7600', 01' (18 holes) with 1-11/16" through tubing Enerjet, 70 psi with guns to surface. Bled down. Burned gas. Made swab run. Recovered 1 bbl water. Put on 1/4" positive choke for 2 hours -

|      |               |
|------|---------------|
| 6:30 | 20#           |
| 7:30 | 20# - 50 MCFD |

Shut in. Overnight SI 1250#. Prep to acidize with 2000 gals acid. DC \$5027; CC \$19,836

10-29-93 Overnight SITP 1250#. Bled down. Made swab run. Recovered 1/2 bbl water. Rigged up Treesaver and WCNA. Acidized Strawn with 2000 gals 7-1/2% Morrow acid with 1000 scf N2/bbl. Break at 5600#. Avg 5 BPM at 4300#. ISDP 3200#, 15 mins 2500#. Flowed back to pit. Cleaned up 50# on 1/2" choke. Opened well. Made swab run. Fluid level 5200' scattered. Rec 3 bbls. On 2nd run - 1 bbl. Put on 1/4" positive choke at 2:00 PM -

|      |      |
|------|------|
| 3:00 | 110# |
| 4:00 | 110# |

Flowed well down. Made swab run. Tubing dry, left well open to pit on 1/4" positive choke. This AM - FTP 110# on 1/4" positive choke = 185 MCFD. Prep to run 72 hour BHP buildup. DC \$7264; CC \$27,100

## DRILLING REPORT - RECOMPLETION

Page 2

Yates Petroleum - Long Arroyo "OD" State #1 (Unit I) 14-14S-27E

\*\*\*\*\*Chaves Co., NM\*\*\*\*\*

10-30/11-1-93 FTP 110 psi on 1/4" positive choke = 185 MCFD. Flow until  
1:00. Run 72 hour BHPB. DC \$980; CC \$28,080

11-2-93 Pulled 72 hour bomb. Turn well back to production. DC  
\$1100; CC \$29,180

11-3-93 No report.

11-4-93 No report.

11-5-93 No report.

11-6-8-93 No report.

11-9-93 Flow testing on pipeline.

11-10-93 Flow testing on pipeline.

11-11-93 Flow testing on pipeline.

11-12-93 Flow testing on pipeline.

11-13-15-93 Flow testing on pipeline.

11-16-93 Flow testing on pipeline.

11-17-93 Flow testing on pipeline.

11-18-93 Flow testing on pipeline.

11-19-93 Flow testing on pipeline.

11-20-22-93 Flow testing on pipeline.

11-20-22-93 Flow testing on pipeline.

11-24-93 Flow testing on pipeline.

11-25-29-93 Flow testing on pipeline.

PRESSURE v TIME

PANSYSTEM V1.0 (C) EPS 1991.

File.....: Y125 GAS

County, State .....: CHAVES COUNTY, NEW MEXICO

Company .....: YATES PETROLEUM COMPANY

Test Dates .....: 10/05/93 - 10/08/93

Lease Name & Well No.....: LONG ARROYO '00' STATE #1

Test Type .....: BUILDUP

Field Name .....: MORROW

Gauge Type .....: AMERMOD

— Actual  
o o o COMPUTED

Model Verification of Homogenous Type Curve Match  
K = 0.81 md, skin = -2.3, P = 1309 psia

MORROW

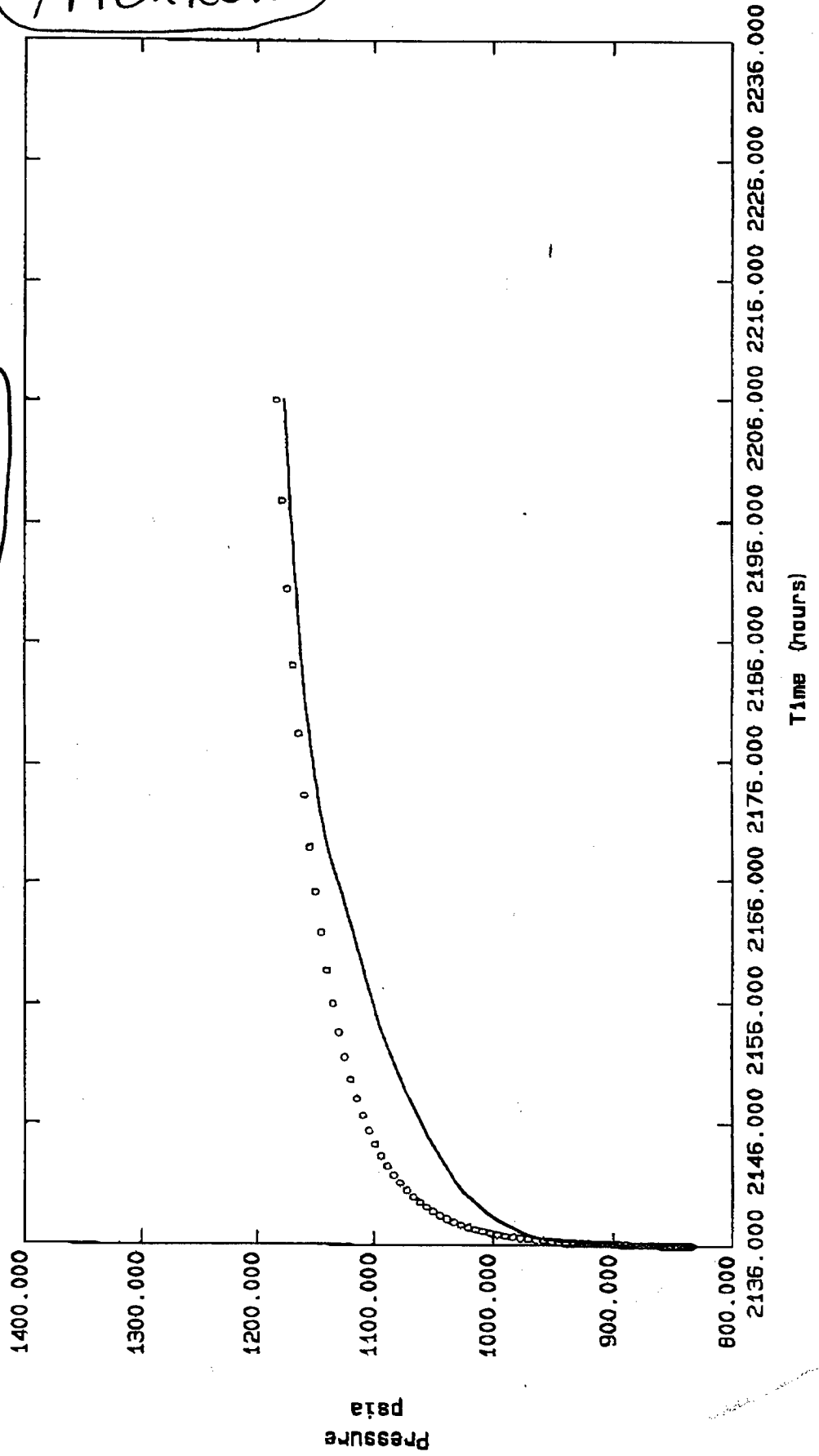


Figure 5

505 393 1737

JARREL SERV INC

Page 2 10/08/93 16:01

P04

TEST DATE: 10/05/93 TO 10/08/93  
TEST DEPTH: 7750 ft  
ELEMENT NO: 64658  
RANGE: 4000 psig  
CLOCK: 23363  
RANGE: 72 hrs  
OPERATOR: Newman

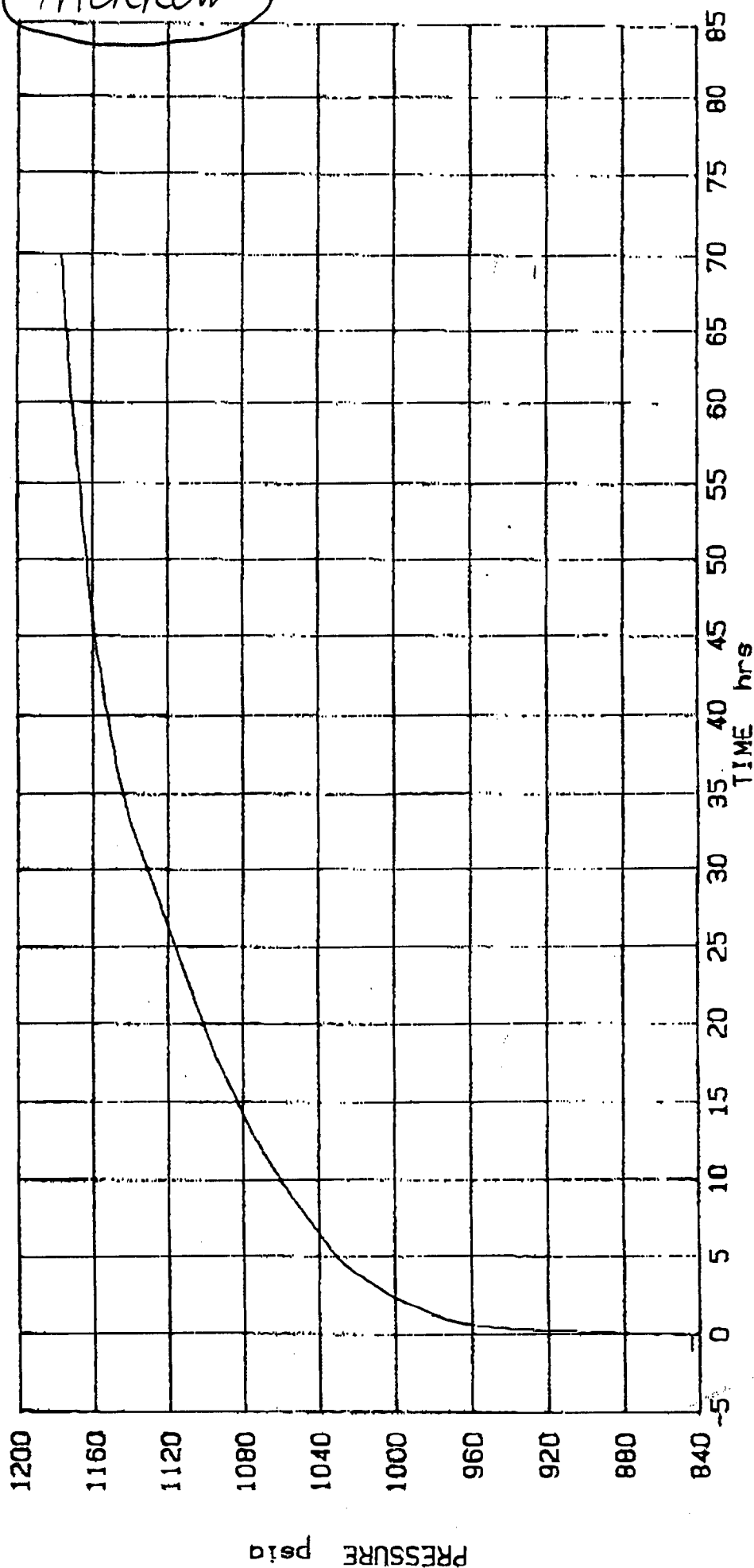
Yates Petroleum Corporation

Long Arroyo '00' State #1

- Morrow

JARREL SERVICES, INC.

Box 1230 Hobbs, N.M. 88240 (505)393-1736



**MORROW**

JARREL SERVICES, INC.  
Box 1230  
Hobbs, New Mexico 88240

## &lt;&lt;Static Gradient Survey&gt;&gt;

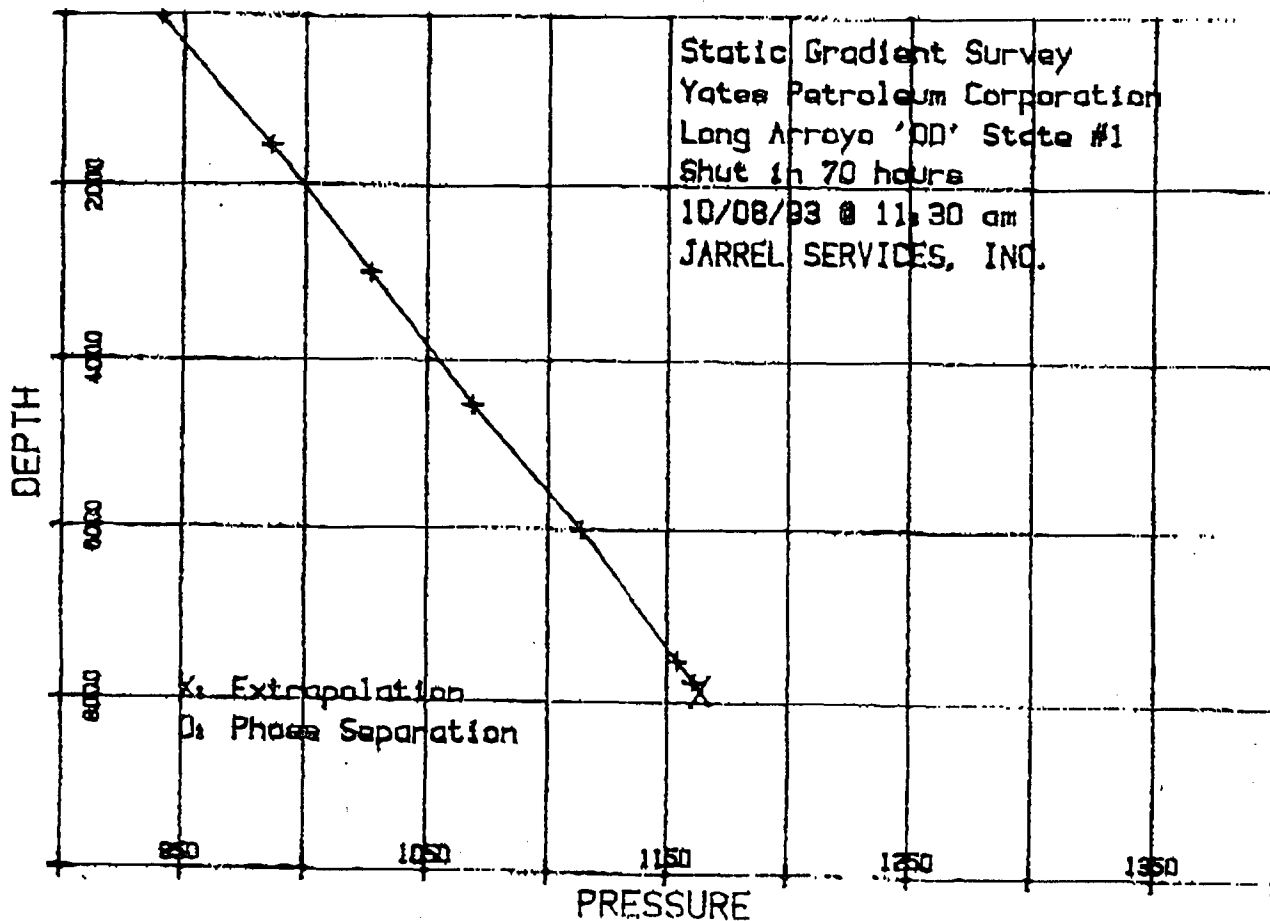
COMPANY: Yates Petroleum Corporation  
LEASE: Long Arroyo '00' State  
FIELD:  
COUNTY: Chaves  
STATUS: Shut in 70 hours  
PERFORATIONS FROM: 7853 ft  
DEPTH: 7750 ft

Date: 10/08/93 @ 11:30 am  
CONTACT: Paul Haynes  
WELL: #1  
ZONE: Morrow  
STATE: New Mexico  
OPERATOR: Newman  
TD: 7858 ft  
TEMPERATURE: 147°F

## TABULAR DATA

| DEPTH<br>(ft) | PRESSURE<br>(psi) | GRADIENT<br>(psi/ft) | EXPLANATIONS       |
|---------------|-------------------|----------------------|--------------------|
| 0             | 941               |                      |                    |
| 1500          | 986               | 0.030                |                    |
| 3000          | 1027              | 0.027                |                    |
| 4500          | 1069              | 0.028                |                    |
| 6000          | 1118              | 0.030                |                    |
| 7500          | 1154              | 0.027                |                    |
| 7750          | 1161              | 0.028                |                    |
| 7856          | 1164              | 0.028                | <=Extrapolated BHP |

NOTE: Explanations are included to clarify calculated data points.





Strawn

PANSYSTEM V1.0 (C) EPS 1991.

## PRESSURE v TIME

File.....: Y734.GAS

County, State.....: CHAVES COUNTY, NEW MEXICO

Company.....: YATES PETROLEUM COMPANY

Test Dates.....: 12/03/93 - 12/10/93

Lease Name &amp; Well No.....: LONG ARROW '00' STATE #1

Test Type.....: BOULDER

Field Name.....: STRAWN

Gauge Type.....: AMERON

— Actual  
 o o o COMPUTED

Model Verification of Homogeneous Type Curve Match

K = 0.125 md, Skin = -1.5, P = 2032 psia

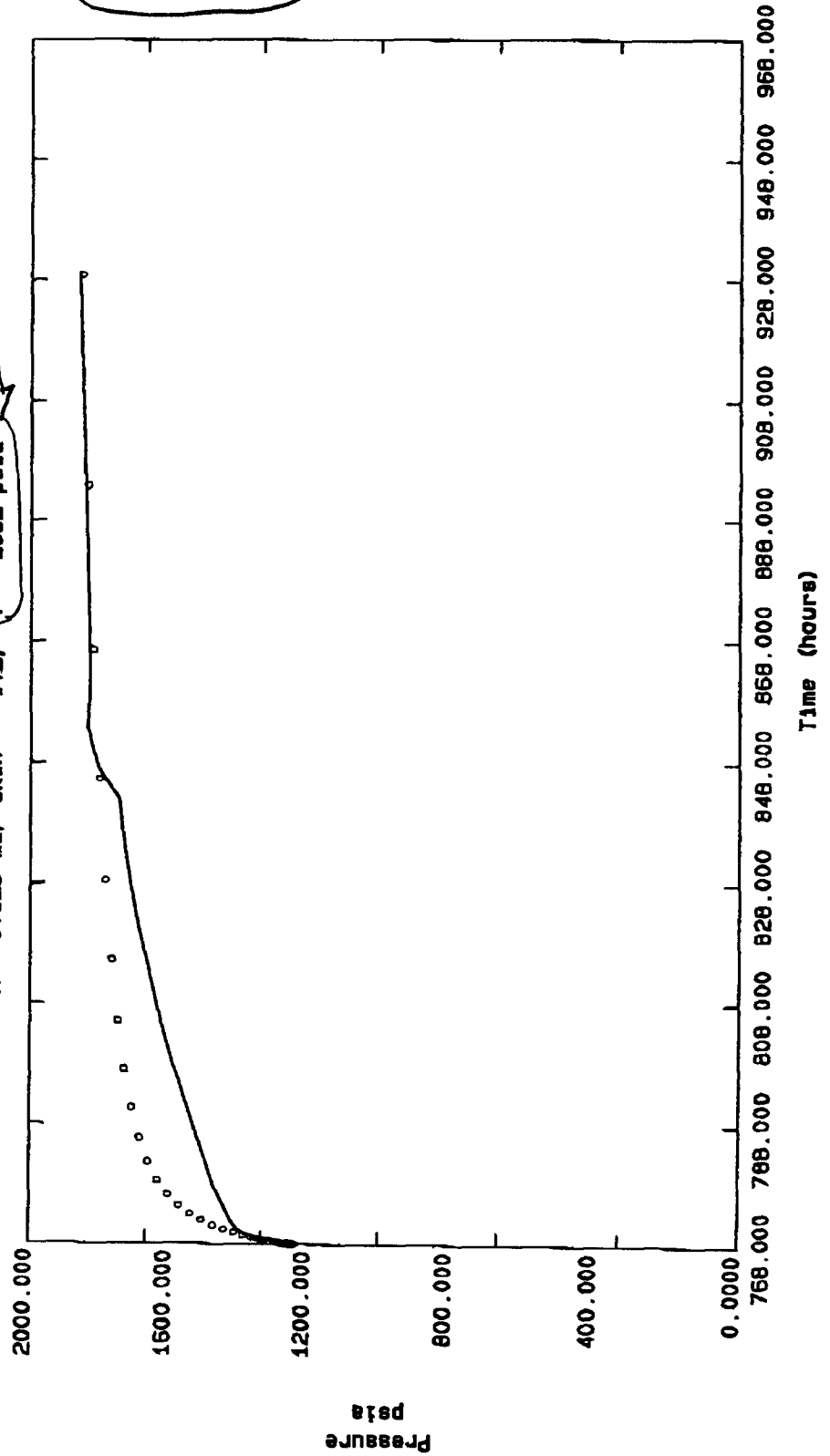
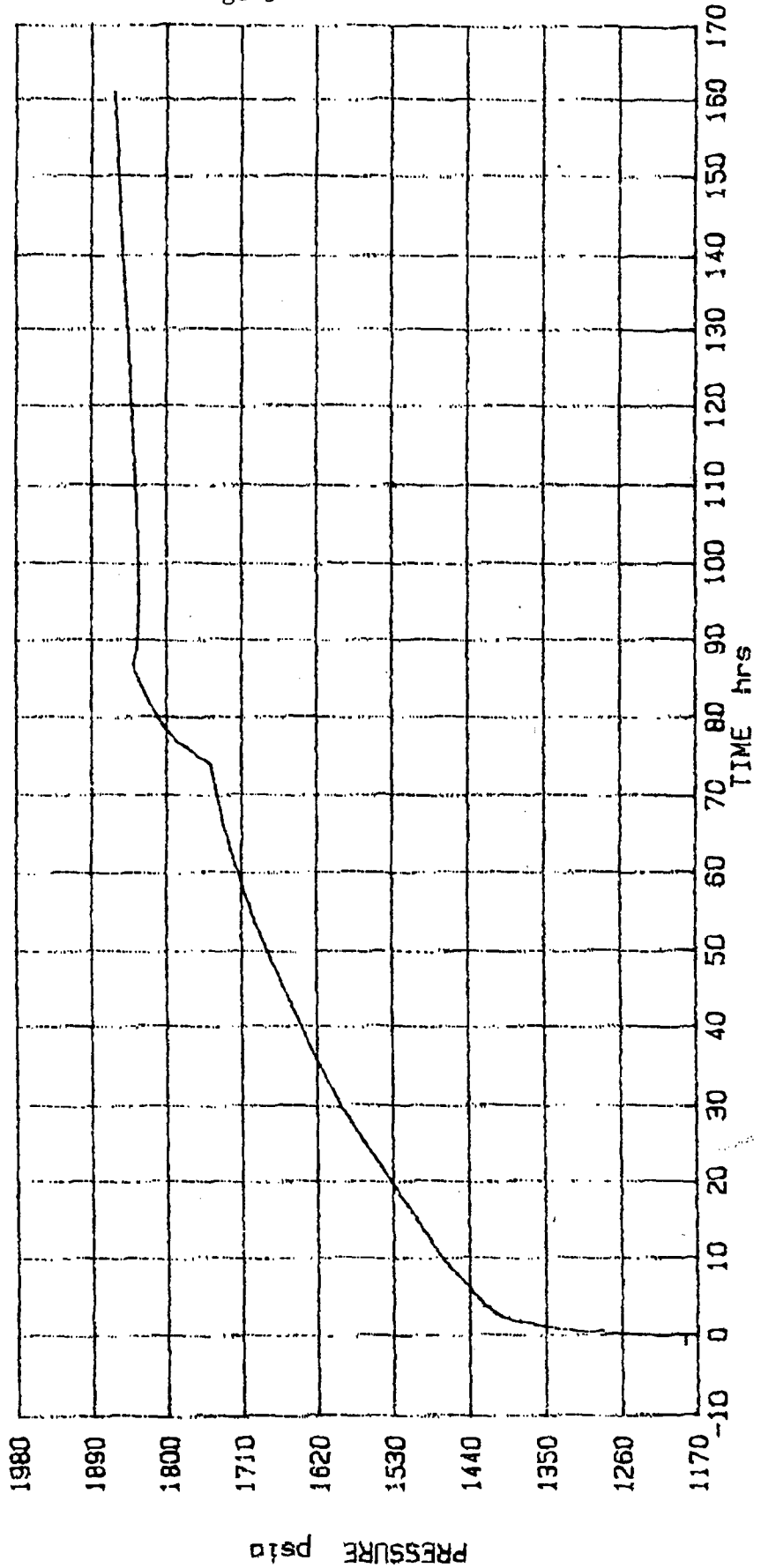


Figure 4

Strawn

|                                           |
|-------------------------------------------|
| Yates Petroleum Corporation               |
| Long Arroyo OD State #1                   |
| Buffalo Valley - Strawn                   |
| JARREL SERVICES, INC.                     |
| Box 1230 Hobbs, N.M. 88240 (505) 393-1736 |

TEST DATE: 12/03/93 TO 12/10/93  
 TEST DEPTH: 7300 ft  
 ELEMENT NO: 64658  
 RANGE: 5000 psig  
 CLOCK: 22561  
 RANGE: 180 hrs  
 OPERATOR: Newman



Attachment D

Page 6

JARREL SERVICES, INC.

Box 1230

Hobbs, New Mexico 88240

Strawn

&lt;&lt;Static Gradient Survey&gt;&gt;

Date: 12/10/93 @ 10:30 am

CONTACT: David Weaver

WELL: #1

ZONE: Strawn

STATE: New Mexico

OPERATOR: Newman

TO: 7601 ft

TEMPERATURE: 136°F

COMPANY: Yates Petroleum Corporation

LEASE: Long Arroyo DD State

FIELD: Buffalo Valley

COUNTY: Chaves

STATUS: Shut in 161 hours

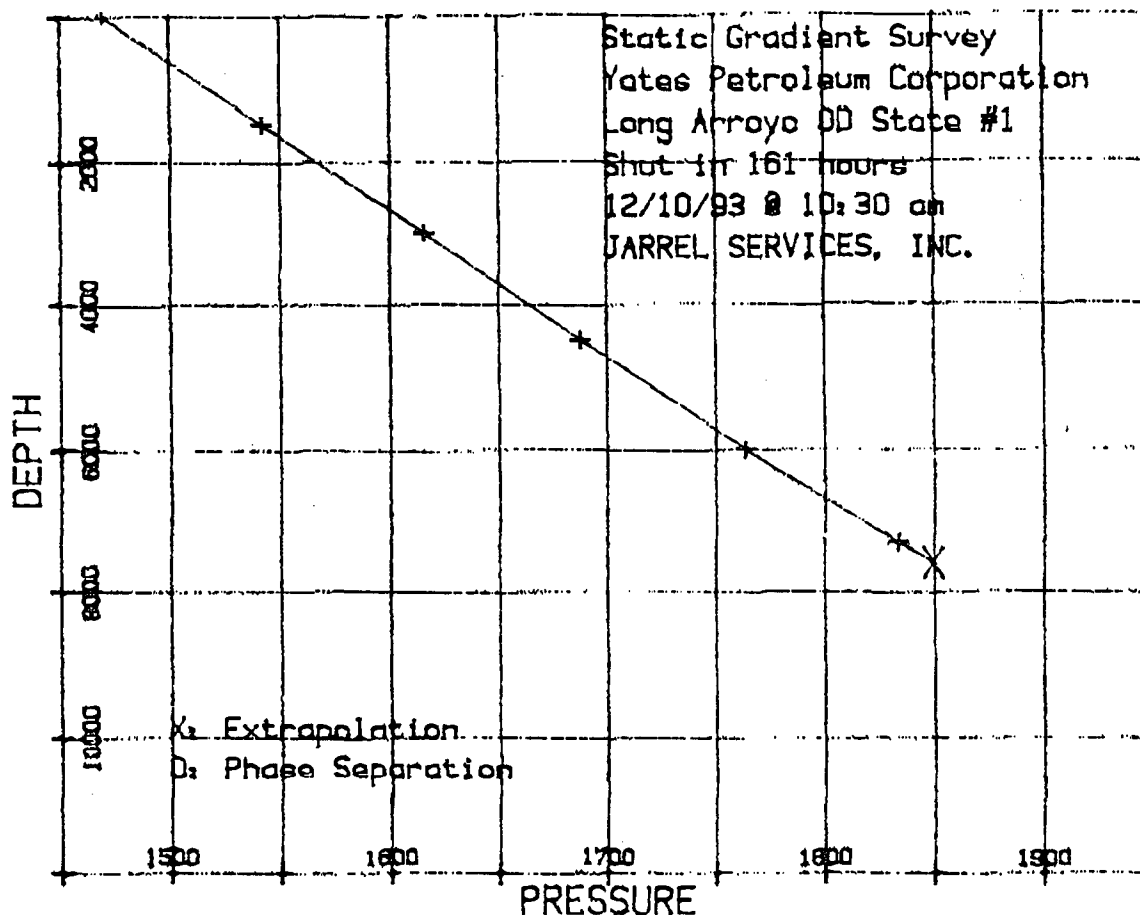
PERFORATIONS FROM: 7587 ft

DEPTH: 7300 ft

## TABULAR DATA

| DEPTH<br>(ft) | PRESSURE<br>(psi) | GRADIENT<br>(psi/ft) | EXPLANATIONS       |
|---------------|-------------------|----------------------|--------------------|
| 0             | 1470              |                      |                    |
| 1500          | 1542              | 0.048                |                    |
| 3000          | 1616              | 0.049                |                    |
| 4500          | 1688              | 0.048                |                    |
| 6000          | 1764              | 0.051                |                    |
| 7300          | 1834              | 0.054                |                    |
| 7594          | 1850              | 0.054                | <=Extrapolated BHP |

NOTE: Explanations are included to clarify calculated data points.



P/2 Long Arroyo DD-1

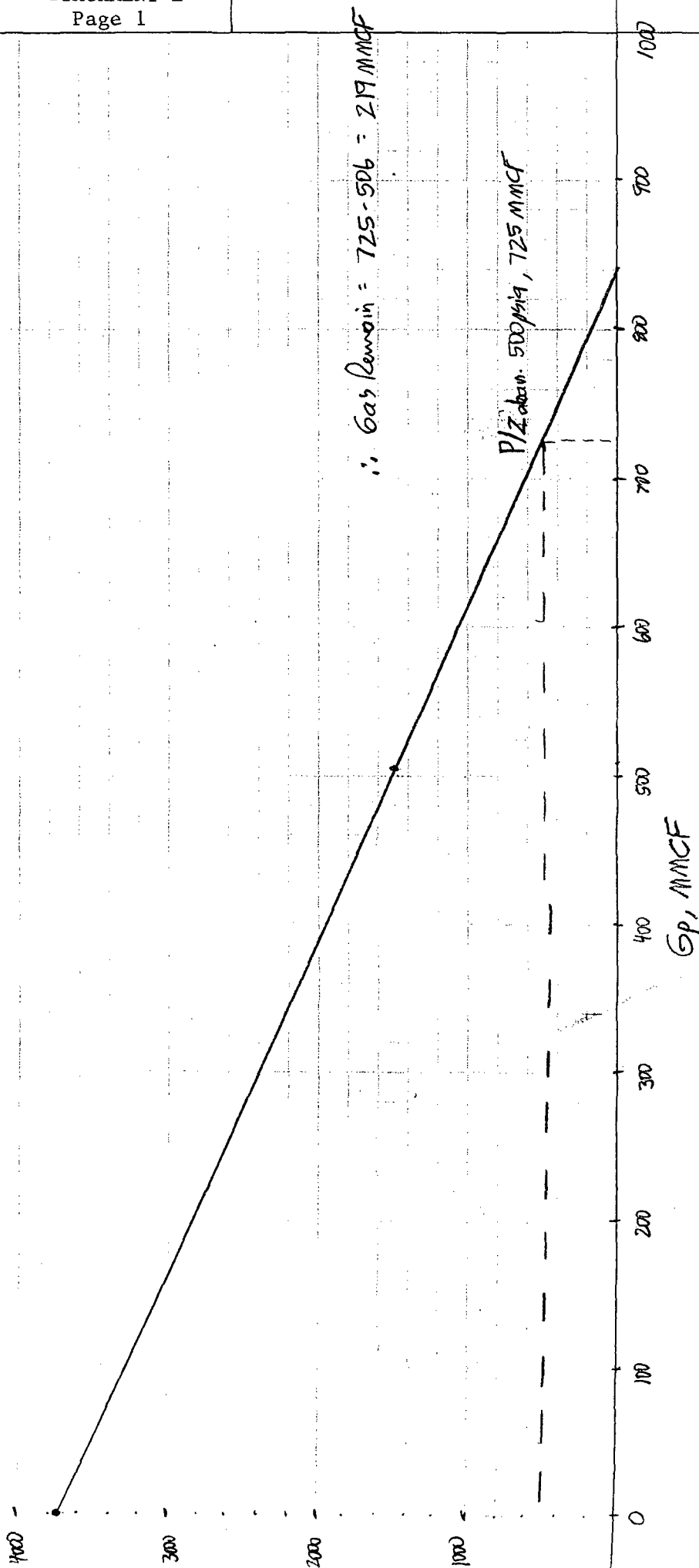
14-149-27c

Monow 7853-56'

P P/2 6p

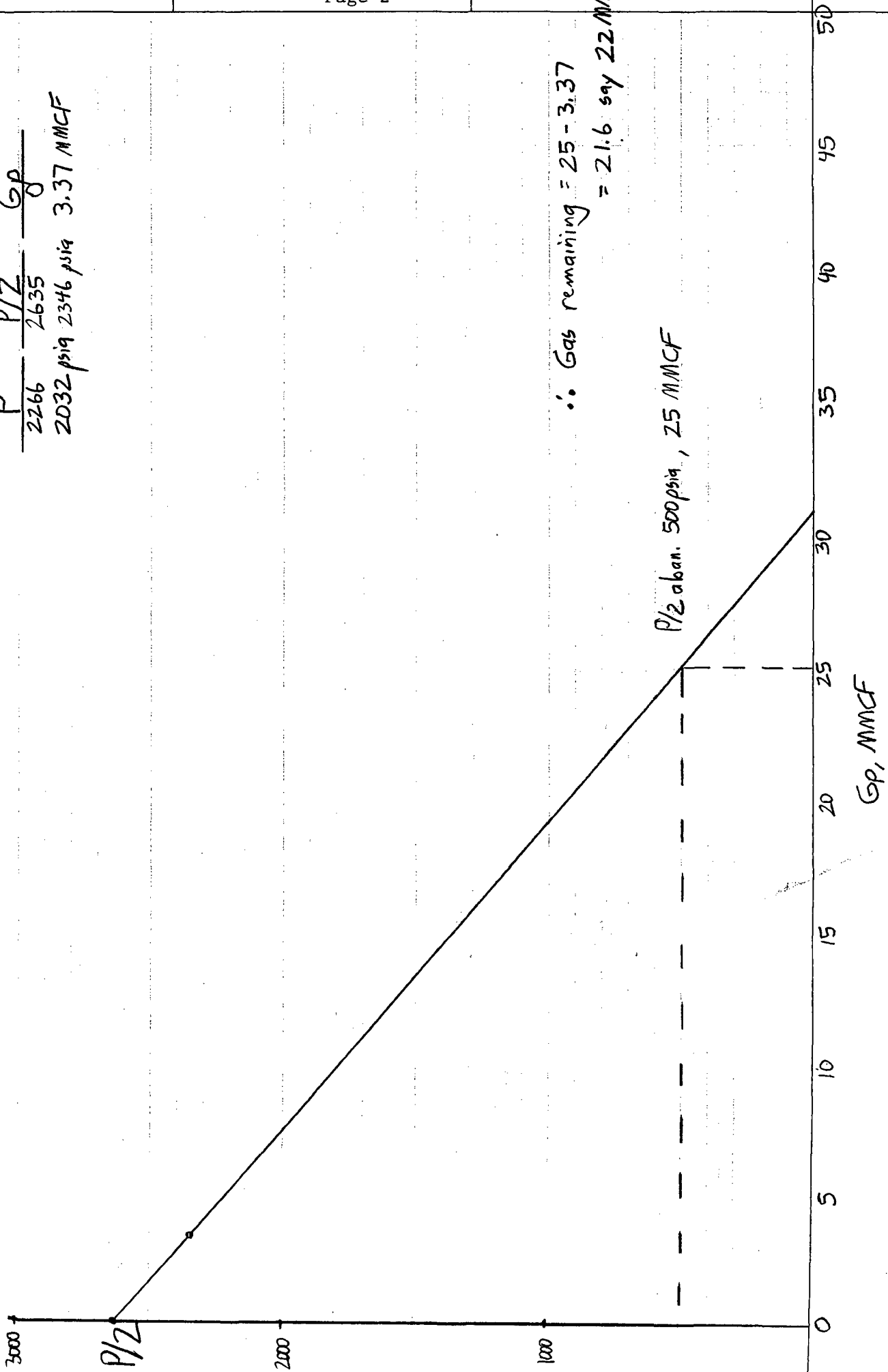
3225 3750 0  
1309<sub>pin</sub> 1488 506 MMCF

P/2



P1/2 Long Anoyo 00-1  
14-14s-27e  
Strawn

P  $\frac{P1/2}{2266}$   $\frac{Gp}{2635}$   
2032 psia 2346 psia 3.37 MMCF



$\therefore$  Gas remaining =  $25 - 3.37$   
= 21.6 say 22 MMCF