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See Rule 401 & Rule 1122

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
2040 South Pacheco  
Santa Fe, NM 87505

Form C-122  
Revised October, 1999

RECEIVED

NOV 17 2003

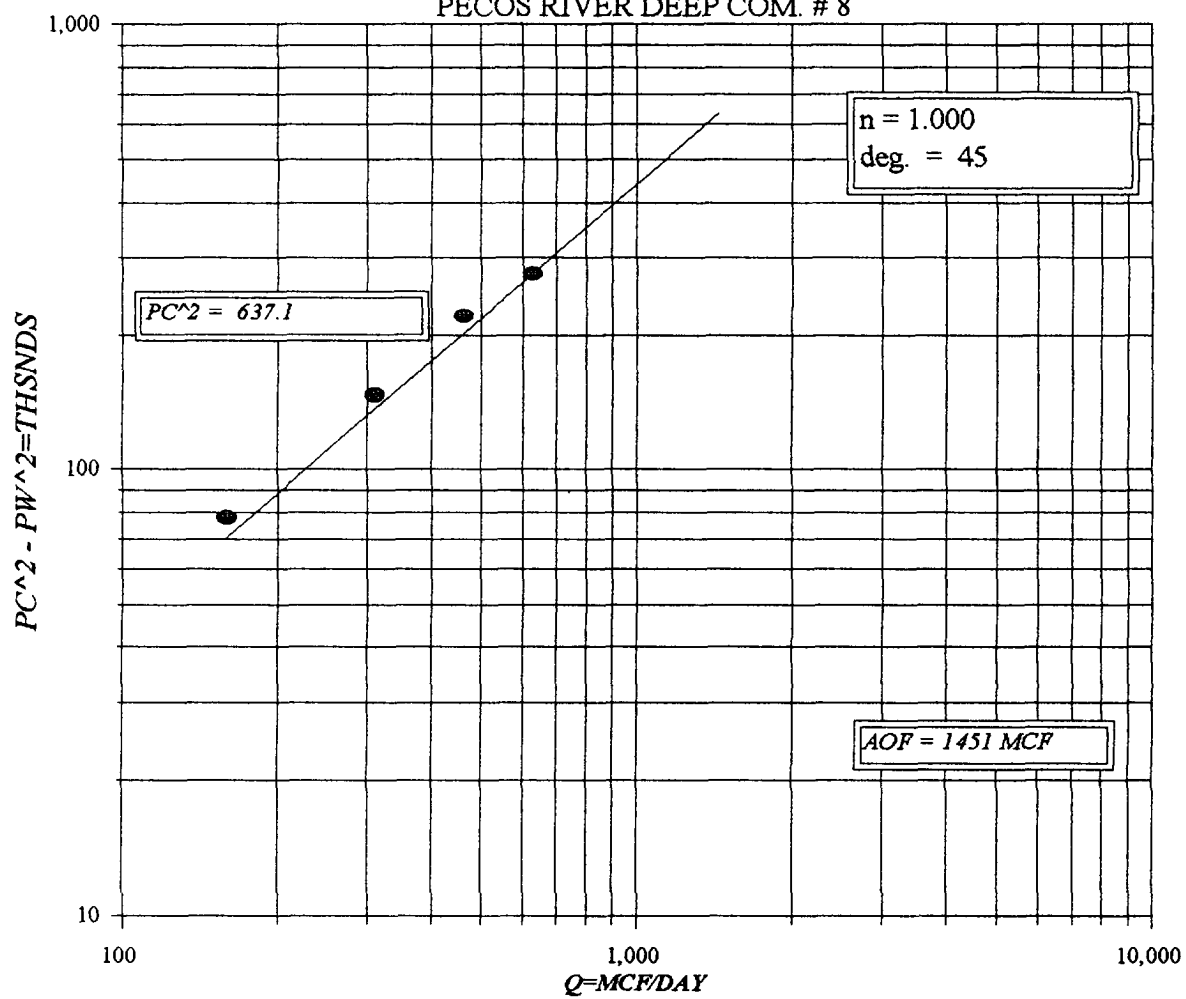
30-015-32510

**MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS**

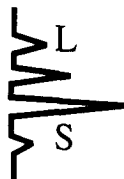
|                                                                                                                           |                             |                                       |                             |                                                          |                                                                                                    |                                          |                                          |
|---------------------------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------------------|-----------------------------|----------------------------------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------------|------------------------------------------|
| Operator<br><b>YATES DRILLING COMPANY</b>                                                                                 |                             |                                       |                             | Lease or Unit Name<br><b>PECOS RIVER DEEP COM.</b>       |                                                                                                    |                                          |                                          |
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |                             |                                       |                             |                                                          |                                                                                                    | Test Date<br>11/6/03                     | Well No.<br>8                            |
| Completion Date<br>8/7/03                                                                                                 |                             | Total Depth<br>10588                  |                             | Plug Back TD<br>10307                                    |                                                                                                    | Elevation<br>3304GL                      | Unit Ltr - Sec - TWP - Rge<br>I 13 20 26 |
| Csg. Size<br>4 1/2                                                                                                        | Wt.<br>11.6                 | d<br>4"                               | Set At<br>10580             | Perforations:<br>From: 10224 To: 10290                   |                                                                                                    |                                          | County<br>EDDY                           |
| Tbg. Size<br>2 3/8                                                                                                        | Wt.<br>4.7 #                | d<br>1.995                            | Set At<br>10150             | Perforations:<br>From: OPEN To: ENDED                    |                                                                                                    |                                          | Pool<br>McMILLAND MORROW                 |
| Type Well-Single-Bradenhead-G.G. or G.O. Multiple<br><b>SINGLE</b>                                                        |                             |                                       |                             | Packer Set At<br>10150                                   |                                                                                                    | Formation<br>MORROW                      |                                          |
| Producing Thru<br>TBG                                                                                                     |                             | Reservoir Temp. °F<br>158 @ 10150     |                             | Mean Annual Temp. °F<br>60                               |                                                                                                    | Baro. Press. -P <sub>a</sub><br>13.2     |                                          |
| Connection<br>DUKE ENERGY                                                                                                 |                             |                                       |                             |                                                          |                                                                                                    |                                          |                                          |
| L<br>10150                                                                                                                | H<br>10150                  | Gg<br>0.629                           | %CO <sub>2</sub><br>0.825   | %N <sub>2</sub><br>0.303                                 | %H <sub>2</sub> S<br>N/A                                                                           | Prover<br>N/A                            | Meter Run<br>3.068                       |
|                                                                                                                           |                             |                                       |                             |                                                          |                                                                                                    | Taps<br>FLG                              |                                          |
| FLOW DATA                                                                                                                 |                             |                                       |                             | TUBING DATA                                              |                                                                                                    | CASING DATA                              |                                          |
| No.                                                                                                                       | Prover<br>Line<br>Size      | Orifice<br>x<br>Size                  | Press<br>p.s.i.g.           | Diff.<br>h <sub>w</sub>                                  | Temp.<br>°F                                                                                        | Press<br>p.s.i.g.                        | Temp.<br>°F                              |
| SI                                                                                                                        |                             |                                       |                             |                                                          |                                                                                                    | 785                                      | PKR                                      |
| 1                                                                                                                         | 3 X                         | 1.500                                 | 53                          | 1.8                                                      | 50                                                                                                 | 734                                      | "                                        |
| 2                                                                                                                         | 3 X                         | 1.500                                 | 63                          | 5.9                                                      | 53                                                                                                 | 685                                      | "                                        |
| 3                                                                                                                         | 3 X                         | 1.500                                 | 75                          | 11.4                                                     | 67                                                                                                 | 626                                      | "                                        |
| 4                                                                                                                         | 3 X                         | 1.500                                 | 91                          | 18                                                       | 69                                                                                                 | 577                                      | "                                        |
| 5                                                                                                                         |                             |                                       |                             |                                                          |                                                                                                    |                                          |                                          |
| RATE OF FLOW CALCULATIONS                                                                                                 |                             |                                       |                             |                                                          |                                                                                                    |                                          |                                          |
| No.                                                                                                                       | COEFFICIENT<br>(24 Hour)    | $\sqrt{h_w P_m}$                      | Pressure<br>P <sub>m</sub>  | Flow Temp.<br>Factor Ft.                                 | Gravity Factor<br>F <sub>g</sub>                                                                   | Super Compress<br>Factor F <sub>pv</sub> | Rate of Flow<br>Q, Mcfd                  |
| 1                                                                                                                         |                             |                                       |                             |                                                          |                                                                                                    |                                          | 160                                      |
| 2                                                                                                                         |                             |                                       |                             |                                                          |                                                                                                    |                                          | 310                                      |
| 3                                                                                                                         | METERED                     | BY                                    |                             | TOTAL                                                    | FLOW                                                                                               | METER                                    | 462                                      |
| 4                                                                                                                         |                             |                                       |                             |                                                          |                                                                                                    |                                          | 628                                      |
| 5                                                                                                                         |                             |                                       |                             |                                                          |                                                                                                    |                                          |                                          |
| No.                                                                                                                       | P <sub>r</sub>              | Temp. °R                              | T <sub>r</sub>              | Z                                                        | Gas Liquid Hydrocarbon Ratio<br>DRY GAS Mcf bbl.                                                   |                                          |                                          |
| 1                                                                                                                         |                             |                                       |                             |                                                          | A.P. I. Gravity of Liquid Hydrocarbons<br>DRY Deg.                                                 |                                          |                                          |
| 2                                                                                                                         |                             |                                       |                             |                                                          | Specific Gravity Separator Gas<br>0.629 XXXXXXXX                                                   |                                          |                                          |
| 3                                                                                                                         |                             | N/A                                   |                             |                                                          | Specific Gravity Flowing Fluid<br>XXXXXX                                                           |                                          |                                          |
| 4                                                                                                                         |                             |                                       |                             |                                                          | Critical Pressure<br>671 P.S.I.A. 671 P.S.I.A.                                                     |                                          |                                          |
| 5                                                                                                                         |                             |                                       |                             |                                                          | Critical Temperature<br>365 R. 365 R                                                               |                                          |                                          |
| P <sub>c</sub> 798.2 P <sub>w</sub> 637.1                                                                                 |                             |                                       |                             |                                                          |                                                                                                    |                                          |                                          |
| No.                                                                                                                       | P <sub>t</sub> <sup>2</sup> | P <sub>w</sub>                        | P <sub>w</sub> <sup>2</sup> | P <sub>c</sub> <sup>2</sup> -P <sub>w</sub> <sup>2</sup> | (1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.31$ (2) $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.31$ |                                          |                                          |
| 1                                                                                                                         |                             | 747.7                                 | 559.1                       | 78                                                       |                                                                                                    |                                          |                                          |
| 2                                                                                                                         |                             | 700.4                                 | 490.6                       | 146.5                                                    |                                                                                                    |                                          |                                          |
| 3                                                                                                                         |                             | 644.6                                 | 415.5                       | 221.6                                                    |                                                                                                    |                                          |                                          |
| 4                                                                                                                         |                             | 601.1                                 | 361.3                       | 275.8                                                    |                                                                                                    |                                          |                                          |
| 5                                                                                                                         |                             |                                       |                             |                                                          |                                                                                                    |                                          |                                          |
| 79825                                                                                                                     |                             |                                       |                             |                                                          | AOF = Q $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.451$                                     |                                          |                                          |
| Absolute Open Flow 1.451                                                                                                  |                             |                                       |                             |                                                          | Mcf/d @ 15.025                                                                                     |                                          |                                          |
| Angle of Slope Q: 45                                                                                                      |                             |                                       |                             |                                                          | Slope n: 1                                                                                         |                                          |                                          |
| Remarks:<br>WELL PRODUCED NO FLUID                                                                                        |                             |                                       |                             |                                                          |                                                                                                    |                                          |                                          |
| Approved By Division:                                                                                                     |                             | Conducted By:<br>JARREL SERVICES INC. |                             | Calculated By:<br>BM                                     |                                                                                                    | Checked By:<br>BM                        |                                          |

# YATES DRILLING COMPANY

PECOS RIVER DEEP COM. # 8



|                                                                    |          |          |          |          |          |          |          |           |                  |                 |  |               |  |
|--------------------------------------------------------------------|----------|----------|----------|----------|----------|----------|----------|-----------|------------------|-----------------|--|---------------|--|
| O COMPANY : YATES DRILLING CO. LEASE : P. R. DEEP COM WELL NO. : 8 |          |          |          |          |          |          |          |           |                  | Pc = 798.2      |  | Pc2 = 637.1 * |  |
| UNIT : I SECTION : 13 TOWNSHIP : 20                                |          |          |          |          |          |          |          |           |                  |                 |  | *             |  |
| L : 10150 H : 10150 L/H : 1 G/GMIX : 0.629                         |          |          |          |          |          |          |          |           |                  | Pt2 = 558.3     |  | Pw = 747.7 *  |  |
| %CO2 : 0.825 %N2 : 0.303 H2S : DATE :11-06-03                      |          |          |          |          |          |          |          |           |                  | 487.5           |  | 700.4 *       |  |
| d : 1.995 Fr :0.018231 GH : 6384.4 RANGE : 26                      |          |          |          |          |          |          |          |           |                  | 408.6           |  | 644.6 *       |  |
| =====                                                              |          |          |          |          |          |          |          |           |                  | 348.3           |  | 601.1 *       |  |
|                                                                    |          |          |          |          |          |          |          |           |                  |                 |  | *             |  |
| VOL 1 : 160 PSIA 1 : 747.2 RESV.TEMP 158.0                         |          |          |          |          |          |          |          |           |                  | Pc2-Pw2= 78.0   |  | Pw2 = 559.1 * |  |
| VOL 2 : 310 PSIA 2 : 698.2                                         |          |          |          |          |          |          |          |           |                  | 146.5           |  | 490.6 *       |  |
| VOL 3 : 462 PSIA 3 : 639.2 SHUT-IN PR= 798.2                       |          |          |          |          |          |          |          |           |                  | 221.6           |  | 415.5 *       |  |
| VOL 4 : 628 PSIA 4 : 590.2                                         |          |          |          |          |          |          |          |           |                  | 275.8           |  | 361.3 *       |  |
|                                                                    |          |          |          |          |          |          |          |           |                  |                 |  | *             |  |
| PCR : 671                                                          |          |          |          |          |          |          |          |           |                  | n = 1.000       |  | *             |  |
| TCR : 365                                                          |          |          |          |          |          |          |          |           |                  |                 |  | *             |  |
|                                                                    |          |          |          |          |          |          |          |           |                  | Pc2/(Pc2-Pw2) = |  | 8.169         |  |
|                                                                    |          |          |          |          |          |          |          |           |                  |                 |  | 4.348         |  |
|                                                                    |          |          |          |          |          |          |          |           |                  |                 |  | 2.875         |  |
|                                                                    |          |          |          |          |          |          |          |           |                  |                 |  | 2.310         |  |
|                                                                    |          |          |          |          |          |          |          |           |                  |                 |  | *             |  |
|                                                                    |          |          |          |          |          |          |          |           |                  |                 |  | *             |  |
| LINE                                                               | RATE 1   |          | RATE 2   |          | RATE 3   |          | RATE 4   |           |                  |                 |  |               |  |
|                                                                    | 1ST      | 2ND      | 1ST      | 2ND      | 1ST      | 2ND      | 1ST      | 2ND       |                  |                 |  |               |  |
| 1 QM                                                               | 0.160    | 0.160    | 0.310    | 0.310    | 0.462    | 0.462    | 0.628    | 0.628     |                  |                 |  |               |  |
| 2 TW                                                               | 534      | 534      | 534      | 534      | 534      | 534      | 534      | 534       | [Pc2/Pc2-Pw2]n = | 8.169           |  | *             |  |
| 3 Ts                                                               | 618.0    | 618.0    | 618.0    | 618.0    | 618.0    | 618.0    | 618.0    | 618.0     |                  | 4.348           |  | *             |  |
| 4 T                                                                | 576.0    | 576.0    | 576.0    | 576.0    | 576.0    | 576.0    | 576.0    | 576.0     |                  | 2.875           |  | *             |  |
| PR (est)                                                           | 1.11     |          | 1.04     |          | 0.95     |          | 0.88     |           |                  | 2.310           |  | *             |  |
| 5 Z(est)                                                           | 0.888    | 0.878    | 0.893    | 0.883    | 0.900    | 0.890    | 0.905    | 0.896     |                  |                 |  | *             |  |
| 6 TZ                                                               | 511.5    | 505.5    | 514.6    | 508.8    | 518.3    | 512.9    | 521.5    | 516.2     | AOF= Q           | 1.307           |  | *             |  |
| 7 GH/TZ                                                            | 12.481   | 12.629   | 12.407   | 12.547   | 12.317   | 12.448   | 12.242   | 12.369    |                  | 1.348           |  | *             |  |
| 8 eS                                                               | 1.597    | 1.606    | 1.592    | 1.601    | 1.587    | 1.595    | 1.583    | 1.590     |                  | 1.328           |  | *             |  |
| 9 l-e-S                                                            | 0.374    | 0.377    | 0.372    | 0.375    | 0.370    | 0.373    | 0.368    | 0.371     |                  | 1.451           |  | *             |  |
| 10 Pt                                                              | 747.2    | 747.2    | 698.2    | 698.2    | 639.2    | 639.2    | 590.2    | 590.2     |                  |                 |  | *             |  |
| 11 Pt2 /1000                                                       | 558.3    | 558.3    | 487.5    | 487.5    | 408.6    | 408.6    | 348.3    | 348.3     |                  |                 |  | *             |  |
| 12 Fr                                                              | 0.018231 | 0.018231 | 0.018231 | 0.018231 | 0.018231 | 0.018231 | 0.018231 | 0.018231  |                  |                 |  | *             |  |
| 13 Fc=FrTZ                                                         | 9.326    | 9.216    | 9.382    | 9.277    | 9.450    | 9.350    | 9.507    | 9.410     |                  |                 |  | *             |  |
| 14 FcQm                                                            | 1.49     | 1.47     | 2.91     | 2.88     | 4.37     | 4.32     | 5.97     | 5.91      |                  |                 |  | *             |  |
| 15 L/H(FcQm)                                                       | 2.2      | 2.2      | 8.5      | 8.3      | 19.1     | 18.7     | 35.6     | 34.9      |                  |                 |  | *             |  |
| 16 Fw                                                              | 0.832183 | 0.820287 | 3.146652 | 3.103930 | 7.050679 | 6.960511 | 13.12391 | 12.961498 |                  |                 |  | *             |  |
| 17 Pw2                                                             | 559.1    | 559.1    | 490.6    | 490.6    | 415.6    | 415.5    | 361.5    | 361.3     |                  |                 |  | *             |  |
| 18 Ps2                                                             | 892.9    | 897.8    | 781.3    | 785.3    | 659.6    | 662.7    | 572.1    | 574.5     |                  |                 |  | *             |  |
| 19 Ps                                                              | 944.9    | 947.5    | 883.9    | 886.2    | 812.2    | 814.1    | 756.3    | 758.0     |                  |                 |  | *             |  |
| 20 P                                                               | 846.1    | 847.4    | 791.1    | 792.2    | 725.7    | 726.6    | 673.3    | 674.1     |                  |                 |  | *             |  |
| 21 Pr                                                              | 1.26     | 1.26     | 1.18     | 1.18     | 1.08     | 1.08     | 1.00     | 1.00      |                  |                 |  | *             |  |
| 22 Tr                                                              | 1.58     | 1.58     | 1.58     | 1.58     | 1.58     | 1.58     | 1.58     | 1.58      |                  |                 |  | *             |  |
| 23 Z                                                               | 0.878    | 0.878    | 0.883    | 0.883    | 0.890    | 0.890    | 0.896    | 0.896     |                  |                 |  | *             |  |
|                                                                    |          |          |          |          |          |          |          |           |                  | FORM C122-D     |  | *             |  |
| =====                                                              |          |          |          |          |          |          |          |           |                  |                 |  | *             |  |



# Laboratory Services, Inc.

4016 Fiesta Drive  
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

FOR: Jarrel Services Inc.  
Attention: Mr. Donnie Dickerson  
P. O. Box 1230  
Hobbs, New Mexico 88240

SAMPLE:  
IDENTIFICATION: Pecos River Deep Com. #8  
COMPANY: Yates Drilling Company  
LEASE:  
PLANT:

SAMPLE DATA: DATE SAMPLED: 11/6/03  
ANALYSIS DATE: 11/6/03  
PRESSURE - PSIG  
SAMPLE TEMP. °F  
ATMOS. TEMP. °F

GAS (XX) LIQUID ( )  
SAMPLED BY: Donnie Dickerson  
ANALYSIS BY: Vickie Biggs

REMARKS:

## COMPONENT ANALYSIS

| COMPONENT              | MOL<br>PERCENT | GPM   |
|------------------------|----------------|-------|
| Hydrogen Sulfide (H2S) |                |       |
| Nitrogen (N2)          | 0.303          |       |
| Carbon Dioxide (CO2)   | 0.825          |       |
| Methane (C1)           | 91.542         |       |
| Ethane (C2)            | 4.459          | 1.190 |
| Propane (C3)           | 1.373          | 0.377 |
| I-Butane (IC4)         | 0.196          | 0.064 |
| N-Butane (NC4)         | 0.285          | 0.090 |
| I-Pentane (IC5)        | 0.118          | 0.043 |
| N-Pentane (NC5)        | 0.082          | 0.030 |
| Hexane Plus (C6+)      | 0.817          | 0.355 |
|                        | 100.000        | 2.149 |

BTU/CU.FT. - DRY 1101  
AT 14.650 DRY 1097  
AT 14.650 WET 1078  
AT 14.73 DRY 1103  
AT 14.73 WET 1084

MOLECULAR WT. 18.2571

SPECIFIC GRAVITY -  
CALCULATED 0.629  
MEASURED