

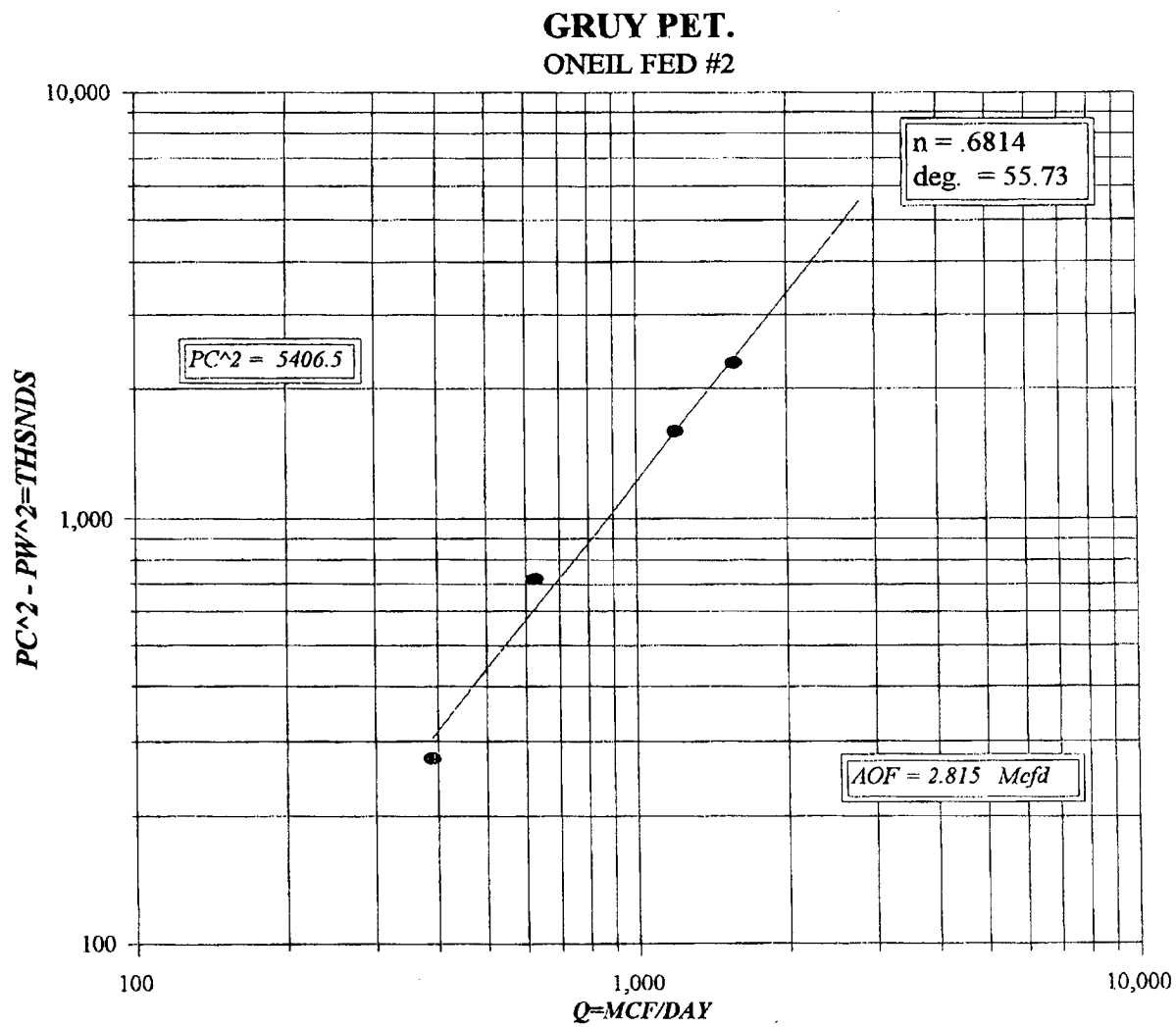
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State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
2040 South Pacheco  
Santa Fe, NM 87505

Form C-122  
Revised October, 1999

### MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

|                                                                                                                           |                             |                           |                                   |                                                           |                                                                                                      |                                      |                                          |                                          |                         |
|---------------------------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------|-----------------------------------|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------------|------------------------------------------|-------------------------|
| Operator<br>GRUY PET.                                                                                                     |                             |                           |                                   | Lease or Unit Name<br>ONEIL FED                           |                                                                                                      |                                      |                                          |                                          |                         |
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |                             |                           |                                   |                                                           |                                                                                                      | Test Date<br>4/25/03                 |                                          | Well No.<br>2                            |                         |
| Completion Date                                                                                                           |                             | Total Depth<br>11940      |                                   | Plug Back TD<br>11903                                     |                                                                                                      | Elevation                            |                                          | Unit Ltr - Sec - TWP - Rgc<br>11 24S 26E |                         |
| Csg. Size<br>5 1/2                                                                                                        | Wt.<br>17                   | d<br>4.892                | Set At<br>11940                   |                                                           | Perforations:<br>From: 11228 To: 11853                                                               |                                      | County<br>EDDY                           |                                          |                         |
| Tbg. Size<br>2 3/8                                                                                                        | Wt.<br>4.7                  | d<br>1.995                | Set At<br>11114                   |                                                           | Perforations:<br>From: To:                                                                           |                                      | Pool                                     |                                          |                         |
| Type Well-Single-Bradenhead-G.G. or G.O. Multiple<br>SINGLE                                                               |                             |                           |                                   | Packer Set At<br>11114                                    |                                                                                                      | Formation<br>MORROW                  |                                          |                                          |                         |
| Producing Thru<br>Tubing                                                                                                  |                             | Reservoir Temp. °F<br>185 |                                   | Mean Annual Temp. °F<br>60                                |                                                                                                      | Baro. Press. -P <sub>a</sub><br>13.2 |                                          | Connection<br>SALES                      |                         |
| L<br>11114                                                                                                                | H<br>11114                  | Gg<br>0.586               | %CO <sub>2</sub><br>1.81          | %N <sub>2</sub><br>0.626                                  | %H <sub>2</sub> S<br>N/A                                                                             | Prover<br>N/A                        | Meter Run<br>4.027                       | 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                              | Press<br>p.s.i.g.                        | Temp.<br>°F             |
| SI                                                                                                                        |                             |                           |                                   |                                                           |                                                                                                      | 2312                                 | N/A                                      | PKR                                      | N/A                     |
| 1                                                                                                                         | 4.027 X 1.000               |                           | 284                               | 14.2                                                      | 84                                                                                                   | 2251                                 |                                          |                                          | 1 HR.                   |
| 2                                                                                                                         | 4.027 X 1.000               |                           | 327                               | 30                                                        | 80                                                                                                   | 2148                                 |                                          |                                          | 1 HR.                   |
| 3                                                                                                                         | 4.027 X 1.000               |                           | 347                               | 98                                                        | 68                                                                                                   | 1926                                 |                                          |                                          | 1 HR.                   |
| 4                                                                                                                         | 4.027 X 1.000               |                           | 329                               | 139                                                       | 67                                                                                                   | 1719                                 |                                          |                                          | 1 HR.                   |
| 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                                                                                                                         |                             |                           |                                   |                                                           |                                                                                                      |                                      |                                          |                                          | 390                     |
| 2                                                                                                                         |                             |                           |                                   |                                                           |                                                                                                      |                                      |                                          |                                          | 627                     |
| 3                                                                                                                         | TOTAL                       |                           | FLOW                              | METER                                                     |                                                                                                      |                                      |                                          |                                          | 1205                    |
| 4                                                                                                                         |                             |                           |                                   |                                                           |                                                                                                      |                                      |                                          |                                          | 1578                    |
| 5                                                                                                                         |                             |                           |                                   |                                                           |                                                                                                      |                                      |                                          |                                          |                         |
| No.                                                                                                                       | P <sub>r</sub>              | Temp. °R                  | T <sub>r</sub>                    | Z                                                         | Gas Liquid Hydrocarbon Ratio N/A Mcf bbl.                                                            |                                      |                                          |                                          |                         |
| 1                                                                                                                         |                             |                           |                                   |                                                           | A.P. I. Gravity of Liquid Hydrocarbons N/A Deg.                                                      |                                      |                                          |                                          |                         |
| 2                                                                                                                         |                             |                           |                                   |                                                           | Specific Gravity Separator Gas 0.586 XXXXXXXX                                                        |                                      |                                          |                                          |                         |
| 3                                                                                                                         | TOTAL                       | FLOW                      | METER                             |                                                           | Specific Gravity Flowing Fluid N/A XXXXXX                                                            |                                      |                                          |                                          |                         |
| 4                                                                                                                         |                             |                           |                                   |                                                           | Critical Pressure 677 P.S.I.A. P.S.I.A.                                                              |                                      |                                          |                                          |                         |
| 5                                                                                                                         |                             |                           |                                   |                                                           | Critical Temperature 345 R. R.                                                                       |                                      |                                          |                                          |                         |
| P <sub>c</sub> 2325.2 P <sub>c2</sub> 5406                                                                                |                             |                           |                                   |                                                           |                                                                                                      |                                      |                                          |                                          |                         |
| 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) $P_c^2 = \frac{2.339}{P_c^2 - P_w^2}$ (2) $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.784$ |                                      |                                          |                                          |                         |
| 1                                                                                                                         |                             | 2265.5                    | 5132.4                            | 274.1                                                     |                                                                                                      |                                      |                                          |                                          |                         |
| 2                                                                                                                         |                             | 2164.6                    | 4685.7                            | 720.8                                                     |                                                                                                      |                                      |                                          |                                          |                         |
| 3                                                                                                                         |                             | 1953.3                    | 3815.3                            | 1591.2                                                    |                                                                                                      |                                      |                                          |                                          |                         |
| 4                                                                                                                         |                             | 1759.2                    | 3094.9                            | 2312.6                                                    |                                                                                                      |                                      |                                          |                                          |                         |
| 5                                                                                                                         |                             |                           |                                   |                                                           | AOF = Q $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.815$                                       |                                      |                                          |                                          |                         |
| Absolute Open Flow                                                                                                        |                             | 2845                      |                                   | Mcf/d @ 15.025                                            |                                                                                                      | Angle of Slope (°)                   |                                          | 55.73                                    |                         |
|                                                                                                                           |                             |                           |                                   |                                                           |                                                                                                      | Slope n:                             |                                          | 0.6814                                   |                         |
| Remarks:<br>* NO LIQUID MADE DURING TEST.                                                                                 |                             |                           |                                   |                                                           |                                                                                                      |                                      |                                          |                                          |                         |
| Approved By Division:                                                                                                     |                             |                           | Conducted By:<br>PRO WELL TESTING |                                                           | Calculated By:<br>MERV BUECKER                                                                       |                                      | Checked By:<br>MB                        |                                          |                         |



C122D FORM IMPORTED FROM SYMPHONY ON 9-9-01

|                                   |            |                   |           |                       |           |                        |           |              |           |
|-----------------------------------|------------|-------------------|-----------|-----------------------|-----------|------------------------|-----------|--------------|-----------|
| COMPANY : GRUY PET. MANAGEMENT CO |            | LEASE : ONEIL FED |           | WELL NO. : 2          |           | Pc = 2325.2            |           | Pc2 = 5406.5 |           |
| UNIT : 11114                      |            | SECTION : 11      |           | TOWNSHIP : 24S        |           | P12 = 5126.6           |           | Pw = 2265.5  |           |
| L : 11114                         |            | H : 11114         |           | L/H : 1               |           | G/GMIX : 0.586         |           | 4670.8       |           |
| %CO2 : 1.81                       |            | %N2 : 0.626       |           | H2S : 0.018183        |           | DATE : 4/25/03         |           | 1953.3       |           |
| d : 1995                          |            | Fr : 0.018183     |           | GH : 8197.0           |           | RANGE : 26E            |           | 1759.2       |           |
| VOL 1 : 390                       |            | PSIA 1 : 2264.2   |           | RESV.TEMP : 185.0     |           | Pc2-Pw2 = 274.1        |           | Pw2 = 5132.4 |           |
| VOL 2 : 627                       |            | PSIA 2 : 2161.2   |           | SHUT-IN PRE: = 2325.2 |           | 720.8                  |           | 4685.7       |           |
| VOL 3 : 1205                      |            | PSIA 3 : 1939.2   |           |                       |           | 1591.2                 |           | 3815.3       |           |
| VOL 4 : 1578                      |            | PSIA 4 : 1732.2   |           |                       |           | 2311.6                 |           | 3094.9       |           |
|                                   |            | PCR : 677         |           |                       |           | n = 0.681              |           |              |           |
|                                   |            | TCR : 345         |           |                       |           | Pc2/(Pc2-Pw2) = 19.722 |           |              |           |
| LINE                              |            | RATE 1            |           | RATE 2                |           | RATE 3                 |           | RATE 4       |           |
|                                   |            | 1ST               |           | 2ND                   |           | 1ST                    |           | 2ND          |           |
| 1                                 | QM         | 0.390             | 0.390     | 0.627                 | 0.627     | 1.205                  | 1.205     | 1.578        | 1.578     |
| 2                                 | TW         | 534               | 534       | 534                   | 534       | 534                    | 534       | 534          | 534       |
| 3                                 | Ts         | 645.0             | 645.0     | 645.0                 | 645.0     | 645.0                  | 645.0     | 645.0        | 645.0     |
| 4                                 | T          | 589.5             | 589.5     | 589.5                 | 589.5     | 589.5                  | 589.5     | 589.5        | 589.5     |
|                                   | PR (est)   | 3.34              | 3.34      | 3.19                  | 3.19      | 2.86                   | 2.86      | 2.56         | 2.56      |
| 5                                 | Z(est)     | 0.845             | 0.845     | 0.846                 | 0.846     | 0.849                  | 0.849     | 0.855        | 0.847     |
| 6                                 | TZ         | 498.1             | 498.1     | 498.6                 | 498.6     | 500.7                  | 498.1     | 504.0        | 499.4     |
| 7                                 | GH/TZ      | 16.455            | 16.412    | 16.440                | 16.441    | 16.371                 | 16.457    | 16.262       | 16.415    |
| 8                                 | eS         | 1.853             | 1.850     | 1.852                 | 1.852     | 1.848                  | 1.854     | 1.840        | 1.851     |
| 9                                 | I-e-S      | 0.460             | 0.460     | 0.460                 | 0.460     | 0.459                  | 0.461     | 0.457        | 0.460     |
| 10                                | Pt         | 2264.2            | 2264.2    | 2161.2                | 2161.2    | 1939.2                 | 1939.2    | 1732.2       | 1732.2    |
| 11                                | Pt2 /1000  | 5126.6            | 5126.6    | 4670.8                | 4670.8    | 3760.5                 | 3760.5    | 3000.5       | 3000.5    |
| 12                                | Fr         | 0.018183          | 0.018183  | 0.018183              | 0.018183  | 0.018183               | 0.018183  | 0.018183     | 0.018183  |
| 13                                | Fc=FrTZ    | 9.058             | 9.082     | 9.066                 | 9.066     | 9.104                  | 9.056     | 9.165        | 9.080     |
| 14                                | FcQm       | 3.53              | 3.54      | 5.68                  | 5.68      | 10.97                  | 10.91     | 14.46        | 14.33     |
| 15                                | L/H(FcQm)2 | 12.5              | 12.5      | 32.3                  | 32.3      | 120.4                  | 119.1     | 209.2        | 205.3     |
| 16                                | Fw         | 5.7462162         | 5.7655035 | 14.869211             | 14.868531 | 55.21397               | 54.845723 | 95.496354    | 94.366567 |
| 17                                | Pw2        | 5132.3            | 5132.4    | 4685.7                | 4685.7    | 3815.7                 | 3815.3    | 3096.0       | 3094.9    |
| 18                                | Ps2        | 9512.6            | 9497.3    | 8679.9                | 8680.1    | 7050.2                 | 7072.3    | 5697.1       | 5727.7    |
| 19                                | Ps         | 3084.3            | 3081.8    | 2946.2                | 2946.2    | 2655.2                 | 2659.4    | 2386.9       | 2393.3    |
| 20                                | P          | 2674.2            | 2673.0    | 2553.7                | 2553.7    | 2297.2                 | 2299.3    | 2089.5       | 2062.7    |
| 21                                | Pr         | 3.95              | 3.95      | 3.77                  | 3.77      | 3.39                   | 3.40      | 3.04         | 3.05      |
| 22                                | Tr         | 1.71              | 1.71      | 1.71                  | 1.71      | 1.71                   | 1.71      | 1.71         | 1.71      |
| 23                                | Z          | 0.847             | 0.847     | 0.846                 | 0.846     | 0.845                  | 0.845     | 0.847        | 0.847     |

FORM C122-D

**Laboratory Services, Inc.**

4016 Fiesta Drive  
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

FOR: Pro Well Testing & Wireline  
P. O. Box 791  
Hobbs, New Mexico 88241

SAMPLE:  
IDENTIFICATION: Oneil Fed. #2  
COMPANY: Gruy Petroleum  
LEASE:  
PLANT:

SAMPLE DATA: DATE SAMPLED: 4/25/03 1:00 pm  
ANALYSIS DATE: 4/28/03  
PRESSURE - PSIG 350  
SAMPLE TEMP. °F  
ATMOS. TEMP. °F  
REMARKS: Sampled @ the meter run.  
Morrow Formation

GAS (XX) LIQUID ( )  
SAMPLED BY: Rice  
ANALYSIS BY: Vickie Biggs

**COMPONENT ANALYSIS**

| COMPONENT              | MOL<br>PERCENT | GPM   |
|------------------------|----------------|-------|
| Hydrogen Sulfide (H2S) |                |       |
| Nitrogen (N2)          | 0.626          |       |
| Carbon Dioxide (CO2)   | 1.810          |       |
| Methane (C1)           | 95.502         |       |
| Ethane (C2)            | 1.761          | 0.470 |
| Propane (C3)           | 0.228          | 0.063 |
| I-Butane (IC4)         | 0.034          | 0.011 |
| N-Butane (NC4)         | 0.039          | 0.012 |
| I-Pentane (IC5)        | 0.000          | 0.000 |
| N-Pentane (NC5)        | 0.000          | 0.000 |
| Hexane Plus (C6+)      | 0.000          | 0.000 |
|                        | 100.000        | 0.556 |

BTU/CU.FT. - DRY 1004  
AT 14.650 DRY 1001  
AT 14.650 WET 983  
AT 14.73 DRY 1006  
AT 14.73 WET 989

MOLECULAR WT. 16.9630

SPECIFIC GRAVITY -  
CALCULATED 0.586  
MEASURED