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See Rule 401 & Rule 1122

## OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

API No. 30-025-04827

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

|                                                                                                                        |                |                               |                                |                                   |                               |                                                  |  |                                                   |                  |  |  |
|------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------------|--------------------------------|-----------------------------------|-------------------------------|--------------------------------------------------|--|---------------------------------------------------|------------------|--|--|
| Operator <b>EXXON</b>                                                                                                  |                |                               |                                |                                   |                               | Lease or Unit Name <b>Eumont Gas Comp. No. 2</b> |  |                                                   |                  |  |  |
| Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |                |                               |                                |                                   |                               | Test Date <b>10-19-94</b>                        |  | Well No. <b>#5</b>                                |                  |  |  |
| Completion Date <b>10-15-94</b>                                                                                        |                | Total Depth <b>3975'</b>      |                                | Plug Back TD <b>3936</b>          |                               | Elevation                                        |  | Unit Ltr. - Sec. - TWP - Rge. <b>M 29 21S 36E</b> |                  |  |  |
| Csg. Size                                                                                                              | Wt.            | d                             | Set At                         | Perforations:                     |                               |                                                  |  | County                                            |                  |  |  |
| <b>5 1/2</b>                                                                                                           | <b>14</b>      | <b>5.012</b>                  | <b>3975</b>                    | From: <b>3255</b> To: <b>3745</b> |                               |                                                  |  | <b>LEA</b>                                        |                  |  |  |
| Tbg. Size                                                                                                              | Wt.            | d                             | Set At                         | Perforations:                     |                               |                                                  |  | Pool                                              |                  |  |  |
| <b>2-3/8</b>                                                                                                           | <b>4.7</b>     | <b>1.995</b>                  | <b>3180</b>                    | From: To:                         |                               |                                                  |  | <b>Eumont</b>                                     |                  |  |  |
| Type Well - Single - Bradenhead - G.G. or P.O. Multiple <b>single</b>                                                  |                |                               |                                |                                   |                               | Packer Set At <b>3180</b>                        |  | Formation <b>VATES/SEVEN RIVERS</b>               |                  |  |  |
| Producing Thru <b>TBG.</b>                                                                                             |                | Reservoir Temp. °F <b>92°</b> |                                | Mean Annual Temp. °F <b>60</b>    |                               | Baro. Press - P <sub>a</sub> <b>13.2</b>         |  | Connection <b>PIPELINE</b>                        |                  |  |  |
| L <b>3255</b>                                                                                                          | II <b>3255</b> | Gg. <b>.705</b>               | % CO <sub>2</sub> <b>23.80</b> | % N <sub>2</sub> <b>1.77</b>      | % H <sub>2</sub> S <b>4.2</b> | Prover <b>-0-</b>                                |  | Meter Run <b>4.026</b>                            | Taps <b>6lg.</b> |  |  |

| FLOW DATA |                  |              |                 |                      |          | TUBING DATA     |          | CASING DATA     |          | Duration of Flow |
|-----------|------------------|--------------|-----------------|----------------------|----------|-----------------|----------|-----------------|----------|------------------|
| NO.       | Prover Line Size | Orifice Size | Press. p.s.i.g. | Diff. h <sub>w</sub> | Temp. °F | Press. p.s.i.g. | Temp. °F | Press. p.s.i.g. | Temp. °F |                  |
| SI        |                  |              |                 |                      |          | 299             |          |                 |          |                  |
| 1.        | 4.026 X          | 1.750        | 46.09           | 1                    | 58°      | 288             | 52°      | PKR.            |          | 45 min           |
| 2.        | 4.026 X          | 1.750        | 47.64           | 4                    | 64°      | 278             | 64°      |                 |          | 45 min           |
| 3.        | 4.026 X          | 1.750        | 50.80           | 14.4                 | 74°      | 256             | 80°      |                 |          | 45 min           |
| 4.        | 4.026 X          | 1.750        | 57.36           | 34.81                | 78°      | 215             | 84°      |                 |          | 1 hr.            |
| 5.        |                  |              |                 |                      |          |                 |          |                 |          |                  |

| RATE OF FLOW CALCULATIONS |                       |                  |                         |                       |                    |                                           |                      |
|---------------------------|-----------------------|------------------|-------------------------|-----------------------|--------------------|-------------------------------------------|----------------------|
| NO.                       | COEFFICIENT (24 HOUR) | $\sqrt{h_w P_m}$ | Pressure P <sub>m</sub> | Flow Temp. Factor Ft. | Gravity Factor Fg. | Super Compress. Factor, F <sub>pv</sub> . | Rate of Flow Q, Mcfd |
| 1.                        | 14.93                 | 7.7              | 59.29                   | 1.002                 | 1.191              | 1.017                                     | 140                  |
| 2.                        | 14.93                 | 15.6             | 60.84                   | .9962                 | 1.191              | 1.017                                     | 281                  |
| 3.                        | 14.93                 | 30.36            | 64.00                   | .9868                 | 1.191              | 1.016                                     | 541                  |
| 4.                        | 14.93                 | 49.56            | 70.56                   | .9831                 | 1.191              | 1.015                                     | 879                  |
| 5.                        |                       |                  |                         |                       |                    |                                           |                      |

| NO. | P <sub>r</sub> | Temp. °R | T <sub>r</sub> | Z    | Gas Liquid Hydrocarbon Ratio                     | Mcf/bbl.          |
|-----|----------------|----------|----------------|------|--------------------------------------------------|-------------------|
| 1.  | .09            | 518      | 1.34           | .987 | DRY                                              |                   |
| 2.  | .09            | 524      | 1.36           | .987 | A.P. I Gravity of Liquid Hydrocarbons <b>DRY</b> | Deg.              |
| 3.  | .094           | 534      | 1.38           | .987 | Specific Gravity Separator Gas <b>.705</b>       | XXXXXXXXXX        |
| 4.  | .10            | 538      | 1.39           | .987 | Specific Gravity Flowing Fluid <b>DRY</b>        | XXXXXX            |
| 5.  |                |          |                |      | Critical Pressure <b>679</b>                     | P.S.I.A. P.S.I.A. |
|     |                |          |                |      | Critical Temperature <b>386</b>                  | R R               |

P<sub>c</sub> **312.2**      P<sub>c</sub><sup>2</sup> **97.2**

| 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.  |                             | 301.6          | 91.0                        | 6.5                                                       |
| 2.  |                             | 292.9          | 85.8                        | 11.7                                                      |
| 3.  |                             | 276.1          | 76.2                        | 21.2                                                      |
| 4.  |                             | 249.2          | 62.1                        | 35.4                                                      |
| 5.  |                             |                |                             |                                                           |

$$1) \frac{P_c^2}{P_c^2 - P_w^2} = 2.757$$

$$(2) \left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.757$$

$$AOF = Q \left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2,423$$

|                                 |              |                                    |                       |
|---------------------------------|--------------|------------------------------------|-----------------------|
| Absolute Open Flow <b>2,423</b> | Mcf @ 15.025 | Angle of Slope $\Theta$ <b>45°</b> | Slope, n <b>1.000</b> |
|---------------------------------|--------------|------------------------------------|-----------------------|

Remarks: \_\_\_\_\_

|                                         |                                      |                          |                       |
|-----------------------------------------|--------------------------------------|--------------------------|-----------------------|
| Approved By Division <b>APPROVED BY</b> | Conducted By: <b>PRO WELL TESTER</b> | Calculated By: <b>KS</b> | Checked By: <b>BM</b> |
|-----------------------------------------|--------------------------------------|--------------------------|-----------------------|

FIELD COPY

NOV 04 1994

OCT-19-94 WED 12:18 Laboratory Services

**Laboratory Services, Inc.**

OCT 2 1994

1331 Tasker Drive  
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

FOR:

Pro Well Testing & Wireline  
Attention: Mr. Ray Gallagher  
P. O. Box 791  
Hobbs, New Mexico 88241

SAMPLE

IDENTIFICATION:

COMPANY: Exxon Company USA

LEASE: Eumont Gas Comm. No. 2 #5

PLANT:

API NO. 30-025-04827

SAMPLE DATA: DATE SAMPLED: 10-19-94 10:30 AM GAS (XX) LIQUID ( )  
ANALYSIS DATE: 10-19-94 SAMPLED BY: Ray Gallagher  
PRESSURE - PSIG 71.00 ANALYSIS BY: Vickie Walker  
SAMPLE TEMP. °F 82.00  
ATMOS. TEMP. °F

REMARKS:

**COMPONENT ANALYSIS**

| COMPONENT              | MOL PERCENT | GPM                   |
|------------------------|-------------|-----------------------|
| Hydrogen Sulfide (H2S) |             |                       |
| Nitrogen (N2)          | 1.77        |                       |
| Carbon Dioxide (CO2)   | 3.80        |                       |
| Methane (C1)           | 80.98       |                       |
| Ethane (C2)            | 7.84        | 2.092                 |
| Propane (C3)           | 3.57        | 0.981                 |
| i-Butane (iC4)         | 0.43        | 0.140                 |
| N-Butane (nC4)         | 0.87        | 0.275                 |
| i-Pentane (iC5)        | 0.22        | 0.079                 |
| N-Pentane (nC5)        | 0.19        | 0.069                 |
| Hexane Plus (C6)       | 0.33        | 0.134                 |
|                        | 100.00      | 3.770                 |
| BTU/CU.FT. - DRY       | 1121        | MOLECULAR WT. 20.4224 |
| AT 14.650 DRY          | 1117        |                       |
| AT 14.650 WET          | 1098        |                       |
| AT 14.73 DRY           | 1123        |                       |
| AT 14.73 WET           | 1104        |                       |
| SPECIFIC GRAVITY -     |             |                       |
| CALCULATED             | 0.705       |                       |
| MEASURED               |             |                       |



OCT 3 - 1994

Equivalent Diameter Program

Author: Bob Murray

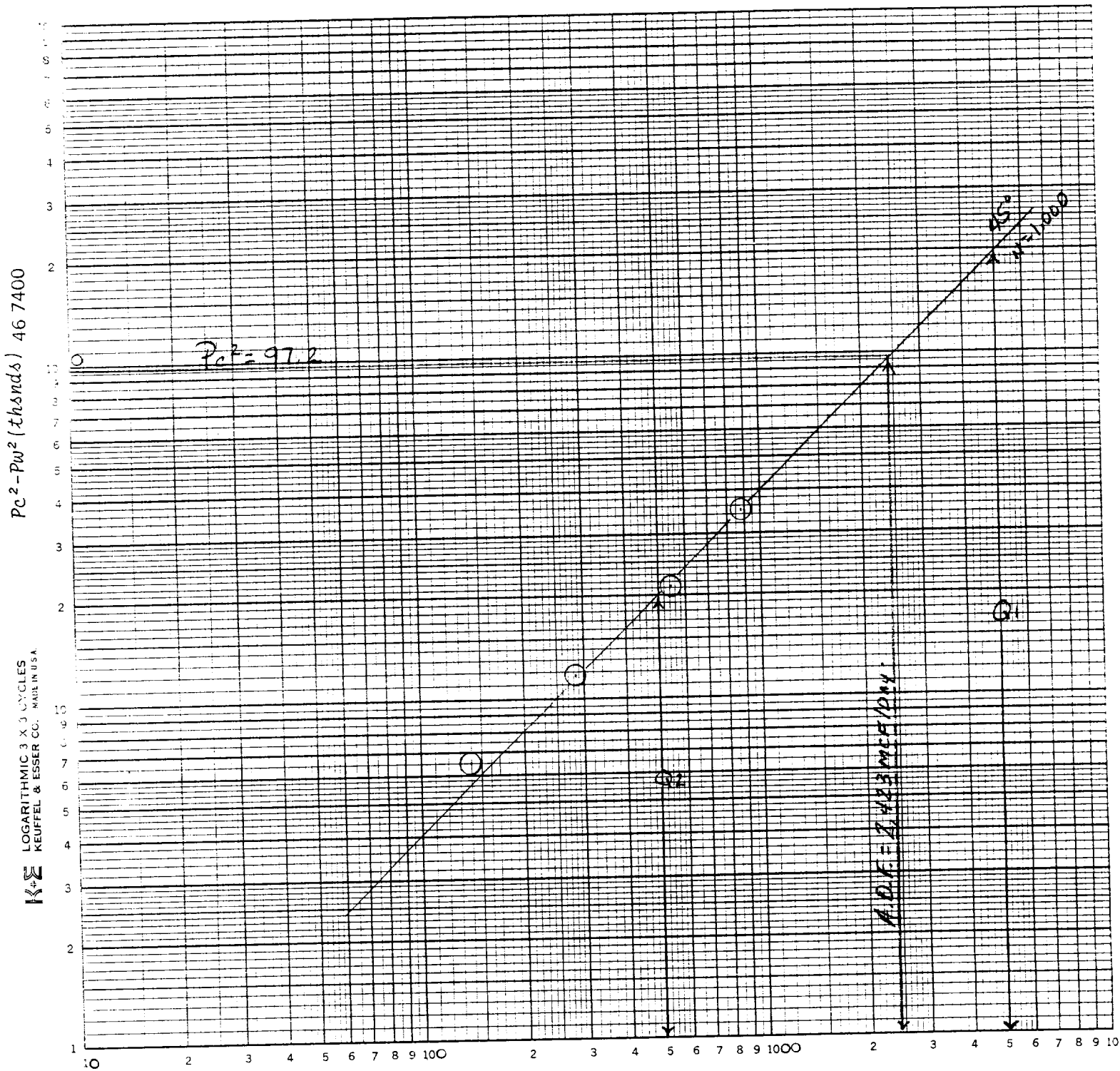
Date: December 26, 1990

API NO. 30-025-04827

|      |           |      |       |        |           |
|------|-----------|------|-------|--------|-----------|
| L1 = | 3180 ft.  | L5 = | 0 ft. | Lt =   | 3255 ft.  |
| D1 = | 1.995 in. | D5 = | 1 in. | C =    | 0.10797   |
| L2 = | 75 ft.    | L6 = | 0 ft. |        |           |
| D2 = | 5.012 in. | D6 = | 1 in. | Deff = | 2.004 in. |
| L3 = | 0 ft.     | L7 = | 0 ft. | Fr =   | 0.01758   |
| D3 = | 1 in.     | D7 = | 1 in. |        |           |
| L4 = | 0 ft.     | L8 = | 0 ft. |        |           |
| D4 = | 1 in.     | D8 = | 1 in. |        |           |

EXXON COMPANY USA  
 Eumont Gas Comm. No. 2 #5  
 29-21S-36E  
 Lea County, New Mexico  
 10-19-94  
 API NO. 30-025-04827

101 10094



Q MCF/DAY

Q1 5000 Log: 3.69897  
 Q2 500 Log: 2.69897  
 slope = 1.00000