

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

|                                                                                                                           |              |                         |                   |                                    |                       |                                    |                    |                     |
|---------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------|-------------------|------------------------------------|-----------------------|------------------------------------|--------------------|---------------------|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |              |                         |                   |                                    | Test Date<br>3/22/81  |                                    |                    |                     |
| Company<br>Supron Energy Corporation (Hill)                                                                               |              |                         |                   |                                    | Connection            |                                    |                    |                     |
| Pool<br>Basin                                                                                                             |              |                         |                   |                                    | Formation<br>Dakota   |                                    |                    |                     |
| Completion Date<br>3/14/81                                                                                                |              |                         | Total Depth       |                                    | Plug Back TD          |                                    | Elevation          |                     |
| Farm or Lease Name<br>Hodges                                                                                              |              |                         |                   |                                    | Well No.<br>15E       |                                    |                    |                     |
| Csq. Size<br>5.500                                                                                                        | Wt.<br>17.00 | d<br>4.892              | Set At<br>7504    | Perforations:<br>From 7180 To 7270 |                       | Unit<br>J-27-26N-8W                |                    |                     |
| Tbg. Size<br>1.900                                                                                                        | Wt.<br>2.90  | d<br>1.610              | Set At<br>7172    | Perforations:<br>From To           |                       | Unit Sec. Twp. Rge.<br>J-27-26N-8W |                    |                     |
| Type Well - Single - Hardhead - G.G. or G.O. Multiple<br>G - G Multiple                                                   |              |                         |                   |                                    | Packer Set At<br>7135 |                                    | County<br>San Juan |                     |
| Producing Thru<br>Tubing                                                                                                  |              | Reservoir Temp. °F<br>p |                   | Mean Annual Temp. °F               |                       | Baro. Press. - P <sub>g</sub>      |                    | State<br>New Mexico |
| L                                                                                                                         | H            | Gg<br>est. .650         | % CO <sub>2</sub> | % N <sub>2</sub>                   | % H <sub>2</sub> S    | Prover                             | Meter Run          | Taps                |

  

| FLOW DATA |                        |   |                 |                    |             |             | TUBING DATA        |             | CASING DATA          |             | Duration<br>of<br>Flow |
|-----------|------------------------|---|-----------------|--------------------|-------------|-------------|--------------------|-------------|----------------------|-------------|------------------------|
| NO.       | Prover<br>Line<br>Size | X | Orifice<br>Size | Press.<br>p.s.i.g. | Diff.<br>hw | Temp.<br>°F | Press.<br>p.s.i.g. | Temp.<br>°F | Press.<br>p.s.i.g.   | Temp.<br>°F |                        |
| 1.        |                        |   | .750            | 40                 |             | 43          | 1591 (D)<br>40     | 43          | 475 (PC)<br>475 (PC) |             | 8 days<br>3 hrs.       |
| 2.        |                        |   |                 |                    |             |             |                    |             |                      |             |                        |
| 3.        |                        |   |                 |                    |             |             |                    |             |                      |             |                        |
| 4.        |                        |   |                 |                    |             |             |                    |             |                      |             |                        |
| 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<br>F <sub>t</sub> | Gravity<br>Factor<br>F <sub>g</sub> | Super<br>Compress.<br>Factor, F <sub>pv</sub> | Rate of Flow<br>Q, Mcfd |
| 1.                        | 12.3650                  |                  | 52                         | 1.0168                                 | .9608                               | 1.0000                                        | 628                     |
| 2.                        |                          |                  |                            |                                        |                                     |                                               |                         |
| 3.                        |                          |                  |                            |                                        |                                     |                                               |                         |
| 4.                        |                          |                  |                            |                                        |                                     |                                               |                         |
| 5.                        |                          |                  |                            |                                        |                                     |                                               |                         |

  

| NO. | P <sub>r</sub> | Temp. °R | T <sub>r</sub> | Z | Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.          |
|-----|----------------|----------|----------------|---|------------------------------------------------------|
| 1.  |                |          |                |   | A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.     |
| 2.  |                |          |                |   | Specific Gravity Separator Gas _____ X X X X X X X X |
| 3.  |                |          |                |   | Specific Gravity Flowing Fluid _____ X X X X X       |
| 4.  |                |          |                |   | Critical Pressure _____ P.S.I.A. _____ P.S.I.A.      |
| 5.  |                |          |                |   | Critical Temperature _____ R _____ R                 |

  

| P <sub>c</sub> 1603    P <sub>c</sub> <sup>2</sup> 2569609 |                             |                |                             |                                                           |
|------------------------------------------------------------|-----------------------------|----------------|-----------------------------|-----------------------------------------------------------|
| NO.                                                        | P <sub>r</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                                                          | 2704                        | 183            | 33477                       | 2536132                                                   |
| 2.                                                         |                             |                |                             |                                                           |
| 3.                                                         |                             |                |                             |                                                           |
| 4.                                                         |                             |                |                             |                                                           |
| 5.                                                         |                             |                |                             |                                                           |

  

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

AOF = Q  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \frac{634}{634}$

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634

(2)  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.0099$

  

|                                             |  |                               |  |                           |  |
|---------------------------------------------|--|-------------------------------|--|---------------------------|--|
| Absolute Open Flow <u>634</u> Mcfd @ 15.025 |  | Angle of Slope $\theta$ _____ |  | Slope, n. <u>.75</u>      |  |
| Remarks: <u>Too wet to flare</u>            |  |                               |  |                           |  |
|                                             |  |                               |  |                           |  |
| Approved by Division                        |  | Conducted By: <u>CRW</u>      |  | Calculated By: <u>CRW</u> |  |
|                                             |  |                               |  | Checked By: _____         |  |