

RECEIVED MEXICO OIL CONSERVATION COMMISSION  
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS

RECEIVED  
NO. 122  
Date 9-1-65

DEC 7 1977

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|                                                                                                                                         |             |                                     |                           |                                                       |                    |
|-----------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------------------------------|---------------------------|-------------------------------------------------------|--------------------|
| Type Test<br><input checked="" type="checkbox"/> Initial <b>O.C.C.</b> <input type="checkbox"/> Annual <input type="checkbox"/> Special |             | Test Date<br>11-22-77               |                           | <b>U.S. GEOLOGICAL SURVEY<br/>ARTESIA, NEW MEXICO</b> |                    |
| Company<br>Depco, Inc.                                                                                                                  |             | Connection                          |                           |                                                       |                    |
| Pool<br>Cemetery Morrow Gas                                                                                                             |             | Formation<br>Morrow                 |                           | Unit                                                  |                    |
| Completion Date<br>10-30-77                                                                                                             |             | Total Depth<br>9860                 |                           | Plug Back TD<br>9826                                  |                    |
| Elevation<br>3778.8 Gr                                                                                                                  |             | Farm or Lease Name<br>Shell Federal |                           | Well No.<br>1                                         |                    |
| Csg. Size<br>4 1/2"                                                                                                                     | Wt.<br>11.6 | d                                   | Set At<br>9860            | Perforations:<br>From 9688 To 9700                    |                    |
| Tbg. Size<br>2 3/8"                                                                                                                     | Wt.<br>4.7  | d                                   | Set At<br>9501            | Perforations:<br>From To                              |                    |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br>Single                                                                       |             |                                     |                           | Packer Set At<br>9501                                 |                    |
| Producing Thru<br>Tubing                                                                                                                |             | Reservoir Temp. °F<br>178 @ 9694    |                           | Mean Annual Temp. °F<br>13.2                          |                    |
| Baro. Press. - P <sub>a</sub><br>13.2                                                                                                   |             | State<br>New Mexico                 |                           | County<br>Eddy                                        |                    |
| L<br>9694                                                                                                                               | H<br>9694   | G <sub>g</sub><br>0.600             | % CO <sub>2</sub><br>2.77 | % N <sub>2</sub><br>0.28                              | % H <sub>2</sub> S |
| Prover                                                                                                                                  |             | Meter Run<br>X                      |                           | Taps<br>Flange                                        |                    |

  

| FLOW DATA |                  |   |              |                 |                      | TUBING DATA |                 | CASING DATA |                 | Duration of Flow |
|-----------|------------------|---|--------------|-----------------|----------------------|-------------|-----------------|-------------|-----------------|------------------|
| NO.       | Prover Line Size | X | 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. |                  |
| SI        |                  |   |              |                 |                      |             | 2697            | 72          |                 |                  |
| 1.        | 3"               | X | 1 1/4"       | 361             | 2.25                 | 72          | 2345            | 74          |                 |                  |
| 2.        | 3"               | X | 1 1/4"       | 378             | 4                    | 71          | 2137            | 74          |                 |                  |
| 3.        | 3"               | X | 1 1/4"       | 384             | 9                    | 70          | 1687            | 74          |                 |                  |
| 4.        | 3"               | X | 1 1/4"       | 387             | 10.24                | 66          | 1288            | 73          |                 |                  |
| 5.        |                  |   |              |                 |                      |             |                 |             |                 |                  |

  

| RATE OF FLOW CALCULATIONS |                       |                  |                         |                                  |                               |                                         |                      |
|---------------------------|-----------------------|------------------|-------------------------|----------------------------------|-------------------------------|-----------------------------------------|----------------------|
| NO.                       | Coefficient (24 Hour) | $\sqrt{h_w P_m}$ | Pressure P <sub>m</sub> | Flow Temp. Factor F <sub>t</sub> | Gravity Factor F <sub>g</sub> | Super Compress. Factor, F <sub>pv</sub> | Rate of Flow Q, Mcfd |
| 1                         | 7.577                 | 29.02            | 374.2                   | 0.9887                           | 1.291                         | 1.029                                   | 289                  |
| 2                         | 7.577                 | 39.56            | 391.2                   | 0.9896                           | 1.291                         | 1.030                                   | 394                  |
| 3                         | 7.577                 | 59.79            | 397.2                   | 0.9905                           | 1.291                         | 1.031                                   | 597                  |
| 4                         | 7.577                 | 64.02            | 400.2                   | 0.9943                           | 1.291                         | 1.033                                   | 643                  |
| 5                         |                       |                  |                         |                                  |                               |                                         |                      |

  

|                                  |                |          |                |   |                                                         |  |  |
|----------------------------------|----------------|----------|----------------|---|---------------------------------------------------------|--|--|
| NO.                              | P <sub>t</sub> | Temp. °R | T <sub>r</sub> | Z | Gas Liquid Hydrocarbon Ratio Trace of oil made Mcf/bbl. |  |  |
|                                  |                |          |                |   | A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.        |  |  |
|                                  |                |          |                |   | Specific Gravity Separator Gas 0.600 X X X X X X X X    |  |  |
|                                  |                |          |                |   | Specific Gravity Flowing Fluid X X X X X 0.600          |  |  |
|                                  |                |          |                |   | Critical Pressure 683 P.S.I.A. 683 P.S.I.A.             |  |  |
| Critical Temperature 353 R 353 R |                |          |                |   |                                                         |  |  |
| 5.                               |                |          |                |   |                                                         |  |  |

  

|                                  |                             |                |                             |                                                           |  |                                                             |  |
|----------------------------------|-----------------------------|----------------|-----------------------------|-----------------------------------------------------------|--|-------------------------------------------------------------|--|
| $P_t^2 = 3363.2$ $P_s^2 = 11311$ |                             |                |                             | $(1) \frac{P_t^2}{P_t^2 - P_s^2} = 1.4581$                |  | $(2) \left[ \frac{P_t^2}{P_t^2 - P_s^2} \right]^n = 1.2835$ |  |
| NO.                              | P <sub>t</sub> <sup>2</sup> | P <sub>s</sub> | P <sub>s</sub> <sup>2</sup> | P <sub>t</sub> <sup>2</sup> - P <sub>s</sub> <sup>2</sup> |  |                                                             |  |
| 1                                |                             | 3012.2         | 9073                        | 2238                                                      |  |                                                             |  |
| 2                                |                             | 2815.2         | 7925                        | 3386                                                      |  |                                                             |  |
| 3                                |                             | 2335.2         | 5453                        | 5858                                                      |  |                                                             |  |
| 4                                |                             | 1885.2         | 3554                        | 7757                                                      |  |                                                             |  |
| 5                                |                             |                |                             |                                                           |  |                                                             |  |

  

|                                                                                              |  |                               |  |                |  |
|----------------------------------------------------------------------------------------------|--|-------------------------------|--|----------------|--|
| Absolute Open Flow 825 Mcfd @ 15.025                                                         |  | Angle of Slope $\theta$ 56.5° |  | Slope, n 0.662 |  |
| Remarks:                                                                                     |  |                               |  |                |  |
| Approved By Commission: _____ Conducted By: Jones Calculated By: McPherson Checked By: _____ |  |                               |  |                |  |