

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

Form C-122  
 Revised 9-1-65

|                                                                                                                           |                        |                                                            |                                  |
|---------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------------------------------------------|----------------------------------|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |                        | Test Date<br><b>6-14-82</b>                                |                                  |
| Company<br><b>GULF OIL EXPL. &amp; PROD.</b>                                                                              |                        | Connection<br><b>AIR</b>                                   |                                  |
| Pool<br><b>BUFFALO</b>                                                                                                    |                        | Formation<br><b>MORROW</b>                                 |                                  |
| Completion Date<br><b>6-12-82</b>                                                                                         |                        | Total Depth<br><b>13702</b>                                |                                  |
| Flag back TD<br><b>13702</b>                                                                                              |                        | Elevation<br><b>3675 GL</b>                                |                                  |
| Well No.<br><b>1</b>                                                                                                      |                        | Form or Lease Name<br><b>LANGLIE <del>FEED</del> A COM</b> |                                  |
| Csg. Size<br><b>5 1/2</b>                                                                                                 | Set At<br><b>13470</b> | Perforations:<br>From <b>13516</b> To <b>13602</b>         |                                  |
| Tbg. Size<br><b>2 3/8</b>                                                                                                 | Set At<br><b>13470</b> | Perforations:<br>From                      To              |                                  |
| Type Well - Single - Prodenhead - G.G. or G.O. Multiple<br><b>SINGLE GAS</b>                                              |                        | Packer Set At<br><b>13470</b>                              |                                  |
| Producing Thru<br><b>Tbg.</b>                                                                                             |                        | Baro. Press. - $P_a$<br><b>13.2</b>                        |                                  |
| Reservoir Temp. °F<br><b>209 @ 13470</b>                                                                                  |                        | Mean Annual Temp. °F<br><b>60°</b>                         |                                  |
| State<br><b>NEW MEXICO</b>                                                                                                |                        | County<br><b>LEA</b>                                       |                                  |
| L<br><b>13470</b>                                                                                                         | H<br><b>13470</b>      | Gg<br><b>.648</b>                                          | % CO <sub>2</sub><br><b>.808</b> |
| % N <sub>2</sub><br><b>.589</b>                                                                                           |                        | % H <sub>2</sub> S<br>Prover                               |                                  |
| Meter Run<br><b>4"</b>                                                                                                    |                        | Temp<br><b>Flg.</b>                                        |                                  |

  

| 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 |
| 5!        |                        |   |                 |                    |             |             | 4370               |             |                    |                        | 48 hrs.     |
| 1.        | 4 x 1.750              |   |                 | 530                | 4.0         | 86          | 4100               |             |                    |                        | 45 min.     |
| 2.        | " " "                  |   |                 | 535                | 12.0        | 94          | 3785               |             |                    |                        | 1 hr.       |
| 3.        | " " "                  |   |                 | 540                | 21.0        | 87          | 3580               |             |                    |                        | 45 min.     |
| 4.        | " " "                  |   |                 | 560                | 39.0        | 78          | 3250               |             |                    |                        | 1 hr.       |
| 5.        |                        |   |                 |                    |             |             |                    |             |                    |                        |             |

  

| RATE OF FLOW CALCULATIONS |                          |                  |                   |                               |                            |                                        |                        |
|---------------------------|--------------------------|------------------|-------------------|-------------------------------|----------------------------|----------------------------------------|------------------------|
| NO.                       | Coefficient<br>(24 Hour) | $\sqrt{h_w P_m}$ | Pressure<br>$P_m$ | Flow Temp.<br>Factor<br>$F_t$ | Gravity<br>Factor<br>$F_g$ | Super<br>Compress.<br>Factor, $F_{pv}$ | Rate of Flow<br>Q, Mgd |
| 1                         | 14.93                    | 46.61            | 543.2             | .9759                         | 1.242                      | 1.048                                  | 884                    |
| 2                         | 14.93                    | 81.11            | 548.2             | .9688                         | 1.242                      | 1.046                                  | 1524                   |
| 3                         | 14.93                    | 107.78           | 553.2             | .9750                         | 1.242                      | 1.049                                  | 2044                   |
| 4                         | 14.93                    | 149.52           | 573.2             | .9831                         | 1.242                      | 1.055                                  | 2876                   |
| 5.                        |                          |                  |                   |                               |                            |                                        |                        |

  

| NO. | $\eta$ | Temp. °R | $T_f$ | Z    | Gas Liquid Hydrocarbon Ratio          | Mcf/bsl.   |
|-----|--------|----------|-------|------|---------------------------------------|------------|
| 1.  | .81    | 546      | 1.46  | .911 | DRY                                   |            |
| 2.  | .82    | 554      | 1.48  | .914 | A.P.I. Gravity of Liquid Hydrocarbons |            |
| 3.  | .83    | 547      | 1.46  | .909 | Specific Gravity Separator Gas        | XXXXXXXXXX |
| 4.  | .86    | 538      | 1.43  | .899 | Specific Gravity Flowing Fluid        | XXXXXX     |
| 5.  |        |          |       |      | Critical Pressure 670                 | P.S.I.A.   |
|     |        |          |       |      | Critical Temperature 375              | R          |

  

| NO. | $P_c^2$ | $P_w^2$ | $P_c^2 - P_w^2$ | (1) $\frac{P_c^2}{P_c^2 - P_w^2} =$ | (2) $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$ |
|-----|---------|---------|-----------------|-------------------------------------|------------------------------------------------------|
| 1   | 4122.0  | 16990.9 | 2221.5          | 2.345                               | 2.345                                                |
| 2   | 3807.8  | 14499.3 | 4713.1          |                                     |                                                      |
| 3   | 3621.5  | 13115.3 | 6097.1          |                                     |                                                      |
| 4   | 3319.5  | 11019.1 | 8193.3          |                                     |                                                      |
| 5   |         |         |                 |                                     |                                                      |

  

|                    |  |              |                |                |            |       |              |
|--------------------|--|--------------|----------------|----------------|------------|-------|--------------|
| Absolute Open Flow |  | <b>6,744</b> | Mcf/d @ 15.025 | Angle of Slope | <b>45°</b> | Slope | <b>1.000</b> |
|--------------------|--|--------------|----------------|----------------|------------|-------|--------------|

  

Remarks: **TRACE OF DISTILLATE**

  

|                         |                                              |                                     |             |
|-------------------------|----------------------------------------------|-------------------------------------|-------------|
| Approved By Consultant: | Conducted By:<br><b>DAVIS SERVICES, INC.</b> | Calculated By:<br><b>RICK PAGAN</b> | Checked By: |
|-------------------------|----------------------------------------------|-------------------------------------|-------------|

RECEIVED

RECEIVED JUN 28 1982

JUN 16 1982 O.C.D.  
HOBBS OFFICE

2.  
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