

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

Form C-122  
 Revised 9-1-65

|                                                                                                                        |                 |                                        |                               |                                                   |                              |                                           |                      |                          |  |
|------------------------------------------------------------------------------------------------------------------------|-----------------|----------------------------------------|-------------------------------|---------------------------------------------------|------------------------------|-------------------------------------------|----------------------|--------------------------|--|
| Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |                 |                                        |                               |                                                   |                              | Test Date <b>2-1-83</b>                   |                      |                          |  |
| Company <b>AMOCO PRODUCTION COMPANY</b>                                                                                |                 |                                        |                               |                                                   |                              | Connection <b>ATMOSPHERE</b>              |                      |                          |  |
| Pool <b>WEST OSUDO</b>                                                                                                 |                 |                                        |                               |                                                   |                              | Formation <b>MORROW</b>                   |                      |                          |  |
| Completion Date <b>02/03/83</b>                                                                                        |                 | Total Depth <b>13570.</b>              |                               | Plug Back TD <b>13570.</b>                        |                              | Elevation <b>3698.</b>                    |                      | Unit <b>BEST GAS COM</b> |  |
| Csg. Size <b>5.500</b>                                                                                                 | Wt. <b>19.8</b> | d <b>4.778</b>                         | Set At <b>12870.</b>          | Perforations: From <b>12870.</b> To <b>13570.</b> |                              | Well No. <b>1</b>                         |                      |                          |  |
| Tub. Size <b>2.875</b>                                                                                                 | Wt. <b>6.5</b>  | d <b>2.441</b>                         | Set At <b>13022.</b>          | Perforations: From <b>0.</b> To <b>0.</b>         |                              | Unit Sec. Twp. Rge. <b>G-23-20S-35E</b>   |                      |                          |  |
| Type Well - Single - Brdenhead - G.G. or G.O. Multiple <b>SINGLE</b>                                                   |                 |                                        |                               |                                                   |                              | Packer Set At <b>12760.</b>               |                      | County <b>LEA COUNTY</b> |  |
| Producing Thru <b>TUBING</b>                                                                                           |                 | Reservoir Temp. °F <b>172.0 13220.</b> |                               | Mean Annual Temp. °F <b>60.0</b>                  |                              | Baro. Press. - P <sub>a</sub> <b>13.2</b> |                      | State <b>NEW MEXICO</b>  |  |
| L <b>13220.</b>                                                                                                        | H <b>13220.</b> | Gg <b>0.667</b>                        | % CO <sub>2</sub> <b>0.49</b> | % N <sub>2</sub> <b>0.59</b>                      | % H <sub>2</sub> S <b>0.</b> | Prover <b>0.</b>                          | Meter Run <b>4.0</b> | Taps <b>FLANGE</b>       |  |

  

| 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. | Temp. °F         | of Flow |
| SI        |                  |   |              |                 |                      |             | 4383.           | 73.         |                 |                  | 24.0    |
| 1.        | 4.00             | X | 2.000        | 530.            | 3.0                  | 76.         | 3911.           | 76.         | 0.              | 0.               | 0.7     |
| 2.        | 4.00             | X | 2.000        | 530.            | 19.0                 | 59.         | 3881.           | 59.         | 0.              | 0.               | 0.7     |
| 3.        | 4.00             | X | 2.000        | 530.            | 30.0                 | 60.         | 3890.           | 60.         | 0.              | 0.               | 0.7     |
| 4.        | 4.00             | X | 2.000        | 530.            | 50.0                 | 60.         | 2430.           | 60.         | 0.              | 0.               | 0.7     |
| 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, Fpv | Rate of Flow Q, Mcfd |
| 1                         | 19.83                 | 40.37            | 543.2                   | 0.9850                | 1.2240            | 1.0526                      | 1016.                |
| 2                         | 19.83                 | 101.59           | 543.2                   | 1.0010                | 1.2240            | 1.0596                      | 2616.                |
| 3                         | 19.83                 | 127.66           | 543.2                   | 1.0000                | 1.2240            | 1.0591                      | 3282.                |
| 4                         | 19.83                 | 164.80           | 543.2                   | 1.0000                | 1.2240            | 1.0591                      | 4237.                |
| 5.                        |                       |                  |                         |                       |                   |                             |                      |

  

|     |                |          |                |       |                                                               |
|-----|----------------|----------|----------------|-------|---------------------------------------------------------------|
| NO. | P <sub>r</sub> | Temp. °R | T <sub>r</sub> | Z     | Gas Liquid Hydrocarbon Ratio <b>3.1</b> Mcf/bbl.              |
|     |                |          |                |       | A.P.I. Gravity of Liquid Hydrocarbons <b>47.2</b> Deg.        |
| 1.  | 0.81           | 536.     | 1.42           | 0.903 | Specific Gravity Separator Gas <b>0.667</b> <b>XXXXXXXXXX</b> |
| 2.  | 0.81           | 519.     | 1.33           | 0.891 | Specific Gravity Flowing Fluid <b>XXXXXX</b> <b>1.349</b>     |
| 3.  | 0.81           | 520.     | 1.33           | 0.891 | Critical Pressure <b>670.</b> P.S.I.A. <b>636.</b> P.S.I.A.   |
| 4.  | 0.81           | 520.     | 1.33           | 0.891 | Critical Temperature <b>377.</b> °R <b>590.</b> °R            |
| 5.  |                |          |                |       |                                                               |

  

|                                                               |                |                |                             |
|---------------------------------------------------------------|----------------|----------------|-----------------------------|
| P <sub>c</sub> <b>4371.9 P<sub>c</sub><sup>2</sup> 19114.</b> |                |                |                             |
| NO.                                                           | P <sub>c</sub> | P <sub>w</sub> | P <sub>w</sub> <sup>2</sup> |
| 1                                                             | 15399.         | 3899.          | 15194.                      |
| 2                                                             | 10352.         | 3333.          | 11143.                      |
| 3                                                             | 8429.          | 2962.          | 8772.                       |
| 4                                                             | 5969.          | 2537.          | 6437.                       |
| 5                                                             |                |                |                             |

  

(1)  $\frac{P_c^2}{P_c^2 - P_w^2} = 1.5027$

(2)  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.5027$

AOF = Q  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 6339.$

  

|                                               |                                     |                       |
|-----------------------------------------------|-------------------------------------|-----------------------|
| Absolute Open Flow <b>4339.</b> Mcfd @ 15.025 | Angle of Slope $\theta$ <b>45.0</b> | Slope, n <b>1.000</b> |
|-----------------------------------------------|-------------------------------------|-----------------------|

  

Remarks:

|                                                                                                 |                                   |                                       |
|-------------------------------------------------------------------------------------------------|-----------------------------------|---------------------------------------|
| Approved By Commission:<br><b>ORIGINAL SIGNED BY JERRY SEXTON</b><br><b>DISTRICT SUPERVISOR</b> | Conducted By:<br><b>JOHN WEST</b> | Calculated By:<br><b>STEVE BATES</b>  |
|                                                                                                 |                                   | Checked By:<br><b>BOB LaROBADIERE</b> |