

## NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Basin Dakota Formation Dakota County Rio Arriba  
Initial X Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test ~~XXXXXX~~ 3-20-63  
Company Caulkins Oil Company Lease Breech "E" Well No. D-118  
Unit N Sec. 1 Twp. 26N Rge. 6W Purchaser El Paso Natural Gas Company  
Casing 4 1/2" Wt. 10.5 I.D. 4.000 Set at 7760 Perf. 7488 To 7712  
Tubing 2 3/8" Wt. 4.7 I.D. 1.995 Set at 7451 Perf. 7451 To \_\_\_\_\_  
Gas Pay: From 7488 To 7712 L 7451 xG .600 -GL 4471 Bar.Press. 12  
Producing Thru: Casing No Tubing Yes Type Well Single  
Date of Completion: 3-6-63 Packer No Single-Bradenhead-G. G. or G.O. Dual  
Reservoir Temp. 185

## OBSERVED DATA

Tested Through (XXXXX) (Choke) (XXXXX) Type Taps \_\_\_\_\_

| No. | Flow Data                  |                              |                |                         |              | Tubing Data    |              | Casing Data    |              | Duration<br>of Flow<br>Hr. |
|-----|----------------------------|------------------------------|----------------|-------------------------|--------------|----------------|--------------|----------------|--------------|----------------------------|
|     | (Prover)<br>(Line)<br>Size | (Choke)<br>(Orifice)<br>Size | Press.<br>psig | Diff.<br>h <sub>w</sub> | Temp.<br>°F. | Press.<br>psig | Temp.<br>°F. | Press.<br>psig | Temp.<br>°F. |                            |
| SI  |                            |                              |                |                         |              | 2590           |              | 2600           |              | 7 day SI                   |
| 1.  |                            | 3/4"                         |                |                         |              | 321            | 60           | 1165           | 60           | 3 hr. flow                 |
| 2.  |                            |                              |                |                         |              |                |              |                |              |                            |
| 3.  |                            |                              |                |                         |              |                |              |                |              |                            |
| 4.  |                            |                              |                |                         |              |                |              |                |              |                            |
| 5.  |                            |                              |                |                         |              |                |              |                |              |                            |

## FLOW CALCULATIONS

| No. | Coefficient<br>(24-Hour) | $\sqrt{h_w p_f}$ | Pressure<br>psia | Flow Temp.<br>Factor<br>F <sub>t</sub> | Gravity<br>Factor<br>F <sub>g</sub> | Compress.<br>Factor<br>F <sub>pv</sub> | Rate of Flow<br>Q-MCFPD<br>@ 15.025 psia |
|-----|--------------------------|------------------|------------------|--|-------------------------------------|--|--|
| 1.  | 14.1605                  |                  | 3 33             | 1.0048                                 | 9535                                | 1.036                                  | 4680                                     |
| 2.  |                          |                  |                  |  |                                     |  |  |
| 3.  |                          |                  |                  |  |                                     |  |  |
| 4.  |                          |                  |                  |  |                                     |  |  |
| 5.  |                          |                  |                  |  |                                     |  |  |

## PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.  
Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
F<sub>c</sub> \_\_\_\_\_ (1-e<sup>-s</sup>)  
Specific Gravity Separator Gas \_\_\_\_\_  
Specific Gravity Flowing Fluid \_\_\_\_\_  
P<sub>c</sub> 2612 P<sub>c</sub><sup>2</sup> 6,822,544

| No. | P <sub>w</sub><br>P <sub>t</sub> (psia) | P <sub>t</sub> <sup>2</sup> | F <sub>c</sub> Q | (F <sub>c</sub> Q) <sup>2</sup> | (F <sub>c</sub> Q) <sup>2</sup><br>(1-e <sup>-s</sup> ) | P <sub>w</sub> <sup>2</sup> | P <sub>c</sub> <sup>2</sup> -P <sub>w</sub> <sup>2</sup> | Cal.<br>P <sub>w</sub> | P <sub>w</sub><br>P <sub>c</sub> |
|-----|---|-----------------------------|------------------|---------------------------------|---|-----------------------------|--|------------------------|----------------------------------|
| 1.  |   |                             |                  |                                 |   | 1,385,329                   | 5,437,215  |                        | .450                             |
| 2.  |   |                             |                  |                                 |   |                             |  |                        |                                  |
| 3.  |   |                             |                  |                                 |   |                             |  |                        |                                  |
| 4.  |   |                             |                  |                                 |   |                             |  |                        |                                  |
| 5.  |   |                             |                  |                                 |   |                             |  |                        |                                  |

Absolute Potential: 5532 MCFPD; n (1.25)n 1.1821

COMPANY Caulkins Oil Company

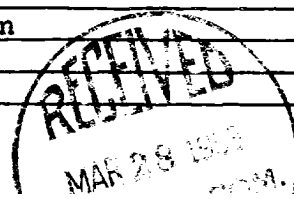
ADDRESS Post Office Box 780, Farmington, New Mexico

AGENT and TITLE Charles J. J. J. Production Foreman

WITNESSED \_\_\_\_\_

COMPANY \_\_\_\_\_

REMARKS \_\_\_\_\_



## INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and the back pressure curve shall be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

## NOMENCLATURE

$Q$  = Actual rate of flow at end of flow period at W. H. working pressure ( $P_w$ ).  
MCF/da. @ 15.025 psia and 60° F.

$P_c$  = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater.  
psia

$P_w$  = Static wellhead working pressure as determined at the end of flow period.  
(Casing if flowing thru tubing, tubing if flowing thru casing.) psia

$P_t$  = Flowing wellhead pressure (tubing if flowing through tubing, casing if flowing through casing.) psia

$P_f$  = Meter pressure, psia.

$h_w$  = Differential meter pressure, inches water.

$F_g$  = Gravity correction factor.

$F_t$  = Flowing temperature correction factor.

$F_{pv}$  = Supercompressability factor.

$n$  = Slope of back pressure curve.

Note: If  $P_w$  cannot be taken because of manner of completion or condition of well, then  $P_w$  must be calculated by adding the pressure drop due to friction within the flow string to  $P_t$ .