

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool        Formation        County         
Initial        Annual        Special        Date of Test 12/22/59  
Company        Lease        Well No. 11  
Unit 0 Sec. 1 Twp. 2 Rge. 10 Purchaser         
Casing: 1 1/2 Wt. 7.5 I.D. 4.875 Set at 1735 Perf. 1745 To 1755  
Tubing: 1 Wt. 1.7 I.D. 1 Set at 1920 Perf.        To         
Gas Pay: From 1735 To 1920 L        xG        -GL        Bar.Press.         
Producing Thru: Casing        Tubing        Type Well         
Date of Completion: 12/22/59 Packer        Single-Bradenhead-G. G. or G.O. Dual  
Reservoir Temp.       

## OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) 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. |                            |
| 1.  |                            |                              |                |                         |              |                |              |                            |
| 2.  |                            |                              |                |                         |              |                |              |                            |
| 3.  |                            |                              |                |                         |              |                |              |                            |
| 4.  |                            |                              |                |                         |              |                |              |                            |
| 5.  |                            |                              |                |                         |              |                |              |                            |

## FLOW CALCULATIONS

| No. | Coefficient<br>(24-Hour) | $\sqrt{h_{wpf}}$ | 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.  | 12.45                    |                  | 202              | 1.020                                  | .904                                | 1.035                                  | 2.14                                     |
| 2.  |                          |                  |                  |                                        |                                     |                                        |                                          |
| 3.  |                          |                  |                  |                                        |                                     |                                        |                                          |
| 4.  |                          |                  |                  |                                        |                                     |                                        |                                          |
| 5.  |                          |                  |                  |                                        |                                     |                                        |                                          |

## PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio        cf/bbl.  
Gravity of Liquid Hydrocarbons        deg.  
T<sub>c</sub>        (1-e<sup>-5</sup>)  
Specific Gravity Separator Gas         
Specific Gravity Flowing Fluid         
P<sub>c</sub> 597 P<sub>c</sub><sup>2</sup> 356409

| No. | P <sub>1</sub><br>P <sub>1</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>-5</sup> ) | P <sub>1</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.  | 202                                     |                             |                  |                                 |                                                         | 40804                       | 275134                                                   |                        |                                  |
| 2.  |                                         |                             |                  |                                 |                                                         |                             |                                                          |                        |                                  |
| 3.  |                                         |                             |                  |                                 |                                                         |                             |                                                          |                        |                                  |
| 4.  |                                         |                             |                  |                                 |                                                         |                             |                                                          |                        |                                  |
| 5.  |                                         |                             |                  |                                 |                                                         |                             |                                                          |                        |                                  |

Absolute Potential: 3930 MCFPD; n .85

COMPANY         
ADDRESS         
AGENT and TITLE ORIGINAL SIGNED BY D. E. BRYANT  
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<sub>t</sub> = 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<sub>t</sub> = Flowing temperature correction factor.

$F_{sv}$  - Supercompressibility 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  $P_t$ .

|                             |   |   |
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