

## NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Sanita Dakota Formation Dakota County San Juan  
Initial I Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 9-24-64  
Company Artes Oil & Gas Company Lease WILSON "A" Well No. 1  
Unit F Sec. 6 Twp. 32N Rge. 18W Purchaser Southern Union  
Casing 1-1/2 Wt. 9.3 I.D. 1.029 Set at 6075 Perf. 6662 To 6737  
Tubing 2-3/8 Wt. 4.7 I.D. 1.995 Set at 6638 Perf. Collar To \_\_\_\_\_  
Gas Pay: From 6662 To 6737 L 6638 xG .700(amt) -GL 4637 Bar.Press. \_\_\_\_\_  
Producing Thru: Casing \_\_\_\_\_ Tubing I Type Well Single Gas  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: 9-17-64 Packer None Reservoir Temp. \_\_\_\_\_

## OBSERVED DATA

Tested Through (Pressure) (Choke) (Meter)

Type Taps \_\_\_\_\_

| No. | Flow Data     |                        |             |                      |           | Tubing Data |                 | Casing Data |                 | Duration of Flow Hr. |
|-----|---------------|------------------------|-------------|----------------------|-----------|-------------|-----------------|-------------|-----------------|----------------------|
|     | (Line) Size   | (Choke) (Orifice) Size | Press. psig | Diff. h <sub>w</sub> | Temp. °F. | Press. psig | Temp. °F.       | Press. psig | Temp. °F.       |                      |
| SI  | <u>7 days</u> |                        |             |                      |           | <u>1477</u> |                 | <u>1479</u> |                 |                      |
| 1.  | <u>2 days</u> | <u>3/4"</u>            |             |                      |           | <u>256</u>  | <u>60°(amt)</u> | <u>222</u>  | <u>60°(amt)</u> | <u>1 hours</u>       |
| 2.  |               |                        |             |                      |           |             |                 |             |                 |                      |
| 3.  |               |                        |             |                      |           |             |                 |             |                 |                      |
| 4.  |               |                        |             |                      |           |             |                 |             |                 |                      |
| 5.  |               |                        |             |                      |           |             |                 |             |                 |                      |

## FLOW CALCULATIONS

| No. | Coefficient (24-Hour) | $\sqrt{h_w p_f}$ | Pressure psia | Flow Temp. Factor F <sub>t</sub> | Gravity Factor F <sub>g</sub> | Compress. Factor F <sub>pv</sub> | Rate of Flow Q-MCFPD @ 15.025 psia |
|-----|-----------------------|------------------|---------------|----------------------------------|-------------------------------|----------------------------------|------------------------------------|
| 1.  | <u>12.365</u>         |                  | <u>256</u>    | <u>1.000</u>                     | <u>.9238</u>                  | <u>1.031</u>                     | <u>395</u>                         |
| 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> 1491 P<sub>c</sub><sup>2</sup> 2,223,081

| No. | P <sub>w</sub> 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> (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. P <sub>w</sub> | P <sub>w</sub> /P <sub>c</sub> |
|-----|--------------------------------------|-----------------------------|------------------|---------------------------------|--|-----------------------------|--|---------------------|--------------------------------|
| 1.  | <u>604</u>                           |                             |                  |                                 |  | <u>364,816</u>              | <u>1,858,265</u>   |                     |                                |
| 2.  |                                      |                             |                  |                                 |  |                             |  |                     |                                |
| 3.  |                                      |                             |                  |                                 |  |                             |  |                     |                                |
| 4.  |                                      |                             |                  |                                 |  |                             |  |                     |                                |
| 5.  |                                      |                             |                  |                                 |  |                             |  |                     |                                |

Absolute Potential: 343 MCFPD; n .75COMPANY Artes Oil & Gas CompanyADDRESS Box 370, Farmington, New Mexico

AGENT and TITLE

WITNESSED

COMPANY

Original Signed By

Carl E. Jameson

Carl E. Jameson, District Engineer

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.
- $F_{pv}$  = 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  $P_t$ .