

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool San Juan Formation San Juan County San Juan  
Initial I Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 7-23-64  
Company Antec Oil & Gas Company Lease XXXXXXXXXX Well No. 10 3"  
Unit C Sec. 20 Twp. 34N Rge. 12E Purchaser Southern Union Gas  
Casing 4-1/2 Wt. 20.5 O.D. 4.000 Set at 7300 Perf. 7301 To 7303  
Tubing 2-1/2 Wt. 4.7 I.D. 1.995 Set at 7303 Perf. Open ended To \_\_\_\_\_  
Gas Pay: From 7301 To 7303 L 7303 xG .70 GL 2097 Bar.Press. \_\_\_\_\_  
Producing Thru: Casing \_\_\_\_\_ Tubing I Type Well Single Gas  
Single-Bradenhead-G. G. or G.O. Dual \_\_\_\_\_  
Date of Completion: 7-22-64 Packer None Reservoir Temp. \_\_\_\_\_

## OBSERVED DATA

Tested Through (Prover) (Choke) (Meter)

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

| No. | Flow Data            |                        |             |             |           | Tubing Data |              | Casing Data |              | Duration of Flow Hr. |
|-----|----------------------|------------------------|-------------|-------------|-----------|-------------|--------------|-------------|--------------|----------------------|
|     | (Prover) (Line) Size | (Choke) (Orifice) Size | Press. psig | Diff. $h_w$ | Temp. °F. | Press. psig | Temp. °F.    | Press. psig | Temp. °F.    |                      |
| SI  | <u>7 days</u>        |                        |             |             |           | <u>2097</u> | <u>60-65</u> | <u>2097</u> | <u>60-65</u> |                      |
| 1.  | <u>2 days</u>        | <u>3/4</u>             |             |             |           | <u>2097</u> | <u>60-65</u> | <u>2097</u> | <u>60-65</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 $F_t$ | Gravity Factor $F_g$ | Compress. Factor $F_{pv}$ | Rate of Flow Q-MCFPD @ 15.025 psia |
|-----|-----------------------|------------------|---------------|-------------------------|----------------------|---------------------------|------------------------------------|
| 1.  | <u>12.35</u>          |                  | <u>2097</u>   |                         | <u>.650</u>          | <u>1.433</u>              | <u>300</u>                         |
| 2.  |                       |                  |               |                         |                      |                           |                                    |
| 3.  |                       |                  |               |                         |                      |                           |                                    |
| 4.  |                       |                  |               |                         |                      |                           |                                    |
| 5.  |                       |                  |               |                         |                      |                           |                                    |

## PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.  
Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
 $F_c$  \_\_\_\_\_ ( $1-e^{-s}$ )

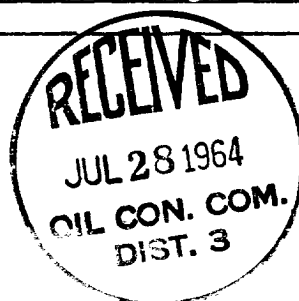
Specific Gravity Separator Gas \_\_\_\_\_  
Specific Gravity Flowing Fluid \_\_\_\_\_  
 $P_c$  2097  $P_c^2$  4,398,409

| No. | $P_w$<br>$P_t$ (psia) | $P_t^2$ | $F_c Q$ | $(F_c Q)^2$ | $(F_c Q)^2 (1-e^{-s})$ | $P_w^2$          | $P_c^2 - P_w^2$ | Cal. $P_w$ | $\frac{P_w}{P_c}$ |
|-----|-----------------------|---------|---------|-------------|------------------------|------------------|-----------------|------------|-------------------|
| 1.  | <u>2097</u>           |         |         |             |                        | <u>4,398,409</u> |                 |            |                   |
| 2.  |                       |         |         |             |                        |                  |                 |            |                   |
| 3.  |                       |         |         |             |                        |                  |                 |            |                   |
| 4.  |                       |         |         |             |                        |                  |                 |            |                   |
| 5.  |                       |         |         |             |                        |                  |                 |            |                   |

Absolute Potential: 340 MCFPD; n .75COMPANY Antec Oil & Gas CompanyADDRESS Box 9710, Farmington, New MexicoAGENT and TITLE Original Signed By Carl E. Jameson, District EngineerWITNESSED Carl E. Jameson

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  $P_t$ .