

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Blanco Formation Mesa Verde County San Juan  
Initial y Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test Sept. 30, 1957  
Company Southern Union Gas Co. Lease Jaquez Well No. 1  
Unit M Sec. 6 Twp. 31N Rge. 8W Purchaser Southern Union Gas Co.  
Casing 7 5/8" Wt. 26.4 I.D. 6.969 Set at 0.3180  
52" Wt. 15.5 I.D. 4.950 Set at 2969-5655 Perf. 1635 To 5598  
Tubing 2 3/8" Wt. 4.7 I.D. 2.00 Set at 5600 Perf. 5570 To 5600  
Gas Pay: From 1635 To 5598 L. \_\_\_\_\_ xG 0.67 est. GL \_\_\_\_\_ Bar. Press. 12.0  
Producing Thru: Casing \_\_\_\_\_ Tubing \_\_\_\_\_ Type Well Single Gas  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: \_\_\_\_\_ Packer \_\_\_\_\_ 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 <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI										
1.						1099		1118		12 days
2.		3/4"	274		700	274	700	857		3 hours
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.	12.3650		286	0.9905	0.9463	1.029	3,411
2.							
3.					3214.7		
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> 1130 P<sub>c</sub> 1276.9  
P<sub>w</sub> 869 P<sub>w</sub> 755.1

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.						755.1	521.8		0.768
2.									
3.									
4.									
5.									

Absolute Potential: 6,625 MCFPD; n 0.75

COMPANY Southern Union Gas Co.  
ADDRESS P. O. Box 815, Farmington, New Mexico  
AGENT and TITLE Gilbert Roland, Jr.  
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.

$F_{pv}$  = 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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