

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Blanco Mesa Verde Formation Mesa Verde County Rio Arriba  
Initial X Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 6-30-58  
Company Southern Union Gas Co. Lease San Juan Unit 29-7 Well No. #69  
Unit H Sec. 25 Twp. 29 Rge. 7 Purchaser El Paso Natural Gas Co.  
Casing 7-5/8" 26.404 6.969 3787 KB C.H. 5432 5578  
5 1/2" Wt. 15.54 I.D. 4.950 Set at 5983 KB Perf. P.L. 5764 To 5860  
Tubing 2-3/8" Wt. 4.7 I.D. 1.995 Set at 5935 Perf. 5920 To 5935  
Gas Pay: From 5432 To 5860 L \_\_\_\_\_ xG 0.67 -GL \_\_\_\_\_ Bar.Press. 12.0  
Producing Thru: Casing \_\_\_\_\_ Tubing X Type Well Single Gas  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: 6-15-58 Packer \_\_\_\_\_ Reservoir Temp. \_\_\_\_\_

## OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) Type Taps \_\_\_\_\_

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						1038		1038		15 days
1.		3/4"	379		67°	379	67°	866		3 hour
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.	12.3650		391	0.9933	0.9463	1.042	4,735
2.							
3.							
4.							
5.							

## PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.  
Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
P<sub>c</sub> \_\_\_\_\_ (1-e<sup>-s</sup>) \_\_\_\_\_

Specific Gravity Separator Gas \_\_\_\_\_  
Specific Gravity Flowing Fluid \_\_\_\_\_  
P<sub>c</sub> 1050 P<sub>c</sub><sup>2</sup> 1102.5  
P<sub>w</sub> 878 P<sub>w</sub><sup>2</sup> 770.9

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.						770.9	331.6		.836
2.									
3.									
4.									
5.									

Absolute Potential: 11,648 MCFPD; n 0.75  
COMPANY Southern Union Gas Company  
ADDRESS P. O. Box 815, Farmington, New Mexico  
AGENT and TITLE G. L. Hoffman  
WITNESSED Bill Rischard  
COMPANY El Paso Natural Gas Co.

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.

$F_t$  = 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  $P_t$ .

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<b>AZTER TOWNSHIP OFFICE</b>	
No.	3
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