

## NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Aaled Formation Pictured Cliffs County San Juan  
Initial X Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test September 24, 1957  
Company Southern Union Gas Company Lease Albright Well No. 4  
Unit B Sec. 22 Twp. 29N Rge. 10W Purchaser Southern Union Gas Company  
Casing 5 1/2" Wt. 15.5 I.D. 4.950 Set at 2049 Perf. 1938 To 2008  
Tubing 1" Wt. 1.7 I.D. \_\_\_\_\_ Set at 1996 Perf. 1976 To 1996  
Gas Pay: From 1938 To 2008 L \_\_\_\_\_ xG 0.67 Est. -GL \_\_\_\_\_ Bar.Press. 12.0  
Producing Thru: Casing X Tubing \_\_\_\_\_ Type Well Single - Gas  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: August 31, 1957 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										25 days
1.		3/4"	436		66°	651		655		3 hours
2.						448		436	66°	
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		448	0.9943	0.9463	1.050	51.73
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> 667 P<sub>c</sub> 444.9

P<sub>w</sub> 460 P<sub>w</sub> 211.6

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.						211.6	233.3		0.688
2.									
3.									
4.									
5.									

Absolute Potential: 9.468 MCFPD; n 0.85

COMPANY Southern Union Gas Company  
ADDRESS P. O. Box 815 Farmington, New Mexico  
AGENT and TITLE Vernon J. Lowe Asst. Drilling Superintendent  
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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