

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool South Blanco Formation Pictured Cliffs County San Juan  
Initial x Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test Sept. 26, 1957  
Company Southern Union Gas Co. Lease Navajo Indian Well No. 1-B  
Unit u Sec. 30 Twp. 27N Rge. 8W Purchaser \_\_\_\_\_  
Casing 5 1/2" Wt. 15.5 I.D. 4.950 Set at 2117 Perf. 2000 To 2060  
Tubing 1" Wt. 1.7 I.D. \_\_\_\_\_ Set at 2046 Perf. 2026 To 2046  
Gas Pay: From 2000 To 2060 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: Sept. 3, 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) <del>(Choke)</del> Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						701		701		23 days
1.		3/4"	266		67°	318		266	67°	3 hours
2.										
3.										
4.										
5.										

## FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	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		278	0.9933	0.9463	1.030	3,328
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> 713 P<sub>c</sub><sup>2</sup> 508.4  
P<sub>w</sub> 330 P<sub>w</sub><sup>2</sup> 108.9

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.						108.9	399.5		0.464
2.									
3.									
4.									
5.									

Absolute Potential: 4077 MCFPD; n 0.85

COMPANY Southern Union Gas Company  
ADDRESS P. O. Box 815, Farmington, New Mexico  
AGENT and TITLE Gilbert Noland, Jr., Ass't. Dir., Supt.  
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<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  $P_p$  cannot be taken because of manner of completion or condition of well, then  $P_p$  must be calculated by adding the pressure drop due to friction within the flow string to  $P_t$ .

OIL CONSERVATION COMMISSION  
 AZTEC DISTRICT OFFICE  
 No. Copies Received 3  
 State Land Office