

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool South Blanco Formation Pictured Cliffs County San Juan  
Initial X Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test May 9, 1959  
Company Southern Union Gas Company Lease Navajo Indian Well No. 3-B  
Unit N Sec. 19 Twp. 27N Rge. 8W Purchaser Southern Union Gas Company  
Casing 7-5/8" Wt. 26.4 I.D. 6.969 Set at 2170-4546 Perf. 4280 To 4472  
Tubing 2-3/8" Wt. 4.7 I.D. 1.995 Set at 4345 Perf. 4330 To 4345  
Gas Pay: From 4280 To 4472 L 4330 xG 0.67 Ret. GL 2901 Bar. Press. 11.0  
Producing Thru: Casing \_\_\_\_\_ Tubing X Type Well Gas-Gas Dual  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: April 20, 1959 Packer 4156 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						738		738		15 days
1.			3/4"	66	60	68	60			3 hours
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-MCFD @ 15.025 psia
1.	12,3650		78	1,000	0.9463	1,000	913
2.							
3.							
4.							
5.							

## PRESSURE CALCULATIONS

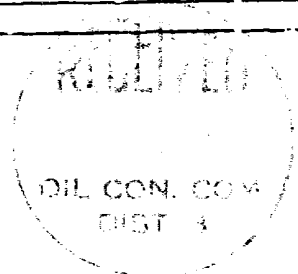
Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.  
Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
P<sub>c</sub> \_\_\_\_\_ (1-e<sup>-s</sup>)

Specific Gravity Separator Gas \_\_\_\_\_  
Specific Gravity Flowing Fluid \_\_\_\_\_  
P<sub>c</sub> 750 P<sub>c</sub> 563  
P<sub>w</sub> 80 P<sub>w</sub> 6.4

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.						6.4	557		
2.									
3.									
4.									
5.									

Absolute Potential: 915 MCFPD; n 0.85  
COMPANY SOUTHERN UNION GAS COMPANY  
ADDRESS P. O. Box 815 Farmington, New Mexico  
AGENT and TITLE Thomas E. Fermo, Engineer  
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.

$F_{pv}$  = 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  $P_t$ .

OIL CONSERVATION COMMISSION		
AZTEC DISTRICT OFFICE		
No. Copies Received	5	
DATE RECEIVED		
Operator	2	
Santa Fe	/	
Proration State	/	
State Land Office	/	
U. S. G. S.	/	
Transporter	/	
File	/	