

## NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Tapacito Pictured Cliffs Formation Pictured Cliffs County Rio Arriba  
Initial X Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test August 3, 1959  
Company SOUTHERN UNION GAS COMPANY Lease Jicarilla Well No. 4-B  
Unit I Sec. 25 Twp. 26N Rge. 4W Purchaser SOUTHERN UNION GAS COMPANY  
Casing 5 1/2" Wt. 15.5# I.D. 4.950 Set at 3906' Perf. 3760-3810 To 3832-5842  
Tubing 2-3/8" Wt. 4.7# I.D. 1.995 Set at 3730' Perf. 3810' To 3730'  
Gas Pay: From 3760 To 3810 L \_\_\_\_\_ xG \_\_\_\_\_ -GL \_\_\_\_\_ Bar.Press. 12.0  
Producing Thru: Casing \_\_\_\_\_ Tubing \_\_\_\_\_ Type Well Single - Gas  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: July 21, 1959 Packer \_\_\_\_\_ Reservoir Temp. \_\_\_\_\_

## OBSERVED DATA

Tested Through ~~3/4"~~ (Choke) ~~2-3/8"~~ Type Taps \_\_\_\_\_

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. $h_w$	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI										
1.		<u>3/4"</u>	<u>452</u>		<u>65</u>	<u>1028</u>		<u>1028</u>		<u>7 days</u>
2.								<u>835</u>		<u>3 hrs.</u>
3.										
4.										
5.										

## FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w P_f}$	Pressure psia	Flow Temp. Factor $F_t$	Gravity Factor $F_g$	Compress. Factor $F_{pv}$	Rate of Flow Q-MCFPD @ 15.025 psia
1.	<u>12.3650</u>		<u>463</u>	<u>0.9952</u>	<u>0.9463</u>	<u>1.051</u>	<u>5,666</u>
2.							
3.							
4.							
5.							

## PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.  
Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
 $P_c$  \_\_\_\_\_  $(1-e^{-S})$  \_\_\_\_\_

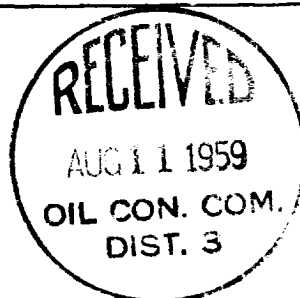
Specific Gravity Separator Gas \_\_\_\_\_  
Specific Gravity Flowing Fluid \_\_\_\_\_  
 $P_c$  1040  $P_c^2$  1081  
 $P_w$  847  $P_w^2$  717

No.	$P_w$ $P_t$ (psia)	$P_t^2$	$F_c Q$	$(F_c Q)^2$	$(F_c Q)^2$ $(1-e^{-S})$	$P_w^2$	$P_c^2 - P_w^2$	Cal. $P_w$	$P_w$ $P_c$
1.									
2.									
3.									
4.									
5.									

Absolute Potential: 14,278 MCFPD; n 0.85

COMPANY SOUTHERN UNION GAS COMPANY  
ADDRESS P. O. Box 815 Farmington, New Mexico  
AGENT and TITLE Thomas E. Fanno 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.

$F_{pv}$  = 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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