

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Tupacito Formation Pictured Cliff County San Arriba  
Initial A Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 8-6-56  
Company Southern Union Gas Company Lease Jicarilla Well No. 4 A  
Unit \_\_\_\_\_ Sec. 2 Twp. 25 N Rge. 5 E Purchaser Southern Union Gas Company  
Casing 5 1/2" Wt. 16.5 I.D. 4.950 Set at 2262 Perf. 2976 To 3036  
Tubing 2 3/8" Wt. 1.75 I.D. 2" Set at 2976 Perf. 2976 To 2976  
Gas Pay: From 2262 To 3036 L 2976 xG 0.570 -GL \_\_\_\_\_ Bar.Press. 11.0  
Producing Thru: Casing \_\_\_\_\_ Tubing A Type Well Single Gas  
Date of Completion: 7-3-56 Packer \_\_\_\_\_ Single-Bradenhead-G. G. or G.O. Dual  
Reservoir Temp. Single

OBSERVED DATA

Tested Through (Prover) (Choke) (Meters) 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										
1.		<u>3/4"</u>	<u>129</u>		<u>63</u>	<u>129</u>	<u>63</u>	<u>129</u>	<u>217</u>	<u>3 hours</u>
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.	<u>12.357</u>		<u>131</u>	<u>0.9971</u>	<u>0.949</u>	<u>1.03</u>	<u>1.518</u>
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.  
Grav. 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> 1042 P<sub>c</sub> 1085.76  
P<sub>w</sub> 22

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.						<u>51.94</u>	<u>1033.73</u>		
2.									
3.									
4.									
5.									

Absolute Potential: 1.613 MCFPD; n 0.85  
COMPANY \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
AGENT and TITLE \_\_\_\_\_  
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  $P_t$ .

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