

## NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Basin Dakota Formation Dakota County San Juan  
Initial XX Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 11-10-62  
Company Southern Union Production Co. Lease Angel Peak Well No. 22-B  
Unit G Sec. 13 Twp. 28 North Rge. 11 West Purchaser Southern Union Gas Company  
Casing 4 1/2 Wt. 10.50 I.D. 4.052 Set at 6507 Perf. 6301 To 6499  
Tubing 1 1/2 Wt. 2.90 I.D. 1.610 Set at 6427 Perf. 6412 To 6427  
Gas Pay: From 6301 To 6499 L 6412 xG .700 -GL 11.88 Bar.Press. 12.0  
Producing Thru: Casing \_\_\_\_\_ Tubing XX Type Well Single Gas  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: 11-3-62 Packer None Reservoir Temp. \_\_\_\_\_

## OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) Type Taps \_\_\_\_\_

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						1845		1852		7 days
1.	2"	3/4"	282		70a	282	70a	1091		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-MCFPD @ 15.025 psia
1.	12.3650		294	.9905	.9258	1.032	3440
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> 1864 P<sub>c</sub><sup>2</sup> 3474.5

No.	P <sub>w</sub> P <sub>t</sub> (psia)	P <sub>c</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.						1216.6	2257.9		592
2.									
3.									
4.									
5.									

Absolute Potential: 4752 MCFPD; n .75

COMPANY Southern Union Production Company  
ADDRESS P.O. Box 808, Farmington, New Mexico  
AGENT and TITLE Verne Rockhold, Jr. Engineer  
WITNESSED Verne Rockhold  
COMPANY Southern Union Production Company

REMARKS

cc: (3) New Mexico Oil Conservation Commission

(1) Mr. Paul Clote

(1) Mr. L. S. Muennink

(1) Mr. Val Ripper

(1) Mr. Bob Corliss

(1) Mr. Rudy Motte

(1) File

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## 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  $P_t$ .