

## 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 1-11-63  
Company Southern Union Production Lease Mangum Well No. 1  
Unit E Sec. 27 Twp. 29-N Rge. 11-W Purchaser Southern Union Gas Company  
Casing 4 1/2 Wt. 10.50 I.D. 4.052 Set at 6350 Perf. 6102 To 6214  
Tubing 1 1/2 Wt. 2.90 I.D. 1.610 Set at 6107 Perf. 6097 To 6107  
Gas Pay: From 6102 To 6214 L 6097 xG 700 -GL 4268 Bar.Press. 12.00  
Producing Thru: Casing \_\_\_\_\_ Tubing \_\_\_\_\_ Type Well Single Gas  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: 1-4-63 Packer \_\_\_\_\_ Reservoir Temp. \_\_\_\_\_

## OBSERVED DATA

Tested Through (~~Perfor~~) (Choke) (~~Water~~)

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						1982		1981		7 day
1.	2 <sup>m</sup>	3/4 <sup>m</sup>	213		62	213	62	853		3 hrs
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		225	.9981	.9258	1.026	2638
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> 1994 P<sub>c</sub> 3976.0

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.						748.2	3227.8		434
2.									
3.									
4.									
5.									

Absolute Potential: 3084 MCFPD; n .75COMPANY Southern Union Production CompanyADDRESS Box 808, Farmington, New MexicoAGENT and TITLE Verne Rockhold, Jr. EngineerWITNESSED Val RipperCOMPANY Southern Union Production 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  $P_t$ .