

## 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 11/18/63  
Company Southern Union Production Co. Lease Nickson Well No. 10  
Unit P Sec. 14 Twp. 26-N Rge. 8-W Purchaser El Paso Natural Gas Company  
Casing 1-1/2 Wt. 11.60 I.D. 4.000 Set at 6765 Perf. 6516 To 6714  
Tubing 1-1/2 Wt. 2.90 I.D. 1.610 Set at 6618 Perf. 6608 To 6618  
Gas Pay: From 6516 To 6714 L 6608 xG .735 -GL 4857 Bar.Press. 12.0  
Producing Thru: Casing \_\_\_\_\_ Tubing XX Type Well Single Gas  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: 11/11/63 Packer \_\_\_\_\_ Reservoir Temp. \_\_\_\_\_

## OBSERVED DATA

Tested Through (PROVER) (Choke) XXXXXX 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						2052		1973		7 days
1.	2"	3/4	193		73°	193	73°	649		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		205	.9877	.9035	1.023	2314
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> 2064 P<sub>c</sub> 4260.1

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.						436.9	3523.2		.320
2.									
3.									
4.									
5.									

Absolute Potential: 2510 MCFPD; n .75  
COMPANY Southern Union Production Company  
ADDRESS P. O. Box 808 - Farmington, New Mexico  
AGENT and TITLE Verne Rockhold - Jr. Engineer Original Signed By  
WITNESSED Herman McAnally VERNE ROCKHOLD  
COMPANY El Paso Natural Gas Company

## REMARKS

- (3) New Mexico Oil Conservation Commission
- (1) Mr. Paul J. Glote - Dallas
- (1) El Paso Natural Gas Company - Proration Dept., P. O. Box 1492, El Paso, Texas
- (2) Mr. H. L. Kindricks - Box 990, Farmington, New Mexico
- (1) File

## 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/day. @ 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  $P_t$ .