

## 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 December 15, 1961  
Company SOUTHERN UNION PRODUCTION CO. Lease MC CORD Well No. 3  
Unit \_\_\_\_\_ Sec. 34 Twp. 30 N Rge. 13 W Purchaser SOUTHERN UNION GAS CO.  
Casing 4 1/2 Wt. 10.50# I.D. 4.090 Set at 6486 Perf. 6402-6422 To 6232-6258  
6412-6414 To 6331-6333  
Tubing 1 1/2 Wt. 2.90# I.D. 1.610 Set at 6250 Perf. 6314-6350 To 6244-6246  
Gas Pay: From 6232 To 6422 L 6250 xG .67 -GL 4187 Bar.Press. 12.0  
Producing Thru: Casing \_\_\_\_\_ Tubing XX Type Well Single Gas  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: 11-28-61 Packer \_\_\_\_\_ Reservoir Temp. \_\_\_\_\_

## OBSERVED DATA

Tested Through (Packer) (Choke) (XXXXXX)

Type Taps \_\_\_\_\_

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	<del>(Packer)</del> (Line) Size	(Choke) <del>(Orifice)</del> Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						1839		1851		7 days
1.	2"	3/4"	276			276	68 deg.	805		3 hrs.
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		288	.9924	.9463	1.030	3444
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> 1863 P<sub>c</sub><sup>2</sup> 3470.77

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.							667.49		.4385
2.									
3.									
4.									
5.									

Absolute Potential: 4005 MCFPD; n .75

COMPANY SOUTHERN UNION PRODUCTION COMPANY  
ADDRESS Box 808 - Farmington, New Mexico  
AGENT and TITLE L.S. MUENNINK - PRODUCTION SUPT.  
WITNESSED Val Ripper  
COMPANY SOUTHERN UNION PRODUCTION CO.

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  $P_t$ .

STATE OF NEW MEXICO  
COUNTY OF SANTA FE  
CITY OF SANTA FE  
I, the undersigned, Clerk of the County of Santa Fe, do hereby certify that the within and foregoing is a true and correct copy of the original as the same appears from the records of said County.

WITNESSED my hand and the seal of said County, at Santa Fe, New Mexico, this 17th day of May, 1907.

CLERK OF COUNTY OF SANTA FE