

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Blanco Mesa Verde Formation Mesa Verde County Rio Arriba  
Initial X Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 8-6-59  
Company Caulkins Oil Company Lease Breech "r" Well No. MD-4  
Unit A Sec. 33 Twp. 27N Rge. 6W Purchaser Southern Union Gas Company  
Casing 5 1/8" Wt. 17# I.D. 4.892 Packer 7390' Set at 7800' Perf. 5454' To 5594'  
Tubing 1 1/2" Wt. 2.4# I.D. 1.380 Set at 5507' Perf. 5507' To \_\_\_\_\_  
Gas Pay: From 5454' To 5594' L 5507' xG .660 -GL 3635 Bar.Press. 12#  
Producing Thru: Casing No Tubing Yes Type Well G. G. Dual  
Date of Completion: 7-29-59 Packer 7390' Single-Bradenhead-G. G. or G.O. Dual  
Reservoir Temp. \_\_\_\_\_

OBSERVED DATA

Tested Through (Packer) (Choke) (Packer) 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						1085		1085		7 day SI
1.		3/4"	72		54	72	54	380		3 hr test
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.	14.1603		84	1.0058	.9335	1.000	1,130
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.  
Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
P<sub>c</sub> \_\_\_\_\_ (1-e<sup>-s</sup>)  
Specific Gravity Separator Gas \_\_\_\_\_  
Specific Gravity Flowing Fluid \_\_\_\_\_  
P<sub>c</sub> \_\_\_\_\_ P<sub>c</sub> \_\_\_\_\_

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.						153.664	1,049.745		.357
2.									
3.									
4.									
5.									

Absolute Potential: 1.277 MCFPD; n .75  
COMPANY Caulkins Oil Company  
ADDRESS P. O. Box 967, Farmington, New Mexico  
AGENT and TITLE Charles Dargatzis Production Foreman  
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<sub>t</sub> = 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  $P_f$ .

[illegible]