

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool South Blanco Formation Dakota County Rio Arriba  
Initial X Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 8-6-59  
Company Caulkins Oil Company Lease Breech "F" Well No. MD-4  
Unit A Sec. 33 Twp. 27N Rge. 6W Purchaser Southern Union Gas Company  
Casing 5 1/8" Wt. 15.5# I.D. 4.950 Set at 7398 Perf. 7448 To 7710  
Tubing 1 1/4" Wt. 2.4 I.D. 1.380" Set at 7398 Perf. 7394 To 7398  
Gas Pay: From 7448 To 7710 L 7394 xG .660 -GL 4880 Bar.Press. 12#  
Producing Thru: Casing No Tubing Yes Type Well G. G. Dual  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: 7-29-59 Packer 7390 Reservoir Temp. \_\_\_\_\_

## OBSERVED DATA

Tested Through (Plunger) (Choke) (Motor) Type Taps \_\_\_\_\_

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press.	Diff.	Temp.	Press.	Temp.	Press.	Temp.	
			psig	h <sub>w</sub>	°F.	psig	°F.	psig	°F.	
SI						2077				7 day SI 3 hr test.
1.		3/4"				257	62			
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.	14.1605		269	.9981	.9535	1.028	3,727
2.							
3.							
4.							
5.							

## PRESSURE CALCULATIONS

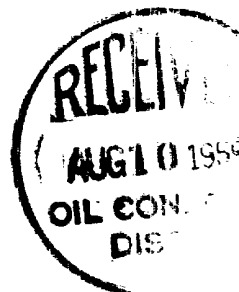
Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.  
Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
P<sub>c</sub> 24.62 (1-e<sup>-s</sup>) 0.281  
Specific Gravity Separator Gas \_\_\_\_\_  
Specific Gravity Flowing Fluid \_\_\_\_\_  
P<sub>c</sub> 2089 P<sub>c</sub> 4,363,921

No.	$\frac{P_w}{F_t}$ (psia)	P <sub>t</sub> <sup>2</sup>	F <sub>c</sub> Q	(F <sub>c</sub> Q) <sup>2</sup>	$\frac{(F_c Q)^2}{(1-e^{-s})}$	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>	$\frac{P_w}{P_c}$
1.	269	72.4	91.8	8,427.2	2,368.0	2,440.4	1,923.5	1562	.748
2.									
3.									
4.									
5.									

Absolute Potential: 6,892 MCFPD; n (2.27).75

COMPANY Caulkins Oil Company  
ADDRESS P. O. Box 967, Farmington, New Mexico  
AGENT and TITLE Charles J. Jorgensen 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

$P_t$  = 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  $P_t$ .

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