

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Blanco Mesa Verde Formation Mesa Verde County Rio Arriba  
Initial Yes Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 9-30-63  
Company Caulkins Oil Company Lease Breesech "EM" Well No. MD 64  
Unit A Sec. 1 Twp. 26 N Rge. 6 W Purchaser El Paso Natural Gas Company  
Casing 5 1/2" Wt. 15.5 I.D. 4.95 Set at 7711 Perf. 4924 To 5482  
Tubing 1 1/2" Wt. 2.4 I.D. 1.3 Set at 5374 Perf. 5374 To \_\_\_\_\_  
Gas Pay: From 4924 To 5482 L 5374 xG .600 -GL 3289 Bar.Press. 12  
Producing Thru: Casing \_\_\_\_\_ Tubing Yes Type Well Gas - Gas Dual  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: 9-18-63 Packer 7340 Reservoir Temp. 150° F

## OBSERVED DATA

Tested Through (~~2500 PSI~~) (Choke) (~~2500 PSI~~) 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						990		989		7 day SI
1.		3/4"				93		649		3 hours
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		105	1.000	1.000	1.010	1502
2.							
3.							
4.							
5.							

## PRESSURE CALCULATIONS

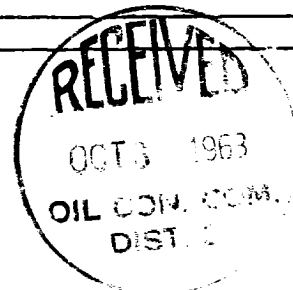
Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.  
Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
F<sub>c</sub> \_\_\_\_\_ (1-e<sup>-S</sup>)  
Specific Gravity Separator Gas .600  
Specific Gravity Flowing Fluid \_\_\_\_\_  
P<sub>c</sub> 1002 P<sub>c</sub><sup>2</sup> 1,004,004

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.						436,921	567,083		.659
2.									
3.									
4.									
5.									

Absolute Potential: 2304 MCFPD; n (1.77)<sup>n</sup> 1.5345

COMPANY Caulkins Oil Company  
ADDRESS P. O. Box 780, Farmington, New Mexico  
AGENT and TITLE Frank T. Perry Superintendent  
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  $P_t$ .