

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Blanco Pictured Cliffs Formation Pictured Cliffs County San Juan  
Initial X Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test May 13, 1960  
Company Pan American Petroleum Corp. Lease Elliott Gas Unit "K" Well No. 1  
Unit 0 Sec. 26 Twp. 30N Rge. 9W Purchaser El Paso Natural Gas Company  
Casing 4-1/2 Wt. 9.5 I.D. 4.090 Set at 2585 Perf. 2479 To 2497  
Tubing 1-1/4 Wt. 2.3 I.D. 1.368 Set at 2485 Perf. None To \_\_\_\_\_  
Gas Pay: From 2479 To 2497 L 2485 xG 0.70(est) GL 1740 Bar.Press. 12  
Producing Thru: Casing X Tubing \_\_\_\_\_ Type Well Single Gas  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: 5-6-60 Packer None Reservoir Temp. 90° F

## OBSERVED DATA

Tested Through (H2O2) (Choke) (H2O2) Type Taps \_\_\_\_\_

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Line) Size	(Choke) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI	Shut in 7 days					1011		1011		
1.	2"	1/4"	293		60 (est)	333		309		3 hr.
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.	12.365		303	1.000	0.9258	1.036	3617
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> 1043 P<sub>c</sub><sup>2</sup> 1,087,849

No.	$\frac{P_w}{P_t}$ (psia)	$P_t^2$	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.						120,409	967,440		
2.									
3.									
4.									
5.									

Absolute Potential: 3,995 MCFPD; n .85

COMPANY Pan American Petroleum Corporation

ADDRESS Box 487, Farmington, New Mexico

AGENT and TITLE H. H. Bauer, Jr., Area Engineer *H. H. Bauer, Jr.*

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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