

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Angels Peak-Dakota Formation Dakota County San Juan  
Initial I Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test November 13, 1959  
Company Pan American Petroleum Corp. Lease J. C. Davidson "G" Well No. 1  
Unit H Sec. 21 Twp. 28N Rge. 10W Purchaser Southern Union Gas Company  
Casing 4-1/2 Wt. 9.5 I.D. 4.090 Set at 6675 Perf. Circumferential abrasive cuts at 6582 ss and 6541  
Tubing 2-3/8 Wt. 4.7 I.D. 1.995 Set at 6513 Perf. open ended; no perforations  
Gas Pay: From 6519 To 6596 L 6513 x 0.70 (est.) -GL 4559 Bar.Press. 12  
Producing Thru: Casing \_\_\_\_\_ Tubing I Type Well Single Gas  
Date of Completion: 10-28-59 Packer None Single-Bradenhead-G. G. or G.O. Dual  
Reservoir Temp. 130° F

## OBSERVED DATA

Tested Through (20000) (Choke) (20000) 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	Start in 16 days									
1.	2"	3/4"	530		130° (est.)	737		2023		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.	12.365		532	1.000	0.9258	1.048	690
2.							
3.							
4.							
5.							

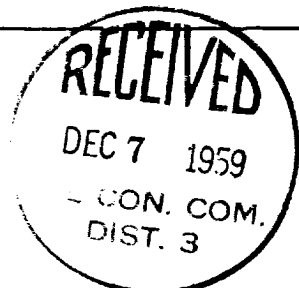
## PRESSURE CALCULATIONS

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> 2031 P<sub>c</sub> 4,124,961

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.						1,937,664	2,187,297		
2.									
3.									
4.									
5.									

Absolute Potential: 10,465 MCFPD; n 0.75  
COMPANY Pan American Petroleum Corporation  
ADDRESS Box 487, Farmington, New Mexico  
AGENT and TITLE E. H. Bauer, Jr., Area Engineer *EHB*  
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.
- $F_{pv}$  = 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  $P_t$ .

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