

Revised 12-1-55

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Angels Peak Dakota Formation Dakota County San Juan  
Initial X Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test May 31, 1960  
Company Pan American Petroleum Corporation lease J. C. Davidson "H" Well No. 1  
Unit H Sec. 22 Twp. 20N Rge. 10W Purchaser Southern Union Gas Company  
Casing 4-1/2 Wt. 9.5 I.D. 4.090 Set at 6662 Perf. 6503 To 6539  
Tubing 2-3/8 Wt. 4.70 I.D. 1.995 Set at 6480 Perf. None To \_\_\_\_\_  
Gas Pay: From 6503 To 6539 L 6480 xG 700 (est) -GL 4536 Bar.Press. 12  
Producing Thru: Casing \_\_\_\_\_ Tubing X Type Well Single - gas  
Single-Bradenhead-G. G. or G.O. Dual \_\_\_\_\_  
Date of Completion: 5-22-60 Packer None Reservoir Temp. 140° F

## OBSERVED DATA

Tested Through (Diameter) (Choke) (Restrictor) Type Taps \_\_\_\_\_

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Line) Size	(Choke) (Restrictor) Size	Press. psig	Diff. $h_w$	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI	<u>Start in 9 days</u>					<u>1970</u>		<u>1970</u>		
1.	<u>2"</u>	<u>1/4"</u>	<u>678</u>		<u>10 (est)</u>	<u>769</u>		<u>1975</u>		<u>3 hours</u>
2.										
3.										
4.										
5.										

## FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w p_f}$	Pressure psia	Flow Temp. Factor $F_t$	Gravity Factor $F_g$	Compress. Factor $F_{pv}$	Rate of Flow Q-MCFPD @ 15.025 psia
1.	<u>12.365</u>		<u>690</u>	<u>1.000</u>	<u>0.9298</u>	<u>1.006</u>	<u>8978</u>
2.							
3.							
4.							
5.							

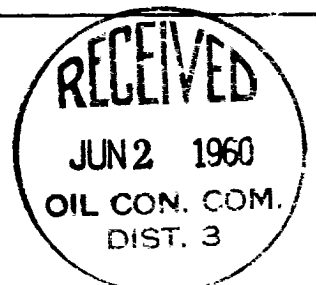
## PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.  
Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
 $F_c$  \_\_\_\_\_  $(1-e^{-s})$   
Specific Gravity Separator Gas \_\_\_\_\_  
Specific Gravity Flowing Fluid \_\_\_\_\_  
 $P_c$  1922  $P_c^2$  3,694,324

No.	$P_w$ $P_t$ (psia)	$P_t^2$	$F_c Q$	$(F_c Q)^2$	$(F_c Q)^2$ $(1-e^{-s})$	$P_w^2$	$P_c^2 - P_w^2$	Cal. $P_w$	$\frac{P_w}{P_c}$
1.						<u>2,918,569</u>	<u>1,409,759</u>		
2.									
3.									
4.									
5.									

Absolute Potential: 18,520 MCFPD; n 0.75  
COMPANY Pan American Petroleum Corporation  
ADDRESS Box 487, Farmington, New Mexico  
AGENT and TITLE B. H. Bauer, Jr., Area Engineer *B. 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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