

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Undesignated Dakota Formation Dakota County Rio Arriba
Initial X Annual _____ Special _____ Date of Test April 2, 1960
Company Pan American Petroleum Corporation Lease Jicarilla Contract 147 Well No. 1
Unit A Sec. 8 Twp. 25N Rge. 5W Purchaser Southern Union Gas Company
Casing 4-1/2 Wt. 11.6 I.D. 4.000 Set at 7530 Perf. 7166 To 7186
Tubing 2-3/8 Wt. 4.7 I.D. 1.995 Set at 7151 Perf. None To _____
Gas Pay: From 7166 To 7186 L 7151 xG .700 (est.) -GL 5006 Bar. Press. 12
Producing Thru: Casing _____ Tubing X Type Well Single-Gas
Single-Bradenhead-G. G. or G.O. Dual _____
Date of Completion: 2-13-60 Packer None Reservoir Temp. 157° F

OBSERVED DATA

Tested Through (2 inches) (Choke) (2 inches) Type Taps _____

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Line) Size	(Choke) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
1.	SI 47 days					2321		2321		
2.	2"	3/4"	126		60 (est)	126		499		1 hr.
3.										
4.										
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	12.365		138	1.000	.9258	1.015	1603
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
P_c _____ (1-e^{-s})

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 2333 P_c 5,442,889

No.	$\frac{P_w}{P_t}$ (psia)	P_t^2	F _c Q	(F _c Q) ²	$\frac{(F_c Q)^2}{(1-e^{-s})}$	P _w ²	P _c ² -P _w ²	Cal. P _w	$\frac{P_w}{P_c}$
1.						221,841	5,221,048		
2.									
3.									
4.									
5.									

Absolute Potential: 1654 MCFPD; n .75

COMPANY Pan American Petroleum Corporation

ADDRESS Box 487, Farmington, New Mexico

AGENT and TITLE R. M. Bauer, Jr., Area Engineer R. M. Bauer, Jr. by J. H. Hollingsworth

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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