

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 9-26-60
Company Pan American Petroleum Corp. Lease Gas Unit #1 State _____ Well No. 1
Unit _____ Sec. 2 Twp. 29N Rge. 9W Purchaser El Paso Natural Gas Company
Casing 4-1/2" Wt. 9.5 I.D. 4.09" Set at 3106 Perf. 3019-3029 Open 3037-3043
Tubing 1-1/4" Wt. 2.3 I.D. 1.380" Set at 3080 Perf. _____ To _____
Gas Pay: From 3019 To 3043 L 3031 xG 0.650 -GL 1970 Bar.Press. 12
Producing Thru: Casing _____ Tubing X Type Well Single Gas
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 9-21-60 Packer None Reservoir Temp. 118° F

OBSERVED DATA

Tested Through (Proven) (Choke) (Meter) Type Taps _____

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Proven) (Line) Size	(Choke) (Line) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI	7 Days					973		973		
1.	2"	3/4"	139	--	60°(est)	550	60°(est)	600	60°(est)	3 hrs.
2.										
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.	12.3650		151	1.000	0.9608	1.014	1819
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 0.65(est)
P_c 985 P_c² 970.225

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.						374,544	595,681		
2.									
3.									
4.									
5.									

Absolute Potential: 2754 MCFPD; n 0.85
COMPANY Pan American Petroleum Corporation
ADDRESS Box 480 - Farmington, New Mexico
AGENT and TITLE R. M. Bauer, Jr., Area Engineer
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 .