

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool West Kutz-Dakota Formation Dakota County San Juan
Initial X Annual _____ Special _____ Date of Test March 22, 1960
Company Pan American Petroleum Corporation Base V. W. McManus Well No. 1
Unit H Sec. 22 Twp. 28N Rge. 12W Purchaser _____
Casing 7" Wt. 20, 23, & 26 I.D. _____ Set at 5959 Perf. _____ To _____
Tubing 2-3/8" Wt. 4.7 I.D. _____ Set at 5768 Perf. open ended at 5768 To _____
Gas Pay: From 6039 To 6080 L 5768 xG 0.695 -GL 4009 Bar.Press. 12
Producing Thru: Casing _____ Tubing X Type Well G. O. Dual
Workover Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: March 22, 1960 Packer 5768 Reservoir Temp. 158° F
*5" liner 5816-6181. Perforated 6039-45; 6076-80.

OBSERVED DATA

Tested Through (PROVER) (Choke) (ROCK) 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 27 days					1990		—		
2.	2"	3/4"	136		60° est.	173		—		3 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		148	1.000	0.9292	1.016	1727
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 2802 P_c 4,006,004

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	P _w /P _c
1.	185	34225	16.237	263.640	66.701	100,926	3,907,078	318	
2.									
3.									
4.									
5.									

Absolute Potential: 1760 MCFPD; n 0.75
COMPANY Pan American Petroleum Corporation
ADDRESS Box 487, Farmington, New Mexico
AGENT and TITLE R. M. Bauer, Jr., Area Engineer *RMB*
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 .