

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Angels Peak Dakota Formation Dakota County San Juan
Initial X Annual _____ Special _____ Date of Test 1-21-60
Company Pan American Petroleum Corp. Lease C. M. Morris Gas Unit Well No. 1
Unit D Sec. 10 Twp. 27N Rge. 10W Purchaser _____
Casing 4-1/2" Wt. 11.6 I.D. 4.090 Set at 6678 Perf. 6566 to 6572 and 6584 To 6588
Tubing 2" Wt. 4.7 I.D. 1.995 Set at 6545 Perf. Open ended To _____
Gas Pay: From 6566 To 6588 L 6549 xG 0.70(est) GL 4584 Bar.Press. 12
Producing Thru: Casing _____ Tubing X Type Well Gas - single
Single-Bradenhead-G. G. or G.O. Dual _____
Date of Completion: 1-13-60 Packer None Reservoir Temp. 153°F

OBSERVED DATA

Tested Through (~~Pressure~~) (Choke) (~~Meter~~) Type Taps _____

No.	Flow Data			Tubing Data		Casing Data		Duration of Flow Hr.
	(Pressure) (Line) Size	(Choke) (Pressure) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	
SI	8 day Shut in					1964	1964	
1.	2"	3/4"	265		60(est)	280	60(est)	3 hr.
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.	12.365		277	1.000	.9258	1.032	3272
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 1976 P_c 3,904,576

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.						591,361	3,313,215		
2.									
3.									
4.									
5.									

Absolute Potential: 3701 MCFPD; n .75

COMPANY Pan American Petroleum Corporation

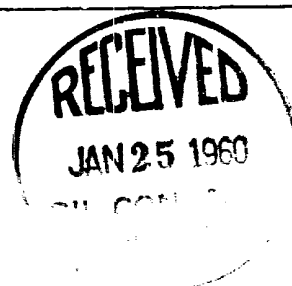
ADDRESS Box 487, Farmington, New Mexico

AGENT and TITLE R. M. Bauer, Jr., Area Engineer RMBauer Q.

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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