

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Blanco Mesaverde Formation Mesaverde County Rio Arriba
Initial X Annual _____ Special _____ Date of Test September 9, 1959
Company Southern Union Gas Company Lease San Juan Unit 29-6 Well No. 63-30
Unit A Sec. 30 Twp. 29N Rge. 6W Purchaser El Paso Natural Gas Company
Casing 5 1/2" / Liner Wt. 15.5# I.D. 4.950 Top @ 3198' Set at 5697 Perf. 4946 To 5628
Tubing 2-3/8" Wt. 4.7# I.D. 1.995 Set at 4990' Perf. 4987 To 4990
Gas Pay: From 4946 To 5628 L _____ xG _____ -GL _____ Bar.Press. 12.0
Producing Thru: Casing _____ Tubing X Type Well Single - Gas
Single-Bradenhead-G. G. or G.O. Dual _____
Date of Completion: August 26, 1959 Packer None Reservoir Temp. _____

OBSERVED DATA

Tested Through (PROVER) (Choke) (MECH) Type Taps _____

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						1068		538		14 days
1.		3/4"	364		71			370		3 hours
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		376	.9896	.9463	1.040	4.528
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 1080 P_c 1166
P_w 382 P_w 145

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.						145	1021		
2.									
3.									
4.									
5.									

Absolute Potential: 5.003 MCFPD; n 0.75

COMPANY SOUTHERN UNION GAS COMPANY
ADDRESS P. O. Box 815 Farmington, New Mexico
AGENT and TITLE Thomas E. Fenno Engineer
WITNESSED Frank Clark
COMPANY El Paso Natural Gas 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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