

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Undesignated Formation Pictured Cliffs County Rio Arriba
Initial X Annual _____ Special _____ Date of Test 12-4-59
Company T. H. McElvain Lease Federal Well No. 1
Unit H Sec. 12 Twp. 24N Rge. 7W Purchaser El Paso Natural Gas Co.
Casing 7" Wt. 20# I.D. 6.456 Set at 2555 Perf. 2401 To 2448
Tubing 2 3/8" Wt. 4.3# I.D. 1.995 Set at 2426 Perf. 2388 To 2394
Gas Pay: From 2401 To 2448 L _____ xG .65 -GL _____ Bar.Press. 12
Producing Thru: Casing _____ Tubing X Type Well Single - gas
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 11-26-59 Packer _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) 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						589		589		
1.		3/4"	164		60°	164	60°	279		3 hours
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		176	1.0	0.9608	1.018	2129
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 601 P_c^2 361.201

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.						84.681	276.520		.484
2.									
3.									
4.									
5.									

Absolute Potential: 2671 MCFPD; n .85
COMPANY T. H. McElvain
ADDRESS 220 Shelby Street, Santa Fe, New Mexico
AGENT and TITLE W.C. Wunnicke, Consulting Engineer
WITNESSED T. H. McElvain, F. B. Miller
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 .

[illegible]