

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Undesignated Formation Dakota County San Juan
Initial X Annual _____ Special _____ Date of Test 10/17/60
Company Southwest Production Company Lease Holloway Fed. Well No. #6
Unit K Sec. 18 Twp. 27N Rge. 11W Purchaser El Paso Natural Gas Company
Casing 5 1/2" Wt. 13.9 I.D. 4.990 Set at 6525 Perf. 6382 6370 To 6382 6380
Tubing 2 3/8 Wt. 4.70 I.D. 1.995 Set at 6360 Perf. _____ To 6360
Gas Pay: From 6380 To 6492 L 6390 xG .67 -GL 4261.2 Bar.Press. 12.0
Producing Thru: Casing - Tubing X Type Well Single- Gas
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 10-4-60 Packer - Reservoir Temp. _____

OBSERVED DATA

Tested Through (PRESS) (Choke) (PRESS) Type Taps _____

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						2075		2075		7-15
1.		1/4"	150		68	150	68	498		3-42
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.	12.3680		170	.9924	.9463	1.017	2,051
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 2075 P_c² 4305.6
P_w 910 P_w² 260.1

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.						260.1	4045.5		.280
2.									
3.									
4.									
5.									

Absolute Potential: 2,398 MCFPD; n .75
COMPANY Southwest Production Company
ADDRESS 162 Petroleum Center Bldg., Farmington, New Mexico
AGENT and TITLE George L. Hoffman, Production Foreman
WITNESSED _____
COMPANY _____

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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