

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Santa Fe Formation Pictured Cliffs County San Juan
Initial Y Annual _____ Special _____ Date of Test 9/23/59
Company Artes Oil and Gas Company Lease Arizona-Hicarilla Well No. 3
Unit I Sec. 35 Twp. 25N Rge. 15E Purchaser _____
Casing 1 1/2 Wt. 9.50 I.D. 1.070 Set at 3560 Perf. 3561-36 To X00-13
Tubing 2 Wt. 1.70 I.D. 1.015 Set at 3596 Perf. in collar To _____
Gas Pay: From 3584 To 3612 L _____ xG _____ -GL _____ Bar.Press. _____
Producing Thru: Casing _____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 9/23/59 Packer _____ Reservoir Temp. _____
7270 GL

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						753		929		7 days
1.						150	60	501	60	1 hour
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.	12.355		152	1.000	0.9600	1.020	1963
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 9.1 P_c 15.101

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.	101					102.001	724.640		
2.									
3.									
4.									
5.									

Absolute Potential: 2320 MCFPD; n 1.35

COMPANY Artes Oil and Gas Company
ADDRESS Box # 786, Paradox, New Mexico
AGENT and TITLE ORIGINAL SIGNED BY D. K. BRYANT D.K. Bryant, Production Engineer
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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