

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool South Plains Formation Permian Wakarusa County Rio Arriba

Initial X Annual _____ Special _____ Date of Test 8-19-59

Company Caulkins Oil Company Lease Breesh Well No. PMD 224

Unit A Sec. 13 Twp. 26N Rge. 7W Purchaser Southern Union Gas Company

Casing 7" Wt. 23 & 26 I.D. 6.366 Set at 7342 Perf. 6900 To 6940

2" Wt. 4.70 I.D. 1.995 Set at 5153 to 6302

Tubing 1" Wt. 1.68 I.D. 1.049 Set at 5153 Perf. 6302 To _____

Gas Pay: From 6900 To 6940 L 5153 * xG .660 -GL 2655 Bar.Press. 12

Producing Thru: Casing No Tubing Yes Type Well G. G. G. Triple

Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 8-11-59 Packer 4954 5154 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	
SI						1216			7 day SI
1.		3/4	70#			70#	44		3 hr. test
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.	14.1605		82	1.0158	.9535	1.011	1,136
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl. Specific Gravity Separator Gas _____
 Gravity of Liquid Hydrocarbons _____ deg. Specific Gravity Flowing Fluid _____
 P_c 50.40 (1-e^{-s}) 0.176 P_c 1228 P_c 1,507.9

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.	82	6.7	57.2	3271.8	3000.0	582.5	925.4	764	.622
2.					575.8				
3.									
4.									
5.									

Absolute Potential: 1,639 MCFPD; n 1.63^{0.75} 1.4425

COMPANY Caulkins Oil Company
 ADDRESS P. O. Box 967, Farmington, New Mexico
 AGENT and TITLE Charles D. [Signature] Production Foreman
 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} = Supercompressibility 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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