

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool South Blanco Pictured Cliffs Formation Pictured Cliffs County Rio Arriba
Initial X Annual _____ Special _____ Date of Test 11/4/57
Company Magnolia Petroleum Company Lease W. O. Hughes Well No. 4-A
Unit 0 Sec. 7 Twp. 24N Rge. 3W Purchaser Pacific Northwest
Casing 5 1/2" Wt. 14.4 I.D. 5.012 Set at 3130' Perf. 3002 To 3043
Tubing 2 3/8" Wt. 4.7 I.D. 1.995 Set at 3008' Perf. - To -
Gas Pay: From 3002 To 3043 L 3008' xG 0.680(est) GL - Bar. Press. 12 psia
Producing Thru: Casing _____ Tubing X Type Well single completion
Single-Bradenhead-G. G. or G.O. Dual _____
Date of Completion: 10/19/57 Packer None Reservoir Temp. -

OBSERVED DATA

Tested Through (Pressure) (Choke) (Pressure) Type Taps -

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Line) Size	(Choke) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						973	-	973	-	
1.	2"	.750	60	-	61	60	61	109	-	3 hrs.
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.	12.3650	-	72	.9990	.9393	-	835
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 0.680 (est)
P_c 985 P_c 970.2

No.	P _w	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.	121					14.6	955.6		0.150
2.									
3.									
4.									
5.									

Absolute Potential: 846 MCFPD; n 0.85COMPANY MAGNOLIA PETROLEUM COMPANYADDRESS P. O. BOX 2406, MERRIS, NEW MEXICOAGENT and TITLE Walter H. King - Gas EngineerWITNESSED -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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