

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Blanco Mesaverde Formation Mesaverde County San Juan
Initial X Annual _____ Special _____ Date of Test April 8, 1958
Company Southern Union Gas Company Lease Nordhans Well No. 4
Unit A Sec. 12 Twp. 3 1N Rge. 9W Purchaser _____
Casing 7 5/8" 26.4# 6.969 3480 8329 Perf. 5276 To 5780
5 1/2" Wt. 15.5# I.D. 4.950 Set at 8329 Perf. 5276 To 5780
Tubing 2" Wt. 4.7# I.D. 1.995 Set at 5750 Perf. 5720 To 5750
Gas Pay: From _____ To _____ L _____ xG 0.67 -GL _____ Bar.Press. 12.0
Producing Thru: Casing _____ Tubing X Type Well Single-Gas
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: Jan. 28, 1958 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										
1.		<u>3/4</u>	<u>339</u>		<u>69°F</u>	<u>1085</u>	<u>69°F</u>	<u>1085</u>		<u>10 days</u>
2.						<u>339</u>		<u>879</u>		<u>3 hours</u>
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.	<u>12.3650</u>		<u>351</u>	<u>0.9915</u>	<u>0.9463</u>	<u>1.037</u>	<u>4223</u>
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 _____

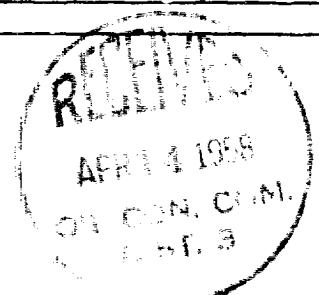
P_c 1097 P_c 1203
P_w 891 P_w 794

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.						<u>794</u>	<u>409</u>		<u>0.812</u>
2.									
3.									
4.									
5.									

Absolute Potential: 9,501 MCFPD; n 0.75

COMPANY Southern Union Gas Company
ADDRESS P. O. Box 815 Farmington, New Mexico
AGENT and TITLE Thomas E. Fenno, Jr. Engr.
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 .