NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Blanco Mesaverde Formation Mesa Verde County Rio Arriba

Initial X Annual ____ Special ____ Date of Test June 2, 1958

Company Southern Union Gas Co. Lease San Juan Unit 29-7 Well No. 64

Unit ____ Sec. 11 Twp. T-29N Rge. R-7W Purchaser El Paso Natural Gas Co.

Casing 7 5/8" Wt. 26.4 I.D. 6.969 Set at 3417 Perf. ____ To ____
5 1/2" 15.5 4.950 3130-5680 4960 5480

Tubing 2 3/8" Wt. 4.7 I.D. 1.995 Set at 5480 Perf. 5450 To 5480

Gas Pay: From 4960 To 5480 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: May 10, 1958 Packer ____ Reservoir Temp. Single Gas

OBSERVED DATA

Tested Through ~~(Prover)~~ (Choke) ~~(Meter)~~ Type Taps ____

No.	Flow Data (Prover) (Line) Size	Flow Data (Choke) (~~Orifice~~) Size	Flow Data Press. psig	Flow Data Diff. h_w	Flow Data Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						1070		1083		7 days
1.		3/4"	377		72°	377	72°	986		3 hours
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.			389	0.9887	0.9463	1.041	4,685
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 ____
F_c ____ $(1-e^{-s})$ ____ P_c 1095 P_c^2 1199
P_w 998 P_w^2 996

No.	P_w P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$\frac{(F_cQ)^2}{(1-e^{-s})}$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.									
2.						996	203		0.910
3.									
4.									
5.									

Absolute Potential: 17,800 MCFPD; n 0.75
COMPANY SOUTHERN UNION GAS COMPANY
ADDRESS P. O. Box 815, Farmington, New Mexico
AGENT and TITLE Thomas E. Penne, Jr. Engineer
WITNESSED Richard Proctor
COMPANY El Paso Natural Gas Company

REMARKS

1. 5½" casing set as a liner, top at 3130, bottom at 5680.

RECEIVED
JUN 6 1958
OIL CON. COM.
DIST. 3

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.