Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool **Blanco**   Formation **Mesaverde**   County **San Juan**

Initial **"**   Annual_____   Special_____   Date of Test **November 8, 1956**

Company **Southern Union Gas Company**   Lease **Quinn**   Well No. **#6**

Unit **A**   Sec. **20**   Twp. **31N**   Rge. **8W**   Purchaser **Southern Union Gas Company**

Casing **5½** Wt. **15.5#** I.D. **4.950** Set at **3373-5839** erf. **5311** To **5630**
(7 5/8   26.4#   0 - 3560)

Tubing **2 3/8** Wt. **4.7** I.D. **2.0** Set at **5720** Perf. **5690** To **5720**

Gas Pay: From **5311** To **5630** L_____ xG **0.68** _GL_____ Bar.Press. **12.0**

Producing Thru: Casing_____ Tubing **"**   Type Well **Single Gas**

Date of Completion: **Oct. 16, 1956** Packer_____   Single-Bradenhead-G. G. or G.O. Dual
           Reservoir Temp._____

OBSERVED DATA

Tested Through (~~Prover~~) (Choke) (~~Orifice~~)   Type Taps_____

No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Press. psig	Tubing Temp. °F.	Casing Press. psig	Casing Temp. °F.	Duration of Flow Hr.
SI						1042		1056		22 days
1.		3/4	338		84°	338	84°	828		3 hr.
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		350	0.9777	0.9393	1.035	410
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 **1068** P_c^2 **1140.6**
                         P_w **840** P_w^2 **705.6**

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	$\frac{P_w}{P_c}$
1.						705.6	435.0		0.787
2.									
3.									
4.									
5.									

Absolute Potential: **874** MCFPD; n **0.75**

COMPANY **Southern Union Gas Company**
ADDRESS **P. O. Box 815, Farmington, New Mexico**
AGENT and TITLE **Gilbert Noland, Jr. - Jr. Engineer**
WITNESSED_____
COMPANY_____
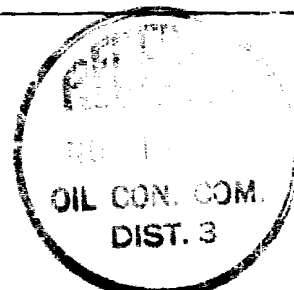
REMARKS

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.