NEW MEXICO OIL CONSERVATION COMMISSION

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool __Basin Dakota__ Formation __Dakota__ County __San Juan__

Initial __XX__ Annual _____ Special _____ Date of Test __9-10-62__

Company __Southern Union Production Co.__ Lease _____ State _____ Well No. __1 - 16__

Unit __G__ Sec. __16__ Twp. __28 N__ Rge. __9 W__ Purchaser __Southern Union Gas Co.__

Casing __4½__ Wt. __10.50__ I.D. __4.052__ Set at __7282__ Perf. __7066__ To __7250__

Tubing __1½__ Wt. __2.75__ I.D. __1.610__ Set at __7104__ Perf. __7089__ To __7104__

Gas Pay: From __7066__ To __7250__ L __7089__ xG __.700__ GL __4962__ Bar.Press. __12.0__

Producing Thru: Casing _____ Tubing __XX__ Type Well __Single Gas__

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

Date of Completion: __8-10-62__ Packer _____ Reservoir Temp. _____

OBSERVED DATA

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

No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						1730		1743		7 days
1.	2"	3/4	204		58	204	68	867	68	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		216	.9924	.9258	1.024	2513
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 __1755__ P_c^2 __3080.0__

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.						772.6	2307.4		.501
2.									
3.									
4.									
5.									

Absolute Potential: __3121__ MCFPD; n __.75__

COMPANY __Southern Union Production Co.__
ADDRESS __P. O. Box 808, Farmington, New Mexico__
AGENT and TITLE __Verne Rockhold, Jr. Engineer__
WITNESSED __Verne Rockhold__
COMPANY __Southern Union Production Co.__

REMARKS
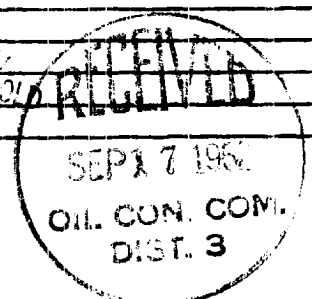
INSTRUCTIONS

· 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.