NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Tapacito Pictured Cliffs Formation Pictured Cliffs County Rio Arriba

Initial XX Annual _____ Special _____ Date of Test 9-26-64

Company Southern Union Production Co. Lease McCroden Well No. 3

Unit O Sec. 3 Twp. 25-N Rge. 3-W Purchaser Southern Union Gas Company

Casing 4-1/2 Wt. 9.50 I.D. 4.090 Set at 3864 Perf. 3780 To 3808

Tubing 1-1/2 Wt. 2.90 I.D. 1.610 Set at 3727 Perf. 3717 To 3727

Gas Pay: From 3780 To 3808 L 3717 xG .650 -GL 2416 Bar.Press. 12.0

Producing Thru: Casing _____ Tubing XX Type Well Single Gas
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 9/19/64 Packer _____ Reservoir Temp. _____

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						763		764		7 days
1.	2"	3/4"	74		55	74	55	518		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		86	1.0048	.9608		1027
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 776 P_c^2 602176

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.						280900	321276		.683
2.									
3.									
4.									
5.									

Absolute Potential: 1752 MCFPD; n .85

COMPANY Southern Union Production Company
ADDRESS P. O. Box 808 - Farmington, New Mexico
AGENT and TITLE Verne Rockhold - Jr. Engineer
WITNESSED _____
COMPANY _____

Witnessed By VERNE ROCKHOLD

RECEIVED SEP 1964 OIL CON. COM. DIST. 3

REMARKS

Trace of Water

cc: (3) New Mexico O.C.C.
cc: (1) Mr. Paul Clote
cc: (1) Mr. Bob McCrary - Prod. Co.
cc: (1) Mr. Bob Corliss - Gas Co.
cc: (1) Mr. Rudy Motto - Gas Co.
cc: (1) Mr. Todd Hickman - Gas Co.
cc: (1) File

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.