NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Basin Dakota Formation Dakota County San Juan

Initial XX Annual ____ Special ____ Date of Test 1-19-65

Company Southern Union Production Co. Lease Foster Well No. 4

Unit G Sec. 4 Twp. 26-N Rge. 8-W Purchaser El Paso Natural Gas Company

Casing 5-1/2 Wt. 17.0# I.D. 4.892 Set at 7040 Perf. 6725 To 6939

Tubing 1-1/2 Wt. 2.90# I.D. 1.610 Set at 6863 Perf. 6853 To 6863

Gas Pay: From 6725 To 6939 L 6853 xG .730 -GL 5003 Bar.Press. 12.0

Producing Thru: Casing ____ Tubing XX Type Well G. G. Dual

Date of Completion: 12-17-65 Packer 6500 Single-Bradenhead-G. G. or G.O. Dual 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						1664				33 days
1.	2"	3/4	176		77	176	77			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		188	.9840	.9066	1.020	2115
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl.
Gravity of Liquid Hydrocarbons ____ deg.
F_c 16.46 $(1-e^{-s})$ .305

Specific Gravity Separator Gas ____
Specific Gravity Flowing Fluid ____
P_c 1676 P_c^2 2808976

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.	188	35344	34,813	1211.945	369.643	404456	2404520	636	
2.									
3.									
4.									
5.									

Absolute Potential: 2376 MCFPD; n .75
COMPANY Southern Union Production Company
ADDRESS P. O. Box 808 - Farmington, New Mexico
AGENT and TITLE Verne Rookhold - Jr. Engineer
WITNESSED Herman McAnally
COMPANY El Paso Natural Gas Company

(3) New Mexico Oil Conservation Commission REMARKS
(1) Mr. Paul Clote
(1) El Paso Natural Gas Co., P.O. Box 1492, El Paso, Texas
(1) Mr. H. L. Kindricks, P. O. Box 990, Farmington, N.M.
(1) File

RECEIVED
JAN 21 1965
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.