NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool **CISCO CANYON** Formation **WOLFCAMP** County **EDDY**

Initial_____ Annual_____ Special **X** Date of Test **NOV. 7, 1964**

Company **BELL PETROLEUM COMPANY** Lease **GULF FEDERAL** Well No. **1**

Unit **J** Sec. **17** Twp. **17 SOUTH** Rge. **27 EAST** Purchaser_____

Casing **5½** Wt. **15.5** I.D.____ Set at **7609** Perf. **7520** To **7536**

Tubing **2-3/8** Wt. **4.70** I.D. **1.995** Set at **7486** Perf.____ To____

Gas Pay: From **7520** To **7536** L **7486** xG **.883** -GL **6610** Bar.Press. **13.2**

Producing Thru: Casing_____ Tubing **X** Type Well **SINGLE**

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

Date of Completion: **OCT. 23, 1964** Packer **NONE** Reservoir Temp. **225° F**

OBSERVED DATA

Tested Through (XXXXX) (Choke) (XXXXX) **A THORNHILL CRAVER 6" CHOKE WAS USED** Type Taps_____

No.	Flow Data (Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Temp. °F.	Casing Data Press. psig	Temp. °F.	Duration of Flow Hr.
SI			1355			1355	70	1355	70	SI 72
1.		18/64	325		78	325	78	550	72	24
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.	1.6907		338.2	0.9831	0.8932	1.030	517
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio **17,993** cf/bbl.
Gravity of Liquid Hydrocarbons **52.9** deg.
F_c_____ $(1-e^{-s})$_____

Specific Gravity Separator Gas **0.752**
Specific Gravity Flowing Fluid **0.883**
P_c **1368.2** P_c^2 **1872**

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.	563.2					317	1355		0.413
2.									
3.									
4.									
5.									

Absolute Potential: **625** MCFPD; n **1.000**

RECEIVED

COMPANY **JOHN WEST ENGINEERING COMPANY**
ADDRESS **412 NORTH DAL PASO, HOBBS, NEW MEXICO 88240**
AGENT and TITLE **R. K. JACOBS, GAS ENGINEER**
WITNESSED **JOHN KELLY**
COMPANY **BELL PETROLEUM COMPANY**

JAN 1 8 1965

O. C. C.
ARTESIA, OFFICE

REMARKS

THIS TEST WAS PERFORMED AFTER THE POINTS ON THE FIRST TEST WERE PLOTTED AND A STRAIGHT LINE WILL NOT PASS THROUGH ANY OF THE FOUR POINTS

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.
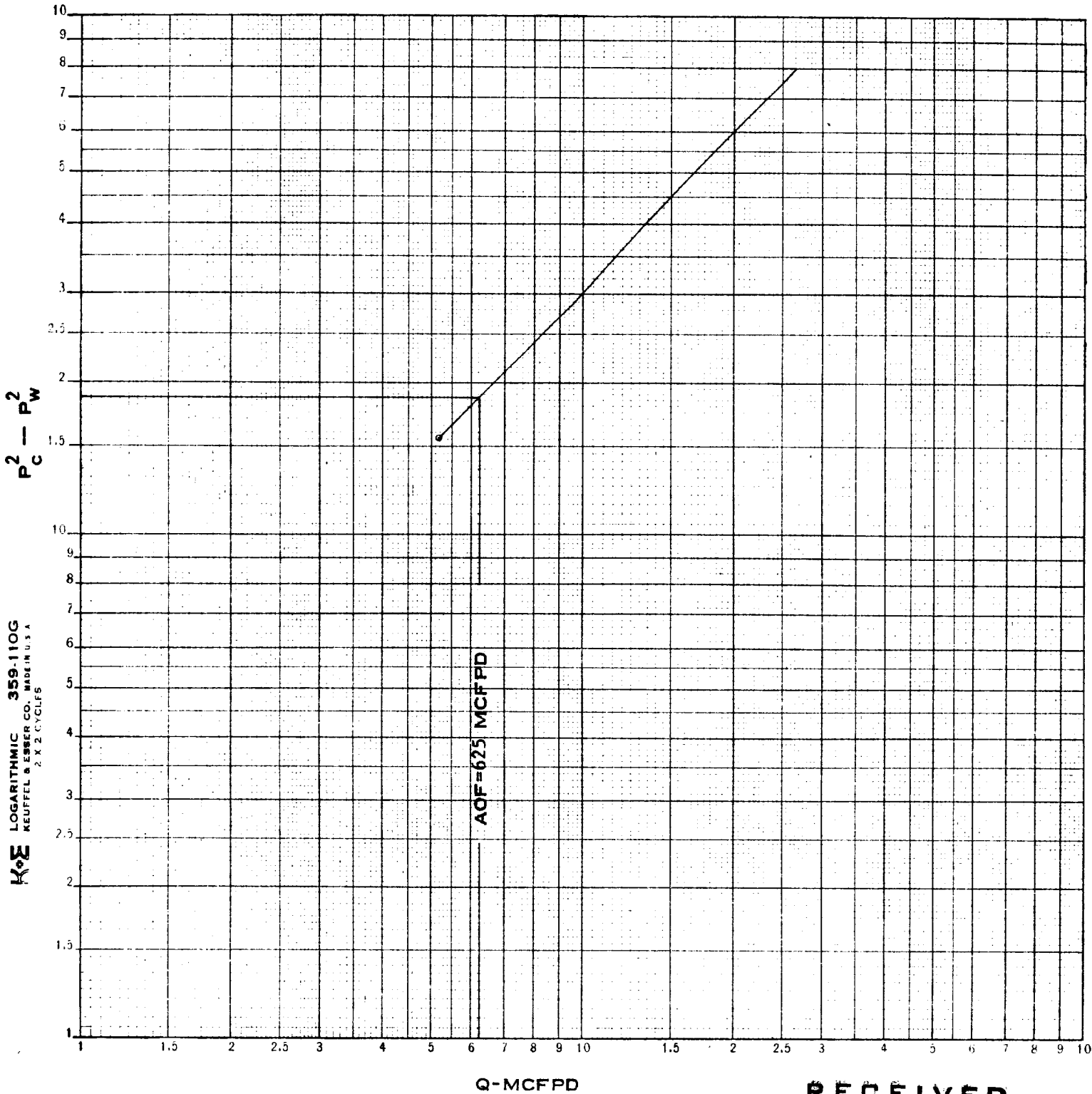
F_t = Flowing temperature correction factor.

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.

COMPANY   BELL PETROLEUM COMPANY
WELL   GULF FEDERAL NO. 1
LOCATION   UNIT J, SECTION 17, TWP. 17 SOUTH, RGE. 27 EAST
COUNTY   EDDY
DATE   NOVEMBER 7, 1964

$P_c^2 - P_w^2$

Q-MCFPD

AOF=625 MCFPD

LOGARITHMIC   359-110G
KEUFFEL & ESSER CO. MADE IN U.S.A.
2 X 2 CYCLES

K·E