

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

1957 FEB 11 AM 10:06

Pool Eumont Formation Queen County LeaInitial _____ Annual X Special _____ Date of Test May 31 1956Company John M. Kelly Lease Kelly State Well No. 1Unit F Sec. 13 Twp. 19 Rge. 36 Purchaser Permian Basin PipelineCasing 5 1/2 Wt. 15.5 I.D. 4.950 Set at 3740 Perf. _____ To _____Tubing 2 3/8 Wt. 4.7 I.D. 1.995 Set at 3875 Perf. _____ To _____Gas Pay: From 3760 To 3875 L 3875 xG 0.672 -GL 2604 Bar. Press. 13.2Producing Thru: Casing _____ Tubing X Type Well Single

Single-Br tenhead-G. G. or G.O. Dual

Date of Completion: 9-12-53 Packer _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through (Proven) (Choke) (Meter) Type Taps Pipe

No.	Flow Data				Tubing Data		Casing Data		Duration of Flow Hr.
	(Proven) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.
SI						1027.4			SI 70 1/2 hrs.
1.	4	2.00	460.3	8.5	72	902.1			23 1/4
2.	4	2.00	460.8	13.8	73	887.5			23 1/2
3.	4	2.00	470.0	19.8	76	750.4			24
4.	4	2.00	460.7	29.0	79	638.2			23
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.	29.92	63.44	473.5	0.9887	0.9463	1.043	1852
2.	29.92	80.88	474.0	0.9877	0.9463	1.043	2359
3.	29.92	97.81	483.2	0.9850	0.9463	1.042	2842
4.	29.92	117.2	473.9	0.9822	0.9463	1.041	3324
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.

Gravity of Liquid Hydrocarbons _____ deg.

F_c 0.936 (1-e^{-s}) 0.164

Specific Gravity Separator Gas _____

Specific Gravity Flowing Fluid _____

P_c 1040.6 P_c² 1085.6

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	P _w P _c
1.	915.3	813.8				869.3	186.3	961.7	.91
2.	840.7	694.8				774.9	280.7	930.1	.86
3.	763.6	563.1				693.9	361.7	877.4	.84
4.	651.4	407.3				593.8	461.8	852.3	.75
5.									

Absolute Potential: 6.204 MCFPD; n .69COMPANY John M. KellyADDRESS Box 5671, Roswell, New MexicoAGENT and TITLE Leasehold Production SuperintendentWITNESSED R. L. WestCOMPANY Permian Basin Pipeline

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.

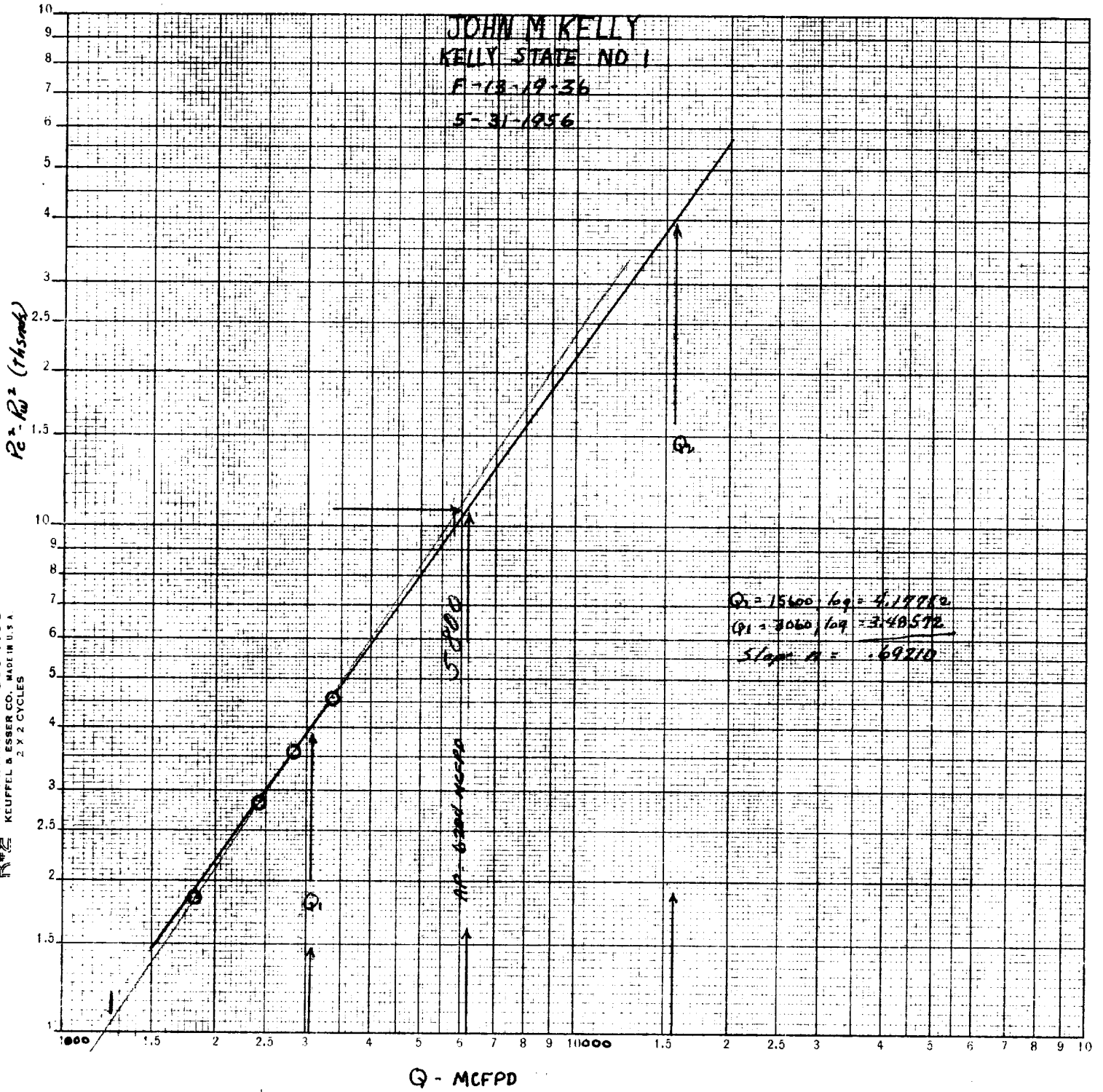
F_t = Flowing temperature correction factor.

F_{pv} = Supercompressibility 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 .

JOHN M KELLY
KELLY STATE NO 1
F-13-19-36
5-31-1956



$$Q_2 = 5400 = 3.732394$$

$$Q_1 = 1250 = \frac{3.096910}{.635484}$$