

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Elmery Formation Elmery County Lee
Initial X Annual Special X Date of Test 8-9-57
Company Simclair Oil & Gas Company Lease Barton Well No. 2
Unit "B" Sec. 23 Twp. 21 S Rge. 37 E Purchaser Permian Basin Pipe Line Company
Casing 6-1/8" Wt. 17.04 I.D. 4.992" Set at 7348' Perf. 5992' To 5631'
Tubing 2-1/8" Wt. 4.74 I.D. 1.995" Set at 6890' Perf. To
Gas Pay: From 5992' To 5631' L 5992' x 141.2 GL Bar. Press. 23.8
Producing Thru: Casing X Tubing Type Well G. G. Dual
Date of Completion: 10-5-55 Packer 6890 Reservoir Temp. 120

OBSERVED DATA

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

Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.	
No.	(Pressure) (Line) Size	(Gauge) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig		Temp. °F.
SI										
1.	1"	2.950	131.5	1.1	67			141.5	60	72
2.	1"	2.950	129.5	1.1	65			139.7	60	24
3.	1"	2.950	127.5	1.1	71			137.7	60	24
4.	1"	2.950	125.5	1.1	61			135.7	60	24
5.								133.7	60	24

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.	0.11		134.7	.9913	.9898	1.005	8000
2.	0.11		132.7	.9912	.9898	1.007	3247
3.	0.11		130.7	.9906	.9898	1.008	1601
4.	0.11		128.6	.9904	.9898	1.007	1305
5.							

(1) 99,189

(2) 87,971

(3) 173,997

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio (h) 102,900 cf/bbl.Gravity of Liquid Hydrocarbons (h) 44.4 deg.F_c 1.012 (1-e^{-s}) (1) 0.242 (h) 0.242

(3) 0.243

(3) 0.240

Specific Gravity Separator Gas .605Specific Gravity Flowing Fluid .722P_c 1442.7 P_c 2764.6

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.	134.9	1820.8	1.759	3.133	3.133	1822.2	991.4	1346.1	.82
2.	132.9	1768.4	1.884	3.548	3.548	1822.2	1140.8	1280.7	.69
3.	130.7	1708.2	1.950	3.803	3.803	1822.2	1280.8	1220.7	.67
4.	128.6	1653.8	1.891	3.574	3.574	1822.2	1420.8	1160.7	.64
5.									

Absolute Potential: 6.047 MCFPD; n 0.99COMPANY Simclair Oil & Gas CompanyADDRESS 500 East Broadway Street Midland, New MexicoAGENT and TITLE R. L. Ward Gas AnalystWITNESSED R. L. WardCOMPANY Permian Basin Pipe Line Company

REMARKS

GOOD TEST: POINT ALIGNMENT IS NOT EXACT BUT SHOULD BE ACCEPTABLE TO THE COMMISSION.
FIRST RATE OF FLOW LOGGING.

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.

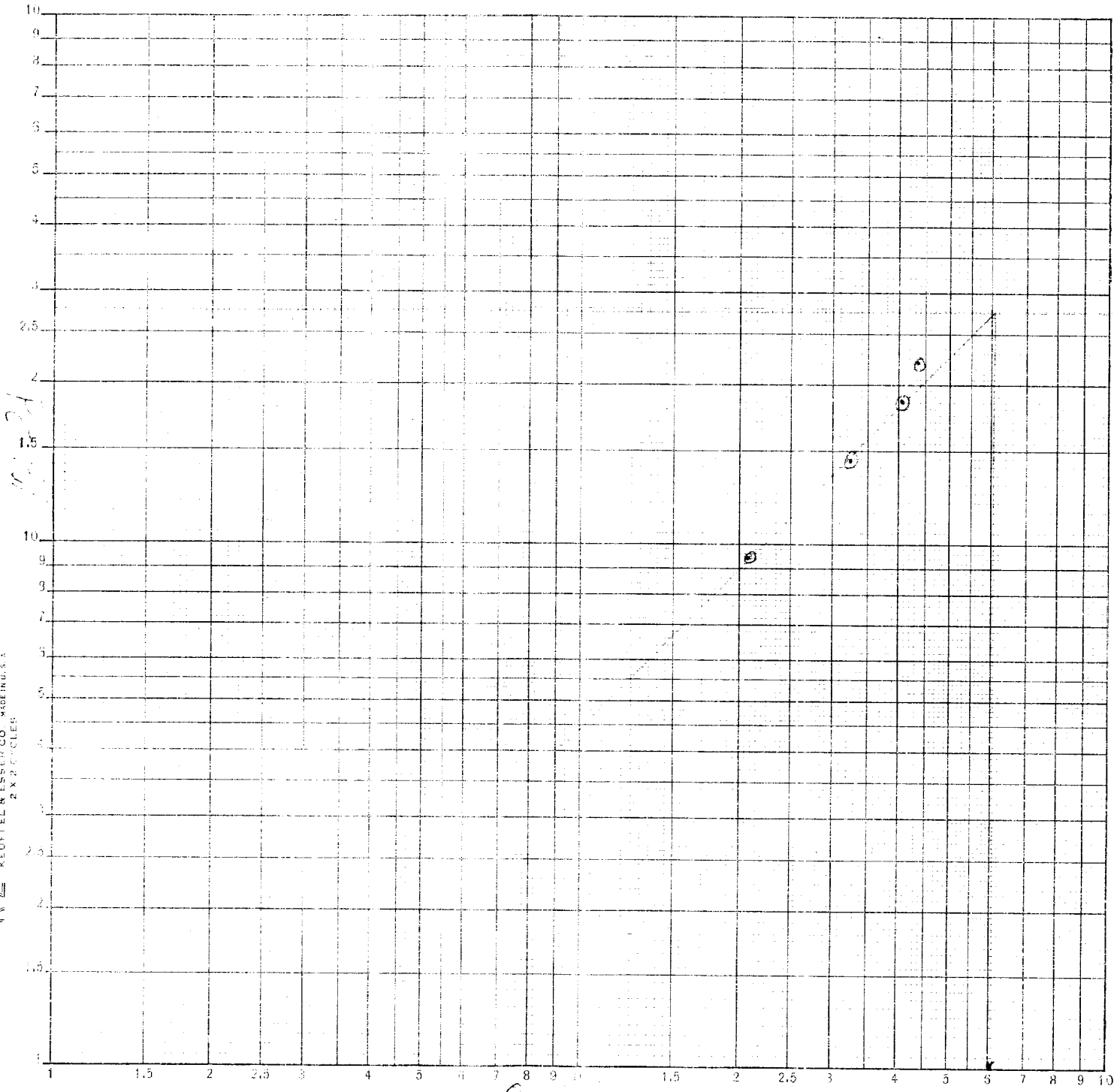
F_{pv} = Supercompressibility factor.

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 .

SP-17-7 100-1-3-100 1-1

LOGARITHMIC 359-110
KEUFFEL & ESSER CO. MADE IN U.S.A.
2 X 2 1/2" C-CLER



0.11
1.6-1.8

0.11