

DUPLICATE

HOBBS OFFICE OCC

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

1960 SEP 10 644nt4 Leg

Pool Bagley Formation Lower Penn
 Initial X Annual _____ Special _____ Date of Test 7/29-8/5-60
 Company Amerada Petroleum Corporation Lease Caudle Well No. 2
 Unit D Sec. 3 Twp. 12 Rge. 33 Purchaser El Paso Natural Gas Company
 Casing 5 1/2 Wt. 17.0 I.D. _____ Set at 11,083 Perf. 9773 To 9801
 Tubing 2 1/16 Wt. 3.4 I.D. 1.700 Set at 9739 Perf. _____ To _____
 Gas Pay: From 9773 To 9801 L 9739 xGmix .803 -GL 7820 Bar.Press. 13.2
 Producing Thru: Casing _____ Tubing X Type Well G. G. Dual
 Single-Bradenhead-G. G. or G.O. Dual
 Date of Completion: 5-28-60 Packer 8670 Reservoir Temp. _____

OBSERVED DATA

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

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(<u>Proven</u>) (Line) Size	(<u>Choke</u>) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						1550				72
1.	1	2.000	659	11.56	85	1210				24
2.	1	2.000	685	16.81	90	1023				24
3.	1	2.000	690	24.01	95	793				24
4.	1	2.000	684	25.00	97	727				24
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	25.58	88.15		.9768	.9005	1.083	2,149
2.	25.58	108.34		.9723	.9005	1.083	2,627
3.	25.58	129.94		.9680	.9005	1.080	3,130
4.	25.58	132.02		.9662	.9005	1.080	3,173
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 37,383 cf/bbl.
 Gravity of Liquid Hydrocarbons 67 deg.
 F_c 15,087 (1-e^{-S}) .416
 Specific Gravity Separator Gas .740
 Specific Gravity Flowing Fluid .7128
 P_c 1563.2 P_c² 2443.6

No.	$\frac{P}{P_t}$ 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.	1223.2	1496.2	32.42	1051	137.2	1933.4	510.2	1390.5	.8895
2.	1036.2	1073.7	39.63	1570	653.1	1726.8	716.8	1314.1	.8406
3.	806.2	649.9	47.22	2230	927.7	1577.6	866.0	1256.0	.8035
4.	740.2	547.9	47.87	2291	953.0	1500.9	942.7	1225.1	.7837
5.									

Absolute Potential: 5,800 MCFPD; n .637
 COMPANY Amerada Petroleum Corporation
 ADDRESS Roswell Star Route - Tatum, New Mexico
 AGENT and TITLE Raymond B. Shaw Junior Petroleum Engineer
 WITNESSED R. A. Mikel
 COMPANY El Paso Natural Gas Company

REMARKS

CORRECTED COPY

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.

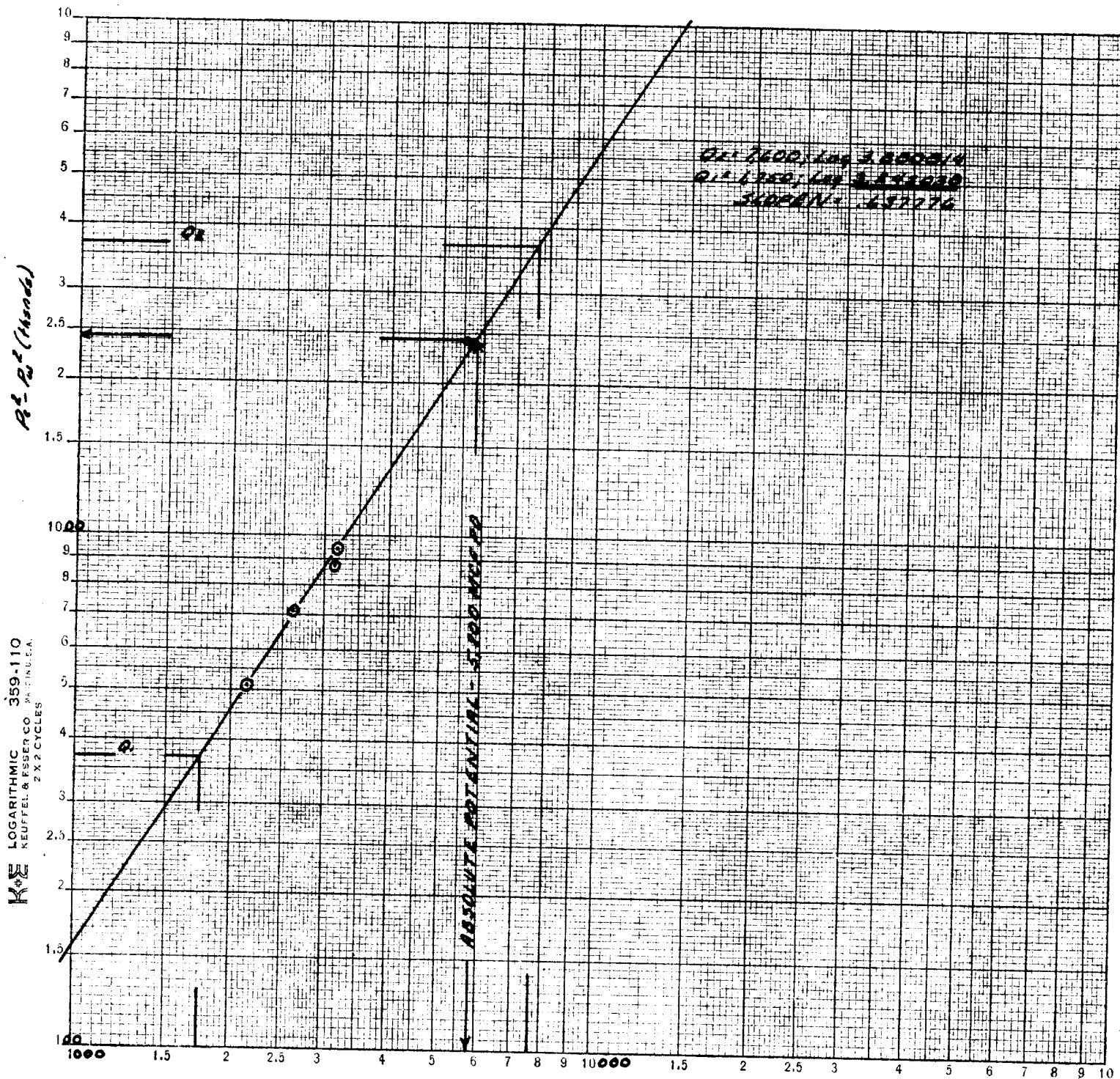
F_t = Flowing temperature correction factor.

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 .

AMERADA PET. CORP.
 CAUDLE #2 (LOWER)
 D-3-12-33
 LRA COUNTY, N. M.



Q - MCF/D
 @ 15.025