

DUPLICATE

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Bagley Formation Upper Penn County Lea
 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. 8568 To 8632
 Tubing 2 1/16 Wt. 3.4 I.D. 1.700 Set at 8613 Perf. _____ To _____
 Gas Pay: From 8568 To 8632 L 8613 xGmix. 736 -GL 6339 Bar.Press. 13.2
 Producing Thru: Casing _____ Tubing X Type Well G. G. Dual
 Date of Completion: 5-28-60 Packer 8670 Single-Bradenhead-G. G. or G.O. Dual
 Reservoir Temp. _____

OBSERVED DATA

Tested Through (~~Prover~~) (Choke) (Meter) Type Taps _____

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						1042				72
1.	4	1.250	660	4.84	87	1000				24
2.	4	1.250	686	23.04	92	902				24
3.	4	1.250	691	34.81	95	824				24
4.	4	1.250	683	46.24	97	755				24
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.	9.643	57.08		.9750	.9293	1.073	529.3
2.	9.643	126.92		.9706	.9193	1.075	1,174
3.	9.643	156.57		.9680	.9193	1.073	1,442
4.	9.643	179.42		.9662	.9193	1.073	1,648
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 95,732 cf/bbl.
 Gravity of Liquid Hydrocarbons 61 deg.
 F_c 15,087 (1-e^{-s}) .353
 Specific Gravity Separator Gas .710
 Specific Gravity Flowing Fluid .7351
 P_c 1055.2 P_c² 1113.4

No.	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.	1013.2	1026.6	7.985	63.76	22.5	1049.1	64.3	1024.2	.9806
2.	915.2	837.6	17.71	313.6	110.7	948.3	165.1	973.8	.9228
3.	837.2	700.9	21.75	473.1	167.0	867.9	245.5	931.6	.8829
4.	768.2	590.1	24.86	618.0	218.1	808.2	305.2	899.0	.8520
5.									

Absolute Potential: 4,800 MCFPD; n .795
 COMPANY Amerada Petroleum Corporation
 ADDRESS Roswell Star Route - Tatum, New Mexico
 AGENT and TITLE R. A. Mikel 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.

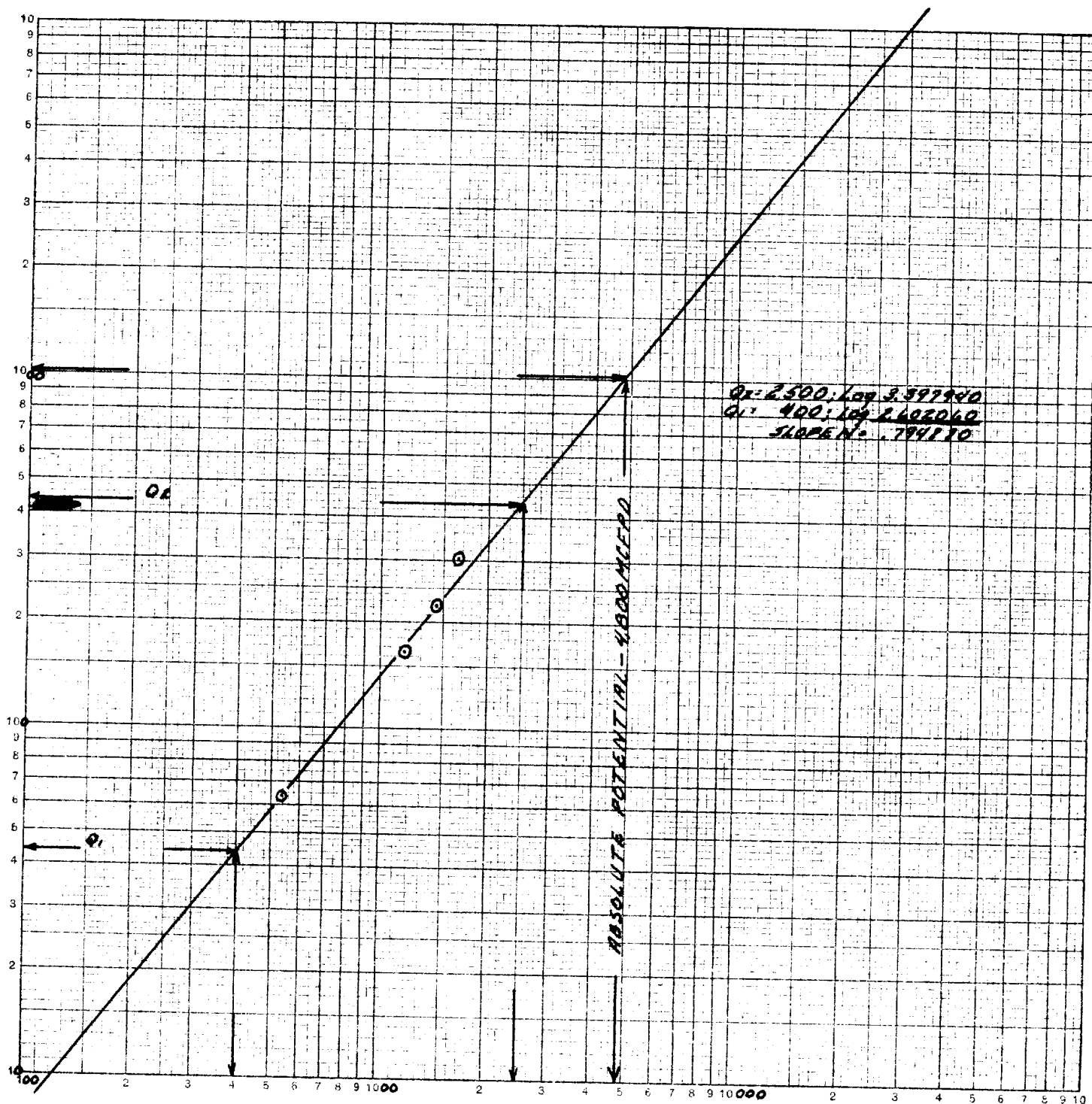
n = Slope of back pressure curve.

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 (UPPER)
 D-3-12-33
 LEA COUNTY, N. M.

$P^* - P^* (thornd)$

KE LOGARITHMIC 359-120
 KEUFFEL & ESSER CO. MADE IN U.S.A.
 3 X 3 CYCLES



Q - MCFD
 @ 15.025