

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Tubb Gas Formation Tubb County Lea
Initial _____ Annual _____ Special X Date of Test 3-27 to 4-3-64
Company Shell Oil Company Lease Argo "A" Well No. 1
Unit D Sec. 22 Twp. 21 S Rge. 37 E Purchaser El Paso Natural Gas Company
Casing 5 1/2" Wt. 15.5 I.D. 4.976 Set at 6635 Perf. 5988 To 6236
Tubing 2" Wt. 4.7 I.D. 1.995 Set at 6462 Perf. _____ To _____
Gas Pay: From 5988 To 6236 L. 5988 xG Min .75 GL. 4503 Bar.Press. 13.2
Producing Thru: Casing X Tubing _____ Type Well G. O. Dual
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: February, 1953 Packer 6460 Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter)Type Taps Flgs.

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	<u>(Prover)</u> <u>(Line)</u> Size	<u>(Choke)</u> <u>(Orifice)</u> Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI										
1.	4	1.250	608	14.44	82			1292		48
2.	4	1.250	601	26.01	81			1131		24
3.	4	1.250	568	43.56	80			989		24
4.	4	1.250	611	51.84	83			925		24
5.	4	1.250	611	51.84	83			837		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.	9.643	94.71	621.2	.9795	.9180	1.070	878.7
2.	9.643	126.39	614.2	.9804	.9180	1.070	1,174
3.	9.643	159.11	581.2	.9813	.9180	1.066	1,472
4.	9.643	179.88	624.2	.9786	.9180	1.074	1,673
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 61,390 cf/bbl.
Gravity of Liquid Hydrocarbons 66.6 A.P.I. deg.
F_c 1.758 (1-e^{-s}) .266

Specific Gravity Separator Gas .712
Specific Gravity Flowing Fluid .7143
P_c 1305.2 P_c 1703.5

No.	$\frac{P_s}{P_t}$ 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.	1144.2	1309.2	1.545	2.387	.6349	1309.8	393.7	1144.5	87.7
2.	1002.2	1004.4	2.064	4.260	1.133	1005.5	698.0	1002.7	76.8
3.	938.2	880.2	2.588	6.698	1.782	882.0	821.5	939.1	72.0
4.	850.2	722.8	2.941	8.649	2.301	725.1	978.4	851.5	65.2
5.									

Absolute Potential: 2,550 MCFPD; n .727
COMPANY Shell Oil Company
ADDRESS P. O. Box 1858, Roswell, New Mexico
AGENT and TITLE A. L. Ellard - Gas Tester
WITNESSED J. B. Murray
COMPANY El Paso Natural Gas Company

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.

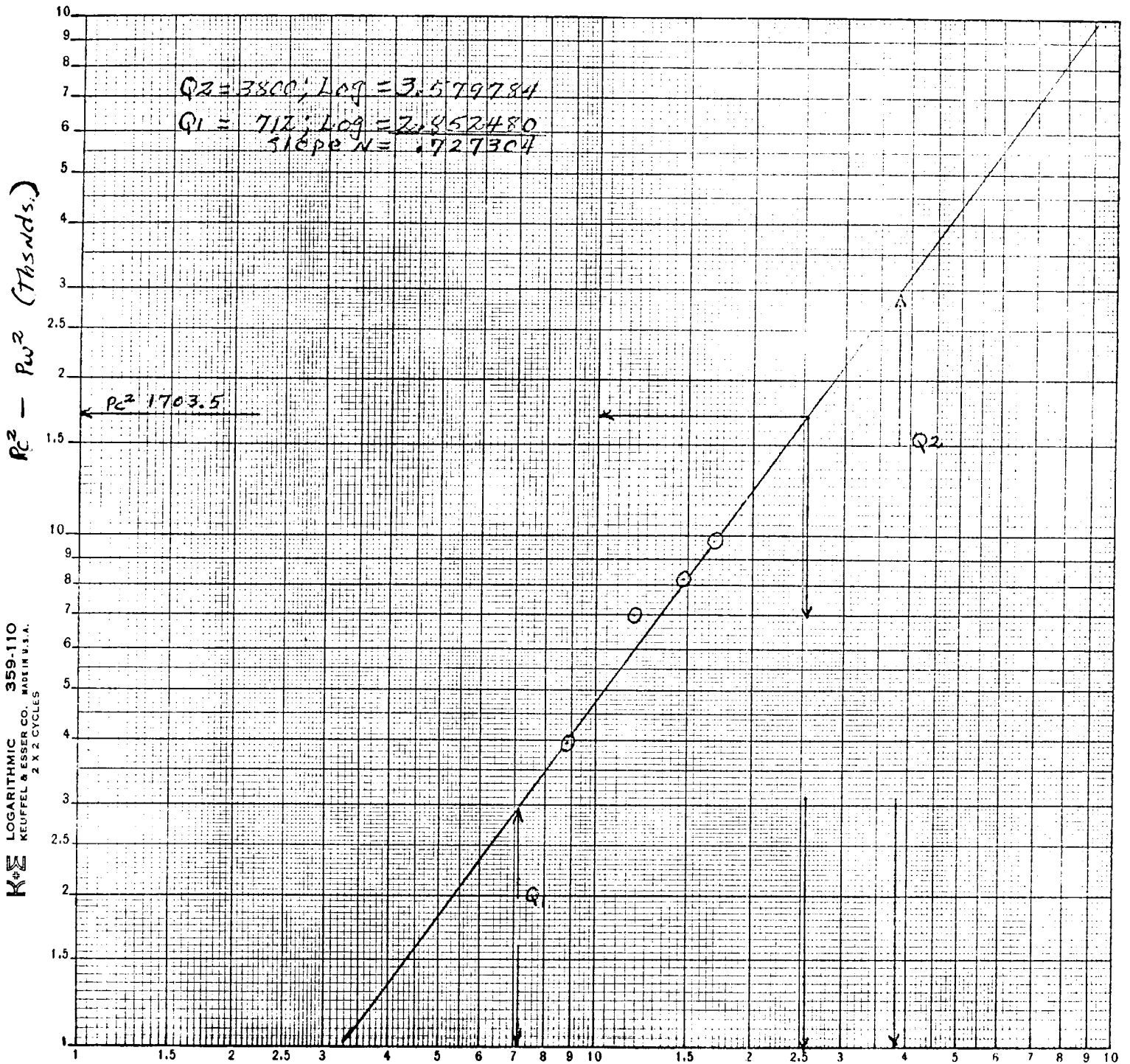
n = Slope of back pressure curve.

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 .

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GAS WELL BACK PRESSURE CURVE

County LEE Field TUBB GAS
Operator SHELL OIL COMPANY
Lease ARGO "A" Well No. 1
Volume 2,550 MCF/24 hr.
Date APRIL 3, 1964



$\leftarrow Q - \text{MCFD} - 15.025 \text{ psia} \rightarrow$