

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 3-13 to 20, 1954
Company Shell Oil Company Lease Turner Well No. 2
Unit L 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 6626' Perf. 6010' To 6215'
Tubing 2" Wt. 4.7 I.D. 1.995 Set at 6451' Perf. _____ To _____
Gas Pay: From 6010' To 6215' L 6010' x Mix. .746 -GL 4433 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: 8-13-52 Packer 6451' Reservoir Temp. _____

OBSERVED DATA

Tested Through (Donner) (Shoke) (Meter) Type Taps Flgs.

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								1288		48
1.	4"	1.500	565	7.84	92			1005		24
2.	4"	1.500	530	20.25	84			973		24
3.	4"	1.500	567	32.49	83			920		24
4.	4"	1.500	586	43.56	81			856		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.	13.99	67.33	578.2	.9706	.9135	1.060	685.2
2.	13.99	109.60	593.2	.9777	.9135	1.070	1,465
3.	13.99	137.29	580.2	.9736	.9135	1.066	1,830
4.	13.99	161.55	599.2	.9804	.9135	1.070	2,166
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 97.128 cf/bbl.
Gravity of Liquid Hydrocarbons 54.0 deg.
 F_c 1.758 $(1-e^{-S})$ 1.265

Specific Gravity Separator Gas .719
Specific Gravity Flowing Fluid .7628
 P_c 1301.2 P_c^2 1693.1

No.	$\frac{X R_x}{P_t}$ (psia)	P_t^2	$F_c Q$	$(F_c Q)^2$	$\frac{(F_c Q)^2}{(1-e^{-S})}$	P_w^2	$P_c^2 - P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	1018.2	1036.7	1.956	2.421	.6416	1037.3	655.8	1018.5	78.3
2.	986.2	972.6	2.575	6.631	1.757	974.2	718.8	987.1	75.9
3.	933.2	870.9	3.217	10.349	2.742	873.6	819.5	934.7	71.8
4.	869.2	755.5	3.808	14.501	3.843	759.3	933.8	871.4	67.0
5.									

Absolute Potential: 3,900 MCFPD; n 1.000

COMPANY Shell Oil Company

ADDRESS P. O. Box 1858, Roswell, New Mexico

AGENT and TITLE A. L. Ellard - Gas Tester

WITNESSED J. E. Murray

COMPANY El Paso Natural Gas Company

REMARKS

Slope greater than 1.000, a slope of 1.000 drawn through highest rate of flow.

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

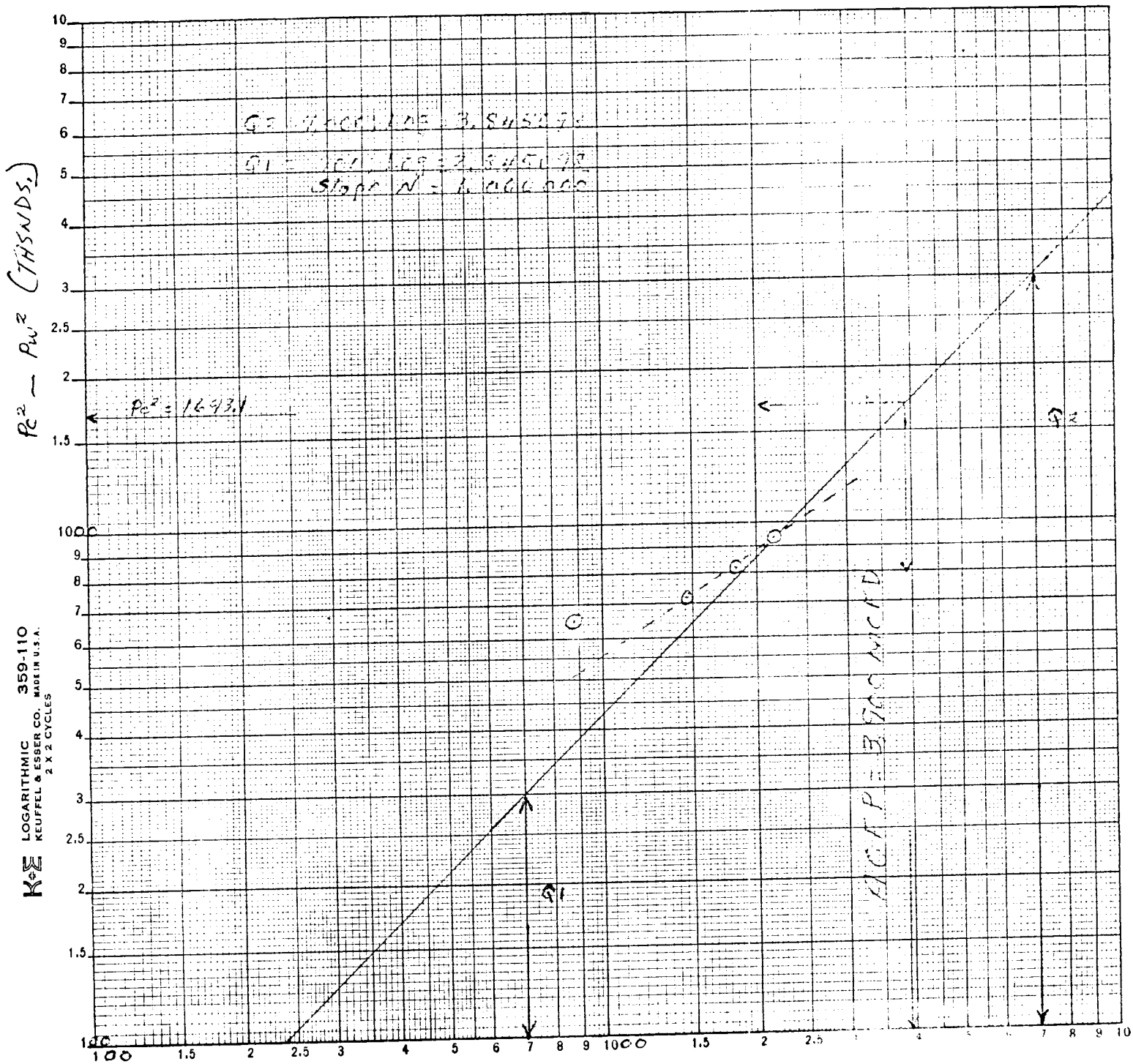
- Q = Actual rate of flow at end of flow period at W. H. working pressure (P_w).
MCF/da. @ 15.025 psia and 60° F.
- P_c = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater.
psia
- P_w = Static wellhead working pressure as determined at the end of flow period.
(Casing if flowing 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 .

APR 6 7 40 AM '64
HOBBS OFFICE O.C.C.

GAS WELL BACK PRESSURE CURVE

County LA Field TURNER GAS
Operator WILL OIL COMPANY
Lease TURNER Well No. 2
Volume 2,900 MCF/24 hr.
Date MARCH 20, 1964



— Q — MCFD — 15.025 psia —