NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmat Formation Yates County Lea

Initial X Annual Special Date of Test 12-7-56

Company The Texas Company Lease J. B. Young Well No. 3

Unit O Sec. 5 Twp. 24-S Rge. 37-E Purchaser Permian Basin Pipe Line Co.

Casing 7" Wt. 20# I.D. 6.456 Set at 3455 Perf. 2945 To 3105

Tubing 2 3/8 Wt. 4.70 I.D. 1.995 Set at 3462 Perf. To

Gas Pay: From 2945 To 3105 L 2945 xG .645 -GL 1900 Bar.Press. 13.2

Producing Thru: Casing X Tubing Type Well G. G. Dual
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 5-26-55 Packer 3443 Reservoir Temp.

OBSERVED DATA

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

No.	Flow Data (~~Prover~~) (Line) Size	(~~Choke~~) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI								890.1		72 3/4
1.	4	2.25	884.5	5.5	65			860.2		23 3/4
2.	4	2.25	807.0	11.7	71			810.0		24
3.	4	2.25	708.5	20.2	68			750.4		24 3/4
4.	4	2.25	699.0	32.4	70			695.7		23 3/4
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.	40.53	53.36	517.7	.9766	.9645	1.062	2.123
2.	40.53	78.81	520.2	.9806	.9645	1.063	3.161
3.	40.53	102.7	521.7	.9824	.9645	1.047	4.171
4.	40.53	128.8	512.2	.9905	.9645	1.043	5.202
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl. Specific Gravity Separator Gas

Gravity of Liquid Hydrocarbons deg. Specific Gravity Flowing Fluid

F_c .707 $(1-e^{-s})$ 0.123 P_c 903.3 P_c^2 816.0

No.	P_w P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$\frac{(F_cQ)^2}{(1-e^{-s})}$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	861.4	745.5	1.501	2.253	.2771	745.6	70.2	863.5	.96
2.	823.2	677.7	2.230	4.973	.6117	678.3	137.7	823.4	.91
3.	761.6	583.1	2.949	8.697	1.070	581.2	232.8	761.7	.85
4.	708.9	502.5	3.678	13.53	1.664	504.1	311.9	710.0	.78
5.									

Absolute Potential: 9,180 MCFPD; n .61

COMPANY THE TEXAS COMPANY

ADDRESS BOX 1270, MIDLAND, TEXAS

AGENT and TITLE L. I. BAKER, DISTRICT GAS MAN

WITNESSED R. L. WEST

COMPANY PERMIAN BASIN PIPE LINE COMPANY

REMARKS

This is a retest.

ELVIS A. UTZ
GAS ENGINEER

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} = Supercompressability factor.

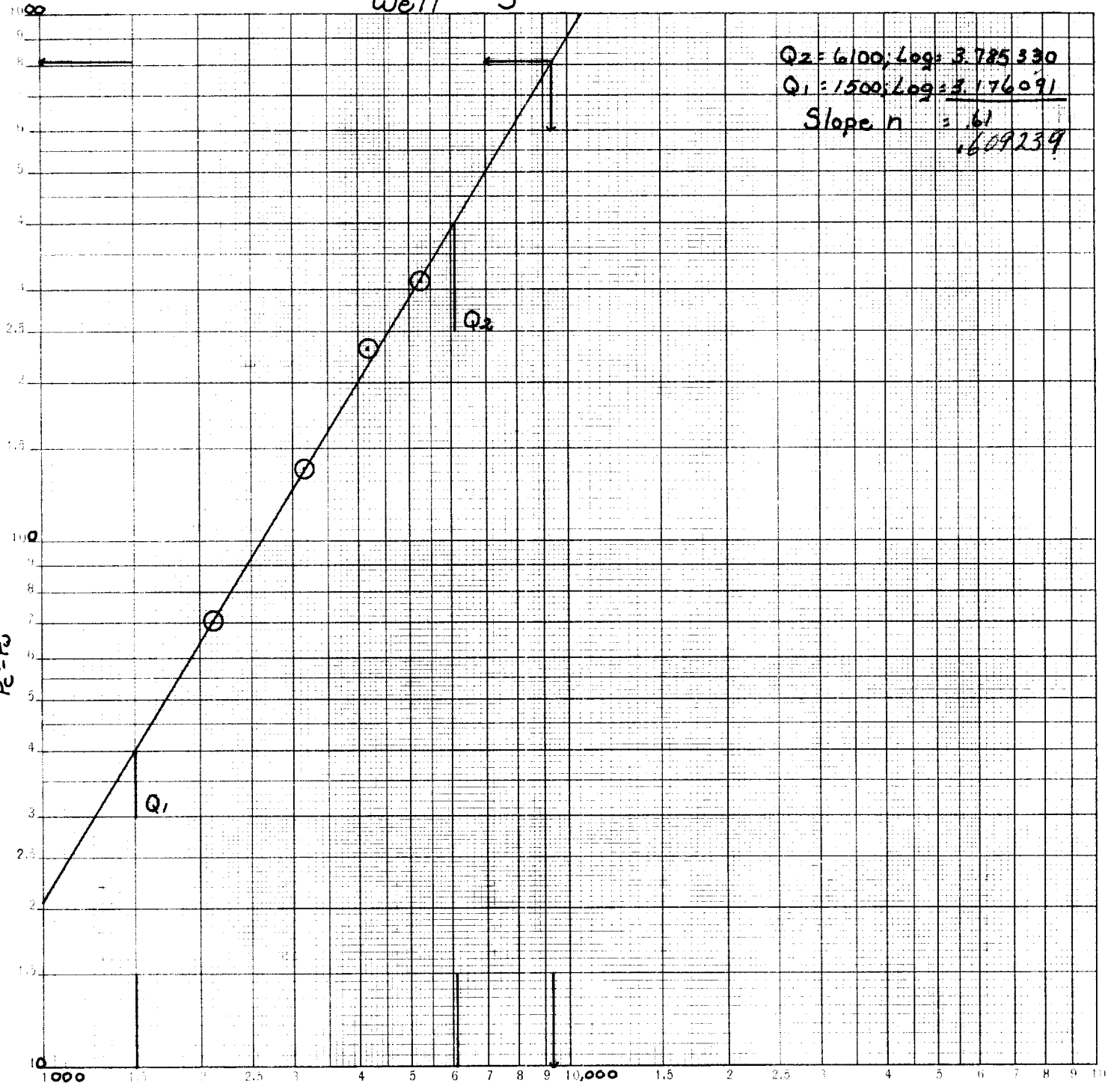
n = Slope of back pressure curve.

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.

The Texas Co

J.D. Young

Well # 3



Q = McF/Day

Q = 9,380