

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Salinas Gas Formation Salinas County San, New Mexico

Initial X Annual _____ Special _____ Date of Test 2-10 to 14, 1961

Company Shell Oil Company Lease State Well No. 2A

Unit 1 Sec. 36 Twp. 24N Rge. 3E Purchaser _____

Casing 5 1/2 Wt. 17.0 I.D. 4.592 Set at 1975 Perf. 2025 To 2028

Tubing 2 1/2 Wt. 6.5 I.D. 2.441 Set at 2004 Perf. 2004 To 2010

Gas Pay: From 2025 To 2028 L 2025 xG .630 -GL 1836 Bar.Press. 13.2

Producing Thru: Casing X Tubing _____ Type Well G. O. Dual

Date of Completion: February 14, 1961 Packer 3000 Reservoir Temp. _____

OBSERVED DATA

Tested Through (NONE) (NONE) (Meter) _____ Type Taps Flgs.

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(LINE) (Line) Size	(ORIFICE) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI										
1.	1	1.920	21.0	20.0	68			120		70 Min.
2.	1	1.920	22.0	27.0	68			120		1 1/2 Hrs.
3.	1	1.920	22.0	25.0	68			120		1 1/2 Hrs.
4.	1	2.000	22.0	22.0	68			120		2 Hrs.
5.	1	2.000	22.0	25.0	68			120		2 Hrs.

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.	13.99	30.32	24.2	.9994	.9998		124.1
2.	13.99	42.70	25.2	.9992	.9998		222.5
3.	13.99	48.38	25.2	1.0017	.9998		222.0
4.	23.32	42.91	21.2	1.0037	.9998		1.10
5.	23.32	32.97	21.2	.9993	.9998		1.20

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl.

Gravity of Liquid Hydrocarbons _____ deg.

F_c 2.937 (1-e^{-s}) .119

Specific Gravity Separator Gas .630

Specific Gravity Flowing Fluid _____

P_c 161.2 P_c 224.5

No.	P _w 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.	161.2	2600.6	1.014	1.028	.1023	260.0	13.5	161.2	61.8
2.	160.2	2568.4	1.120	2.132	.4027	256.1	24.4	160.2	54.9
3.	160.2	2568.4	2.131	5.143	.6453	255.5	30.0	160.2	52.4
4.	159.2	2536.6	2.931	8.591	1.000	253.6	38.0	159.2	45.1
5.	159.2	2536.6	3.210	10.32	1.233	253.0	40.5	159.2	43.0

Absolute Potential: 2.222 MCFPD; n .772

COMPANY Shell Oil Company

ADDRESS P. O. Box 225, Roswell, New Mexico

AGENT and TITLE A. L. Ellard - Gas Tester ORIGINAL SIGNED BY: A. L. ELLARD

WITNESSED _____

COMPANY _____

REMARKS

No fluid was produced during test.

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.

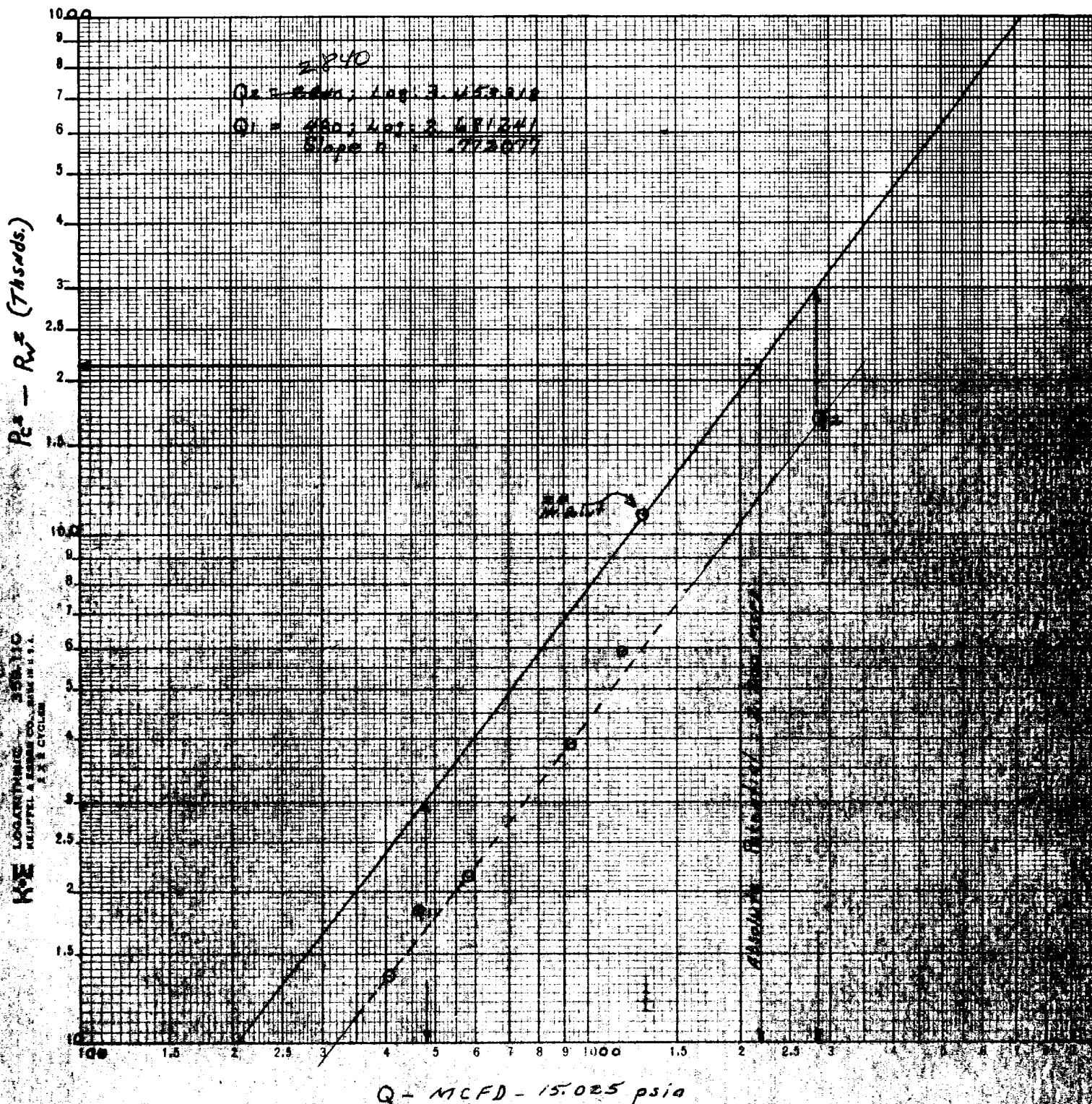
F_{pv} = Supercompressability factor.

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 .

GAS WELL BACK PRESSURE CURVE

County LEA, N. ... Max Field DAWAT, GAS ...
Operator SHELL OIL COMPANY ...
Lease STATE ... Well No. 2A
Volume 2,200 ... MCF/24hr.
Date FEBRUARY 14, 1961 ...



Q₁ 1900 = 3.278 754
Q₂ 820 = 2.525 150
773 604