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NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC
1957 FEB 25 PM 2:56

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmat Formation Yates County Lea

Initial ____ Annual ____ Special x Date of Test 1-21 to 1-25-57

Company Phillips Petroleum Company Lease C. D. Woolworth Gp 3 Well No. 1

Unit M Sec. 6 Twp. 25S Rge. 37E Purchaser EPNG

Casing 7" Wt. 24 I.D. ____ Set at 3040 Perf. 2850 To 3000

Tubing 2" Wt. 4.7 I.D. 1.991 Set at 2800 Perf. ____ To ____

Gas Pay: From 2830 To 3000 L 2800 xG .640 -GL 1792 Bar.Press. 13.2

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

Date of Completion: Re 9-7-54 Packer 2800 Reservoir Temp. ____

OBSERVED DATA

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

No.	Flow Data (Prover) (Line) Size	Flow Data (Choke) (Orifice) Size	Flow Data Press. psig	Flow Data Diff. h_w	Flow Data Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						495				72
1.	4"	0.750	276	18.5	48	439				24
2.	4"	0.750	235	34.8	48	400				24
3.	4"	0.750	250	53.3	53	335				24
4.	4"	0.750	253	68.9	52	275				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.	3.435	73.10		1.0017	.9682	1.030	253
2.	3.435	92.91		1.0017	.9682	1.026	321
3.	3.435	118.38		1.0068	.9682	1.027	407
4.	3.435	135.37		1.0078	.9682	1.027	466
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio dry cf/bbl.
Gravity of Liquid Hydrocarbons ____ deg.
F_c 9.936 $(1-e^{-s})$ .116

Specific Gravity Separator Gas .640
Specific Gravity Flowing Fluid .648
P_c 508.2 P_c^2 258.3

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.	452.2	204.5	2.51	6.30	0.73	205.2	53.1	452.3	.890
2.	413.2	170.7	3.19	10.18	1.18	171.9	86.4	413.3	.815
3.	348.2	121.2	4.03	14.67	1.70	122.9	135.4	348.3	.686
4.	288.2	83.1	4.23	17.89	2.08	85.2	173.1	291.8	.574
5.									

Absolute Potential: 580 MCFPD; n 0.508639

COMPANY Phillips Petroleum Company
ADDRESS Box 2105 Hobbs, New Mexico
AGENT and TITLE W. C. Rodgers, District Production Superintendent
WITNESSED R. T. Wright
COMPANY El Paso Natural Gas Company

REMARKS

LOUIS 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.

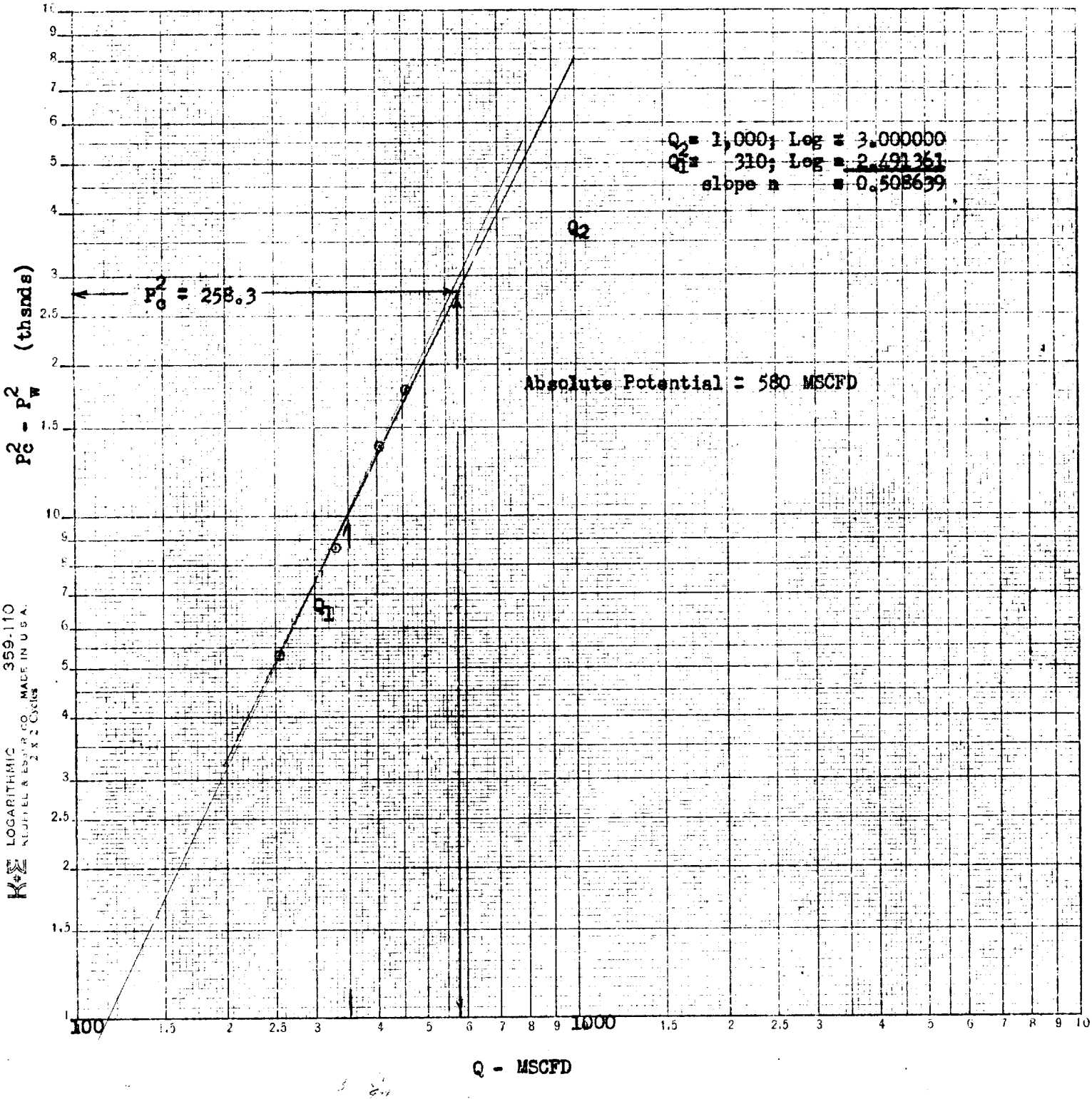
F_t = Flowing temperature correction factor.

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.

PHILLIPS PETROLEUM COMPANY
C.D. Woolworth Mm Gp. 3 No.1
Loc: M- 6 - 25 - 37 - Lea Co., N.M.
Date of test: 1 - 21 to 1 - 25 - 57



Q_2 350 2.544068
Q_1 115 2.060698
.483370