NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Tubbs (gas) Formation Tubb County Lea

Initial X Annual _____ Special _____ Date of Test 1-6-59

Company Tidewater Oil Company Lease State "Q" Well No. 1

Unit N Sec. 36 Twp. 21S Rge. 37E Purchaser El Paso Natural Gas

Casing 5-1/2 Wt. 15.5 I.D. _____ Set at 6530 Perf. 6140 To 6175

Tubing 2-3/8 Wt. 4.7 I.D. _____ Set at 6218 GOT SLEEVE ~~Perf.~~ 6187 To _____

Gas Pay: From 6140 To 6175 L 6140 xG Mix .750 -GL 4605 Bar.Press. 13.2

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

Date of Re-Completion: 11-15-58 Packer 6010 Reservoir Temp. _____

OBSERVED DATA

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

Flow Data						Tubing Data		Casing Data		
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	Duration of Flow Hr.
SI						1603				24
1.		14/64				1392	65			3
2.		16/64				1205	65			3
3.		20/64				1015	55			3
4.		24/64				710	55			3
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.	1.0881		1405.2	.9952	.9258	1.186	1672
2.	1.4382		1218.2	.9952	.9258	1.160	1873
3.	2.3674		1028.2	1.0048	.9258	1.146	2596
4.	3.3210		723.2	1.0048	.9258	1.100	2459
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 55,128 cf/bbl.
Gravity of Liquid Hydrocarbons 49 deg. API
F_c 9.936 $(1-e^{-s})$ 0.272

Specific Gravity Separator Gas .700
Specific Gravity Flowing Fluid .7839
P_c 1616.2 P_c^2 2612.1

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.	1405.2	1974.6	16.6	.28	74.4	1974.7	637.4	1562.6	1451.6
2.	1218.2	1484.0	18.6	.38	94.1	1484.1	1128.0	1634.0	1276.2
3.	1028.2	1057.2	25.8	.47	115.1	1057.4	1554.7	1384.1	1108.2
4.	723.2	523.0	24.4	.60	161.9	523.2	2088.9	1927.2	[illegible]
5.									

Absolute Potential: 3380 MCFPD; n .499

COMPANY El Paso Natural Gas Co.
ADDRESS Jal, N. Mex.
AGENT and TITLE R. A. Nikel & B. G. Bosz
WITNESSED J. W. Smith
COMPANY Tidewater Oil 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.

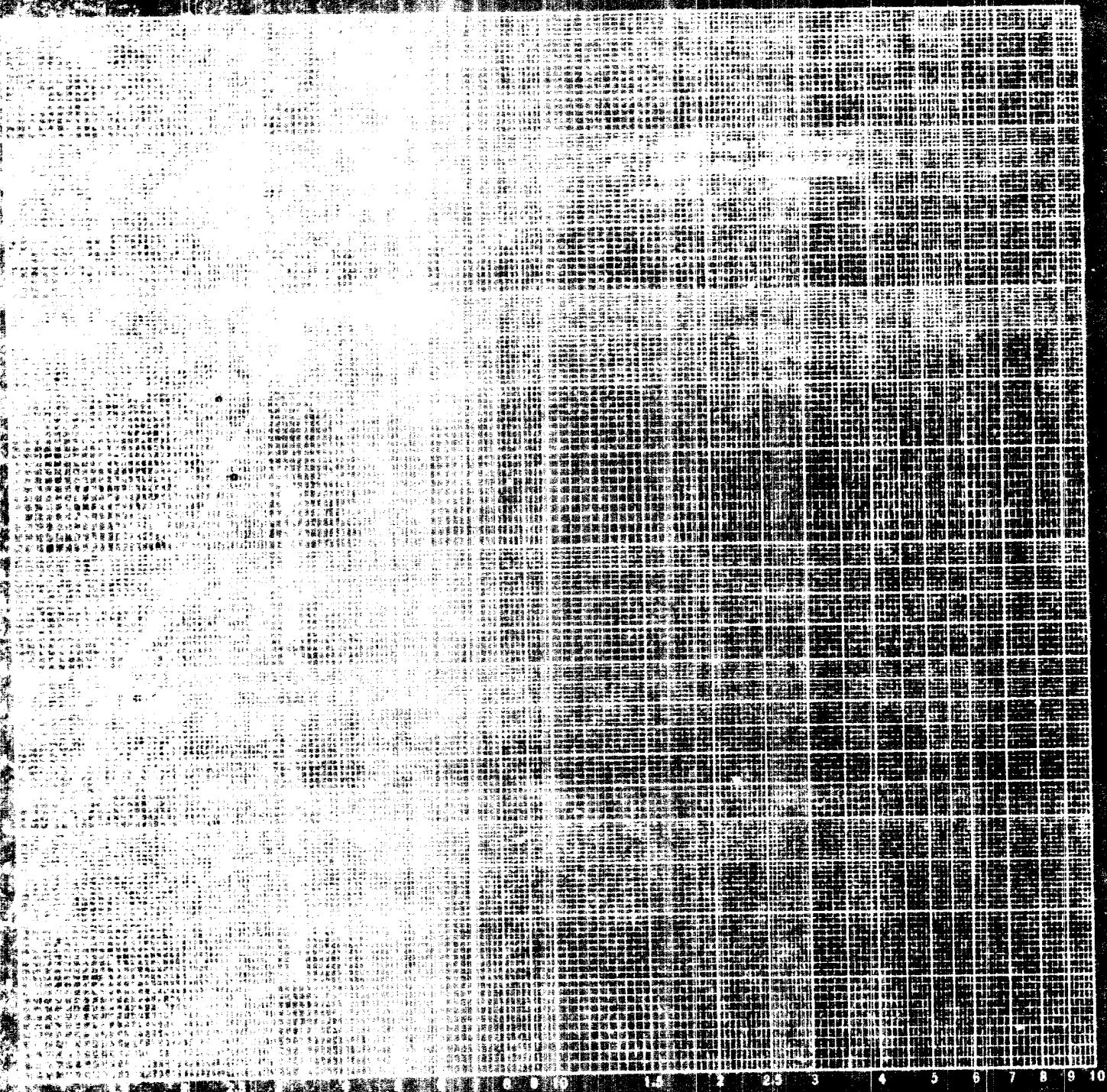
F_g = Gravity correction factor.

F_t = Flowing temperature correction factor.

F_{pv} = 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.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