

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 _____ Annual _____ Special X Date of Test 6-24/6-28-1957

Company El Paso Natural Gas Co. Lease Carlson Federal Well No. 3

Unit I Sec. 23 Twp. 25 Rge. 37 Purchaser EPNG

Casing 7" Wt. 23.0 I.D. _____ Set at 3257 Perf. _____ To _____

Tubing 2 1/2" Wt. 6.5 I.D. _____ Set at 2830 Perf. _____ To _____

Gas Pay: From 2712 To 2825 L _____ xG 0.715 -GL _____ Bar.Press. 13.2

Producing Thru: Casing _____ Tubing X Type Well Single

Date of Completion: 12-8-1955 Packer None Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. _____

OBSERVED DATA

Tested Through Prover Choke (Meter) Type Taps Flange

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						750		750		72
1.	4"	1.000	242	3.61	68	649		649		24
2.	4"	1.000	243	7.29	66	549		549		24
3.	4"	1.000	258	11.90	68	438		438		24
4.	4"	1.000	253	16.00	70	393		393		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.	6.135	30.34		.9924	.9161	1.030	174
2.	6.135	43.20		.9943	.9161	1.030	248
3.	6.135	56.79		.9924	.9161	1.030	326
4.	6.135	65.24		.9905	.9161	1.030	374
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.

Gravity of Liquid Hydrocarbons _____ deg.

F_c Measured (1-e^{-s}) _____

Specific Gravity Separator Gas _____

Specific Gravity Flowing Fluid _____

P_c 763.2 P_c² 582.5

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.	662.2					438.5	144.0		.87
2.	562.2					316.1	266.4		.73
3.	471.2					222.0	360.5		.61
4.	406.2					165.0	417.5		.52
5.									

Absolute Potential: 505 MCFPD; n 0.912

COMPANY El Paso Natural Gas Company

ADDRESS _____

AGENT and TITLE _____

WITNESSED _____

COMPANY El Paso Natural Gas Co.

REMARKS

ELVIS A. UT
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} = 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 .