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 12-2/12-6 1957

Company El Paso Natural Gas Company Lease Farnsworth C Well No. 2

Unit G Sec. 4 Twp. 26 Rge. 37 Purchaser El Paso Natural Gas Co.

Casing 5 1/2 Wt. 17 I.D. ____ Set at 2479 Perf. ____ To ____

Tubing 2 1/2 Wt. 6.5 I.D. ____ Set at 2869 Perf. ____ To ____

Gas Pay: From 2511 To 2833 L ____ xG 0.660 -GL 1657 Bar.Press. 13.2

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

Date of Completion: 12-19-39 Packer None Reservoir Temp. ____

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) Type Taps Flange

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						650				72
1.	4	1.500	590	9.61	64	592				24
2.	4	1.500	569 ✓	19.36	68	570 ✓				24
3.										
4.										
5.										

FLOW CALCULATIONS

No.	Coefficient Flange (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.	13.99	76.12		.9962	.9535	1.066	1.078
2.	13.99	106.15		.9924	.9535	1.058	1.486
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.
Gravity of Liquid Hydrocarbons ____ deg.
F_c 5.866 $(1-e^{-s})$ 0.108

Specific Gravity Separator Gas .660
Specific Gravity Flowing Fluid ____
P_c 663.2 P_c^2 439.8

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.	605.2	366.3	6.324	39.993	4.319	370.6	69.2	608.8	.92
2.	583.2	340.1	8.717	75.986	8.206	348.3	91.5	590.2	.89
3.									
4.									
5.									

Absolute Potential: 4,995 MCFPD; n .771
COMPANY El Paso Natural Gas Company
ADDRESS P. O. Box 1384, Jal, New Mexico
AGENT and TITLE R. T. Wright R. T. Wright
WITNESSED Herbert H. Kerby
COMPANY El Paso Natural Gas Company

REMARKS

Unable to secure more than two rates of flow on this test. Average Jalmat slope of 0.771 was drawn thru the point corresponding to the highest rate of flow.

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.