NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS Revised 12-1-55

Pool **Jalmat** Formation **Seven Rivers** County **Lea**

Initial ____ Annual ____ Special **x** Date of Test **4-15 to 4-19-57**

Company **E. G. Rodman** Lease **Humble State L** Well No. **1**

Unit **1** Sec. **32** Twp. **24** Rge. **37** Purchaser **El Paso Natural Gas**

Casing **7"** Wt. **24.0** I.D. ____ Set at **3427** Perf. - To -

Tubing **2"** Wt. **4.7** I.D. ____ Set at **3531** Perf. **3528** To **3531**

Gas Pay: From **3430** To **3510** L **3531** xG **0.660** -GL **2330** Bar.Press. **13.2**

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

Date of Completion: **6-24-1939** Packer ____ Reservoir Temp. ____

OBSERVED DATA

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

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						705				
1.	4	2.000	649	4.41	94	650				72
2.	4	2.000	629	6.76	92	631				24
3.	4	2.000	610	9.61	93	612				24
4.	4	2.000	590	12.96	89	593				24
5.										24

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.	25.58	54.03		.9688	.9535	1.056	1349
2.	25.58	65.88		.9706	.9535	1.056	1646
3.	25.58	76.75		.9697	.9535	1.054	1913
4.	25.58	88.40		.9732	.9535	1.055	2213
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl. Specific Gravity Separator Gas **.660**

Gravity of Liquid Hydrocarbons ____ deg. Specific Gravity Flowing Fluid ____

F_c **9.936** $(1-e^{-s})$ **0.148** P_c **718.2** P_c^2 **515.8**

No.	P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$(F_cQ)^2$ $(1-e^{-s})$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	663.2	439.8	13.40	179.56	26.57	466.4	49.4	684	95.2
2.	644.2	415.0	16.35	267.32	39.56	454.6	61.2	674	93.8
3.	625.2	390.9	19.01	361.38	53.48	444.4	71.4	666	92.8
4.	606.2	367.5	21.99	483.56	71.57	439.1	76.7	663	92.3
5.									

Absolute Potential: **13,000** MCFPD; n **.957**

COMPANY **E. G. Rodman**

ADDRESS **Box 591 Odessa, Texas**

AGENT and TITLE Earl Rodman **Engineer**

WITNESSED **E. G. Smith**

COMPANY **El Paso Natural Gas**

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.