HOBBS OFFICE OCC

NEW MEXICO OIL CONSERVATION COMMISSION

1956 SEP 21 AM 9:56

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool **Eumont** Formation **Queen** County **Lea**

Initial **X** Annual _____ Special _____ Date of Test **8-24-56**

Company **The Texas Company** Lease **William Weir** Well No. **2**

Unit **N** Sec. **23** Twp. **19-S** Rge. **36-E** Purchaser **Permian Basin Pipe Line Co.**

Casing **7** Wt. **24.0** I.D. **6.336** Set at **3700** Perf. _____ To _____

Tubing **2 7/8** Wt. **6.5** I.D. **2.441** Set at **3717** Perf. **Open end** To _____

Gas Pay: From **3700** To **3925** L **3717** xG **.690** -GL **2565** Bar.Press. **13.2**

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

Date of Completion: **5-13-55** Packer _____ Reservoir Temp. _____

CO_2 = 2.08% N_2 = 2.13%

OBSERVED DATA

Tested Through ~~(Prover)~~ ~~(Choke)~~ (Meter) Type Taps **Pipe**

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						904.7				70 1/4
1.	4	1.75	660.1	4.1	60	850.1				24
2.	4	1.75	662.8	19.1	62	728.8				23 3/4
3.	4	1.75	658.4	31.8	67	625.2				23 3/4
4.	4	1.75	649.7	41.5	70	542.9				24 1/4
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.	21.69	44.06	673.3	1.000	.9325	1.052	937
2.	21.69	95.27	675.2	.9961	.9325	1.052	2,023
3.	21.69	120.9	671.6	.9933	.9325	1.048	2,546
4.	21.69	136.6	662.9	.9905	.9325	1.045	2,902
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c **5.866** $(1-e^{-s})$ **0.162**

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c **917.9** P_c^2 **842.5**

No.	P_w 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.	863.3	745.3	5.496	30.21	4.894	750.2	92.3	866.1	.94
2.	742.0	550.6	11.87	140.8	22.81	573.4	269.0	757.2	.81
3.	638.4	407.6	14.93	222.9	36.11	443.7	398.8	666.1	.70
4.	556.1	309.2	17.02	289.7	46.93	356.1	486.4	596.7	.61
5.									

Absolute Potential: **4,295** MCFPD; n **.69**

COMPANY **THE TEXAS COMPANY**

ADDRESS **BOX 1270, MIDLAND, TEXAS**

AGENT and TITLE **L. I. BAKER, DISTRICT GAS MAN** L. I. Baker

WITNESSED **HAROLD E. BARRETT**

COMPANY **PERMIAN BASIN PIPE LINE COMPANY**

REMARKS

This is a retest.

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.