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 **9-23/9-27-63**

Company **Reserve Oil and Gas Company *** Lease **Hunter** Well No. **1**

Unit **K** Sec. **13** Twp. **24** Rge. **37** Purchaser **El Paso Natural Gas Company**

Casing **7"** Wt. **22** I.D. ____ Set at **2877** Perf. ____ To ____

Tubing ____ Wt. ____ I.D. ____ Set at ____ Perf. ____ To ____

Gas Pay: From **2965** To **3165** L **2887** xG **.679** -GL **1960** Bar.Press. **13.2**

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

Date of Completion: **April 3, 1948** Packer ____ Reservoir Temp. ____

OBSERVED DATA

Tested Through ~~(xxxxx)~~r) ~~(xxxxx)~~ (Meter) Type Taps **Flange**

No.	Flow Data ~~(xxxxx)~~ (Line) Size	Flow Data ~~(xxxxx)~~ (Orifice) Size	Flow Data Press. psig	Flow Data Diff. h_w	Flow Data Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI								331		72
1.	4 x 1.250		177	2.56	80			294		24
2.	4 x 1.250		139	9.00	67			261		24
3.	4 x 1.250		230	4.84	78			268		24
4.	4 x 1.250		193	15.21	74			239		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.	9.643	22.07		.9813	.9400	1.017	199.6
2.	9.643	37.01		.9933	.9400	1.014	337.9
3.	9.643	34.31		.9831	.9400	1.023	312.7
4.	9.643	56.00		.9868	.9400	1.020	510.9
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl. Specific Gravity Separator Gas ____
Gravity of Liquid Hydrocarbons ____ deg. Specific Gravity Flowing Fluid ____
P_c **.4792** $(1-e^{-s})$ **0.126** P_c **344.2** P_c^2 **118.5**

No.	~~P~~ P_t (psia)	P_t^2	$F_c Q$	$(F_c Q)^2$	$\frac{(F_c Q)^2}{(1-e^{-s})}$	P_w^2	$P_c^2 - P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	307.2	94.4	----------	Negligible	----------	94.4	24.1		
2.	274.2	75.2				75.2	43.3		
3.	281.2	79.1				79.1	39.4		
4.	252.2	63.6				63.6	54.9		
5.									

Absolute Potential: **840** MCFPD; n **.901**
COMPANY **Reserve Oil and Gas Company**
ADDRESS **505 Midland Savings Bldg., Midland, Texas**
AGENT and TITLE **Paul Gregory, Prod. Supt.** **10-18-63**
WITNESSED **R. A. Mikel**
COMPANY ____

REMARKS

* **Well previously operated by Producing Properties, Inc.**

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.