HOBBS OFFICE OCC
1957 FEB 17 PM 3:06

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

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

Initial ____ Annual **X** Special **-** Date of Test **Feb. 21, 1957**

Company **N. B. Hunt** Lease **Mary E. Wantz** Well No. **1**

Unit **M** Sec. **21** Twp. **21-S** Rge. **37-E** Purchaser **Phillips Petroleum Co.**

Casing **5.5** Wt. **15.5** I.D. **4.950** Set at **3659** Perf. **Open Hole** To **3815**

Tubing **2.375** Wt. **4.7** I.D. **1.995** Set at **3809** Perf. ____ To ____

Gas Pay: From **3707** To **3815** L **3707** xG **.680** -GL **2520** Bar.Press. **13.2**

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

Date of Completion: **2-1-37** Packer **None** Reservoir Temp. **90° F**

OBSERVED DATA

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

No.	Flow Data (Prover) (Line) Size	Flow Data (Choke) (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	4"	2.0"				545	67	545	67	72
1.	4"	2.0"	19	10	70	407	72	491	65	24
2.	4"	2.0"	19	20	70	384	72	464	68	24
3.	4"	2.0"	19	42	71	339	73	422	65	24
4.	4"	2.0"	19	74	71	286	73	370	61	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.	25.58	17.94	32.2	.9905	.9393	1.004	428
2.	25.58	25.38	32.2	.9905	.9393	1.004	606
3.	25.58	36.75	32.2	.9896	.9393	1.004	877
4.	25.58	48.80	32.2	.9896	.9393	1.004	1163
5.							

PRESSURE CALCULATIONS

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

Specific Gravity Separator Gas **.680**
Specific Gravity Flowing Fluid ____
P_c **558.2** P_c^2 **311.6**

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.	504.2					254.2	57.4		92.0
2.	477.2					227.7	83.9		85.4
3.	435.2					189.4	122.2		77.8
4.	383.2					146.8	164.8		68.7
5.									

Absolute Potential: **2130** MCFPD; n **.95**
COMPANY **N. B. Hunt**
ADDRESS **700 Mercantile Bank Building, Dallas 1, Texas**
AGENT and TITLE Jean M. Hoover Petr. Engr.
WITNESSED ____
COMPANY ____

REMARKS

ELVIS A. UTZ
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} = 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.