NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC 1957 APR 17 PM 3 06

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. 27, 1957**

Company **N. B. Hunt** Lease **Mary E. Wantz** Well No. **2**

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

Casing **5.5** Wt. **15.5** I.D. **4.950** Set at **3213** Perf. **Open Hole** To **3775**

Tubing **2"** Wt. **4.7#** I.D. **1.995** Set at **3758** Perf. ______ To ______

Gas Pay: From **3213** To **3775** L **3213** xG **.680** -GL **2185** Bar.Press. ______

Producing Thru: Casing ______ Tubing **X** Type Well **Single**

Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: **6-30-39** Packer **None** Reservoir Temp. **91°**

OBSERVED DATA

Tested Through (XXXXXX) (XXXXXX) (Meter) Type Taps **Flange**

No.	Flow Data (Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Temp. °F.	Casing Data Press. psig	Temp. °F.	Duration of Flow Hr.
SI	4"	1.75	Shut	In		439	65	395	65	72
1.	4"	1.75	19	16	69	297	65	356	65	24
2.	4"	1.75	19	32	69	241	67	310	65	24
3.	4"	1.75	19	53	70	208	67	256	65	24
4.	4"	1.75	19	85	70	127	67	165	65	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.	19.27	22.69	32.2	.9915	.9393	1.004	409
2.	19.27	32.10	32.2	.9915	.9393	1.004	577
3.	19.27	41.30	32.2	.9905	.9393	1.004	743
4.	19.27	52.30	32.2	.9905	.9393	1.004	942
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio **Dry Gas** cf/bbl. Specific Gravity Separator Gas **.680**

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

F_c **P_w Measured** $(1-e^{-s})$ ______ P_c **452.2** P_c^2 **204.5**

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.	369.2					136.3	68.2		81.7
2.	323.2					104.4	100.1		71.5
3.	269.2					72.5	132.0		59.6
4.	178.2					31.8	172.7		39.5
5.									

Absolute Potential: **1100** MCFPD; n **.91**

COMPANY **N. B. Hunt**

ADDRESS **700 Mercantile Bank Building, Dallas 1, Texas**

AGENT and TITLE *[signature]* P. E. Engr.

WITNESSED ______

COMPANY ______

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.