NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool **Basin Dakota** Formation **Dakota** County **San Juan**

Initial **x** Annual _____ Special _____ Date of Test 11/30/60

Company **The Ohio Oil Company** Lease **Ohio Government** Well No. **2-15**

Unit **P** Sec. **15** Twp. **28 N.** Rge. **11 W.** Purchaser _____

Casing **4½** Wt. **1160** I.D. _____ Set at **6224** Perf. **6049** To **6135**

Tubing **2 3/8"** Wt. **4.7** I.D. _____ Set at **6118** Perf. **open ended** To _____

Gas Pay: From **6049** To **6135** L _____ xG _____ -GL _____ Bar.Press. **12.0**

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

Date of Completion: **11-18-60** Packer _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through ~~(Prover)~~ (Choke) ~~(Meter)~~ Type Taps _____

	Flow Data					Tubing Data		Casing Data		
No.	(Prover) (Line) Size	(Choke) ~~(Orifice)~~ Size	Press. psig	Diff. h_w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	Duration of Flow Hr.
SI						2048		2132		
1.		3/4"	417		82°	405	82°	1262		3 hour
2.										
3.										
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.	12.3650			.9795	.9463	1.042	4980
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl. Specific Gravity Separator Gas _____
Gravity of Liquid Hydrocarbons _____ deg. Specific Gravity Flowing Fluid _____
F_c _____ $(1-e^{-s})$ _____ P_c **2144** P_c^2 **4597**

Assumed gas gravity 0.67

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.						1623	2974		0.5992
2.									
3.									
4.									
5.									

Absolute Potential: **6904** MCFPD; n **0.75**

COMPANY **The Ohio Oil Company**
ADDRESS **Durango, Colorado**
AGENT and TITLE _____ **W. C. Wunnicke, Consulting Engineer**
WITNESSED _____ **W. A. Poe**
COMPANY _____ **Ohio Oil Company**

REMARKS

RECEIVED
DEC 27 1960
OIL CON. COM.
DIST. 3

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.