NEW MEXICO OIL CONSERVATION COMMISSION

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Form C-122

Revised 12-1-55

Bough SW

Pool **undesignated** Formation **San Andres** County **Lea**

Initial **X** Annual Special Date of Test **5-21-64**

Company **H. C. Hood** Lease **Betenbough** Well No. **1**

Unit **N** Sec. **12** Twp. **9S** Rge. **35** Purchaser **venting**

Casing **7"** Wt. I.D. Set at **4600** Perf. **4748** To **4750**

Tubing **2 3/8** Wt. **4.7** I.D. **1.995** Set at **4750** Perf. **open** To

Gas Pay: From **4748** To **4750** L **4750** xG **.825** GL **3919** Bar. Press. **13.2**

Producing Thru: Casing Tubing **X** Type Well **single**

Date of Completion: Packer **4625** Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp.

OBSERVED DATA

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

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. ^oF.	Press. psig	Temp. ^oF.	Press. psig	Temp. ^oF.	
SI	2 X 1.250	14/64	2		61	1142 1122				72
1.	"	19/64	11		63	578				3
2.	"	19/64	11		63	578				3
3.	"	21/64	15		63	463				3
4.	"	23/64	16		44	385				3
5.	"	20/64	15		52	470				24

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.	35.67		15.2	.9990	.8528	1.000	462.0
2.	"		24.2	.9971	"	"	734.1
3.	"		28.2	.9971	"	"	855.4
4.	"		29.2	1.0157	"	"	902.3
5.	"		28.2	1.0078	"	"	864.6

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio **negligible** cf/bbl. Specific Gravity Separator Gas **.825**

Gravity of Liquid Hydrocarbons deg. Specific Gravity Flowing Fluid

T_c **9.936** $(1-e^{-s})$ **.236** P_c **1355** P_c^2 **1837**

No.	P_w P_t (psia)	P_t^2	$F_c Q$	$(F_c Q)^2$	$(F_c Q)^2 (1-e^{-s})$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	1135.2	1289	4.590	21.07	4.973	1294	543.4	1237	
2.	591.2	349.5	7.294	53.20	12.56	362.1	1474.9	601.7	
3.	476.2	226.8	8.300	72.25	17.05	243.8	1593.2	493.8	
4.	398.2	158.6	8.965	80.37	18.97	177.5	1659.5	421.4	
5.	483.2	233.5	8.591	73.81	17.42	250.9	1586.1	500.9	

Absolute Potential: **1,001** MCFPD; n **1.000 (assigned)**

COMPANY **Sinclair Oil & Gas Co.**

ADDRESS **Box 1470, Midland, Texas Mr. Fred Rogers**

AGENT and TITLE **Roger Fawcett**

WITNESSED **Inst. Tech.**

COMPANY

REMARKS

* 7½ liner from 4500' to 4600'

n slope flat- therefore slope of 1.000 drawn through 24-hr point

H_2S content- 790 grs./100 cf

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 60º 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.