NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

TEST NO. 2

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Tubb Gas Formation Tubb County Lea

Initial X Annual ____ Special ____ Date of Test 5-20-57

Company The Ohio Oil Company Lease Edith Butler "B" Well No. 1

Unit I Sec. 13 Twp. 22-S Rge. 37-E Purchaser Permian Basin Pipeline Company

Casing 5½" Wt. 17# I.D. 4.892 Set at 6823' Perf. 6040' To 6140'

Tubing 2-3/8" Wt. 4.7# I.D. 1.995 Set at 6825' Perf. -- To --

Gas Pay: From 6040' To 6140' L 6040 xG 0.685 -GL 4137 Bar.Press. 13.2

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

Date of Re-completion: 5/9/57 Packer 6775' Reservoir Temp. --

OBSERVED DATA

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

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						Packer	--	1816	--	72 hrs S.I.
1.	2"	5/8"	1357	--	75	"	--	1357	75	4 hrs
2.	2"	1/2"	1449	--	77	"	--	1449	77	1-1/2 hrs
3.	2"	3/8"	1574	--	78	"	--	1574	78	2 hrs
4.	2"	1/4"	1640	--	79	"	--	1640	79	2 hrs
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.	8.5417	--	1370.2	0.9859	0.9359	1.152	12,440.6
2.	5.4315	--	1462.2	0.9850	0.9359	1.159	8,476.9
3.	3.0300	--	1587.2	0.9831	0.9359	1.172	5,186.0
4.	1.3309	--	1653.2	0.9822	0.9359	1.177	2,388.5
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Flared cf/bbl.
Gravity of Liquid Hydrocarbons -- deg.
F_c 1.812 $(1-e^{-s})$ 0.248

Specific Gravity Separator Gas --
Specific Gravity Flowing Fluid --
P_c 1829.2 P_c^2 3346.8

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.	1370.2	1877.4	22.542	508.14	126.02	2003.4	1342.6	1415.4	77.4
2.	1462.2	2138.0	15.360	235.93	58.51	2196.5	1149.5	1482.1	81.0
3.	1587.2	2519.2	9.397	88.30	21.90	2541.1	804.9	1595.1	87.1
4.	1653.2	2733.1	4.313	18.60	4.61	2737.7	608.3	1654.6	90.5
5.									

Absolute Potential: 31,000 MCFPD; n 1.00 *

COMPANY The Ohio Oil Company

ADDRESS P.O. Box 2107, Hobbs, New Mexico

AGENT and TITLE H. D. Chiles - Petroleum Engineer H. D. Chiles

WITNESSED J. S. Barber - Petroleum Engineer

COMPANY The Ohio Oil Company

REMARKS

* Slope of back pressure curve was greater than 1.00, therefore slope of 1.00 was assigned.

Decreasing flow sequence used due to improper point alignment on Test No. 1.

Gas produced on above test vented to atmosphere & flared.

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.