NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

1961 MAY 23 AM 5:49

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool **Monument (McKee)** Formation **McKee** County **Lea**

Initial **X** Annual _____ Special _____ Date of Test **May 8, 1961**

Company **TEXACO Inc.** Lease **J. R. Phillips** Well No. **11**

Unit **D** Sec. **6** Twp. **20 S** Rge. **37 E** Purchaser **Transwestern Pipe Line Co.**

Casing **5-1/2** Wt. **17.0** I.D. _____ Set at **9814** Perf. **9532** To **9738**

Tubing **2-3/8** Wt. **4.70** I.D. **1.995** Set at **9748** Perf. _____ To _____

Gas Pay: From **9532** To **9738** L **9748** xG **.699** -GL **6814** Bar.Press. **13.2**

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

Date of Completion: **5-23-58** Packer **9454** Reservoir Temp. _____

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						2368	65			72
1.	3.000	2.000	317	5.4	71	2344	72			3
2.	3.000	2.000	515	22.6	68	2302	75			3
3.	3.000	2.000	690	34.0	64	2240	77			2
4.	3.000	2.000	710	87.0	54	2039	77			1
5.	3.000	2.000	685	12.4	72	2316	76			18

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.	27.52	42.22	330.2	.9896	.9697	1.028	1146
2.	27.52	109.3	528.2	.9924	.9697	1.047	3031
3.	27.52	154.6	703.2	.9962	.9697	1.070	4398
4.	27.52	250.8	723.2	1.0058	.9697	1.075	7235
5.	27.52	93.04	698.2	.9887	.9697	1.061	2605

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio **40,960** cf/bbl. Specific Gravity Separator Gas **.638**

Gravity of Liquid Hydrocarbons **67.1** deg. Specific Gravity Flowing Fluid **.699**

P_c **5.866** $(1-e^{-s})$ **.374** P_c **2381.2** P_c^2 **5670**

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.	2357.2	5556	6.722	45.18	16.90	5573	97	2361	.9915
2.	2315.2	5360	17.78	316.1	118.2	5478	192	2340	.9827
3.	2253.2	5077	25.80	665.6	248.9	5326	344	2308	.9692
4.	2052.2	4211	42.44	1801.1	673.6	4885	785	2210	.9281
5.	2329.2	5425	15.28	233.5	87.33	5512	158	2348	.9860

Absolute Potential: **24,000** MCFPD; n **.620**

COMPANY **TEXACO Inc.**

ADDRESS **P. O. Box 1270, Midland, Texas**

AGENT and TITLE **F. W. Moore, District Gas Foreman** F. W. Moore

WITNESSED _____

COMPANY _____

REMARKS

2-3/8" Tubing plastic coated internally

Used Fc for 2.441 I.D. Tubing

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.