NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS Revised 12-1-55

Pool Lust (Morrow) Formation Morrow County Lea

Initial X Annual Special Date of Test August 21, 1964

Company TEXACO Inc. Lease Texaco - Cities Service State Well No. 1 LT

Unit G Sec. 32 Twp. 19-S Rge. 32-E Purchaser None

Casing 2-7/8 Wt. 6.50 I.D. 2.441 Set at 12,987 Perf. 12,332 To 12,388

Tubing None Wt. I.D. Set at Perf. To

Gas Pay: From 12,332 To 12,388 L 12,332 xG .675 -GL 8324 Bar.Press. 13.2

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

Date of Completion: July 16, 1964 Packer 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										72
1.	3.068	1.500	65	12.0	102			2960	79	1
2.	"	"	93	23.0	104			2683	79	1
3.	"	"	110	39.0	102			2303	79	1
4.	"	"	134	57.0	93			1902	80	1
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.	14.36	30.63	78.2	.9618	.9427	-	398.8
2.	14.36	49.43	106.2	.9602	"	-	642.6
3.	14.36	69.32	123.2	.9618	"	1.009	910.9
4.	14.36	91.60	147.2	.9697	"	1.012	1217
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl. Specific Gravity Separator Gas .675

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

F_c 5.866 $(1-e^{-s})$ .4360 P_c 3916.2 P_c^2 15,337

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.	2973.2	8840	2.339	5.471	2.385	8842	6495	2974	.7594
2.	2696.2	7269	3.769	14.20	6.191	7275	8062	2697	.6887
3.	2316.2	5365	5.343	28.55	12.45	5377	9960	2319	.5921
4.	1915.2	3668	7.139	50.96	22.22	3690	11,647	1921	.4905
5.									

Absolute Potential: 1600 MCFPD; n 1.00

COMPANY TEXACO Inc.

ADDRESS Box 1270, Midland, Texas

AGENT and TITLE F. W. Moore, District Supervisor (Gas) F. W. Moore

WITNESSED

COMPANY

REMARKS

Well produced 5.5 barrels of water during test.

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.