NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Undesignated Formation Morrow County Lea

Initial X Annual ____ Special ____ Date of Test June 8-9, 1964

Company TEXACO Inc. Lease Berry Unit Well No. 1

Unit N Sec. 7 Twp. 21S Rge. 34E Purchaser None

Casing 7" Wt. ____ I.D. ____ Set at 14,750 Perf. 13,908 To 13,986

Tubing 2-3/8 Wt. 4.70 I.D. 1.995 Set at 13,860 Perf. ____ To ____

Gas Pay: From 13,908 To 13,986 L 13,860 xG .816 =GL 11,310 Bar.Press. 13.2

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

Date of Completion: June 9, 1964 Packer 13,860 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						5300				36
1.	3.068	1.500	590	7.0	105	4995	82			3
2.	"	"	620	20	80	4846	82			3
3.	"	"	680	36	60	4565	83			3
4.	"	"	710	65	58	4326	84			2
5.	"	"	610	32	70	4770	82			20

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	64.98	603.2	.9592	.9359	1.054	883
2.	"	112.5	633.2	.9813	"	1.065	1581
3.	"	179.3	893.2	1.0000	"	1.113	2682
4.	"	216.8	723.2	1.0019	"	1.093	3189
5.	"	141.2	623.2	.9905	"	1.072	2015

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 19,870 cf/bbl.
Gravity of Liquid Hydrocarbons 53.8 deg.
P_c 9.936 $(1-e^{-s})$ .541

Specific Gravity Separator Gas .685
Specific Gravity Flowing Fluid .816
P_c 5313.2 P_c^2 28,230

No.	P_w / P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$(F_cQ)^2 (1-e^{-s})$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	5008.2	25,082	8.773	76.96	41.63	25,124	3106	5012	.9433
2.	4859.2	23,612	15.71	246.8	133.5	23,745	4485	4872	.9170
3.	4578.2	20,960	26.65	710.2	384.2	21,344	6886	4619	.8693
4.	4339.2	18,829	31.68	1004	543.2	19,372	8858	4401	.8283
5.	4783.2	22,879	20.02	400.8	216.8	23,096	5134	4805	.9043

Absolute Potential: 10,700 MCFPD; n 1.00

COMPANY TEXACO Inc.
ADDRESS Box 1270, Midland, Texas
AGENT and TITLE F. W. Moore, District Supervisor (Gas)
WITNESSED ____
COMPANY ____

REMARKS

Duration of 4th point only 2 hours due to separator freezing.
5th point of 20 hours fell to right of 45° curve so was not used in determining the absolute potential.

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.