NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

S. Eunice-Monument

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Undesignated Formation Morrow County Lea

Initial X Annual Special Date of Test Sept.19-23,1961

Company TEXACO Inc. Lease State of New Mexico "CM" Well No. 1

Unit O Sec. 31 Twp. 20S Rge. 33E Purchaser Southern Union Gas Company

Casing 5"OD 18 4.276 13,782 13,288 13,602 Wt. 35 I.D. Set at 10,960 Perf. To

Tubing 2-3/8 Wt. 4.6 I.D. 1.995 Set at 13,614 Perf. To

Gas Pay: From 13,288 To 13,602 L 13,614 xG .698 -GL 9502 Bar.Press. 13.2

Producing Thru: Casing Tubing X Type Well Single - Gas

Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: Sept. 23,1961 Packer 13,200 Reservoir Temp.

OBSERVED DATA

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

No.	Flow Data (~~Prover~~) (Line) Size	(~~Choke~~) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						4075	80			
1.	2.067	1.250	634	8.8	96	3956	80			24
2.	2.067	1.250	674	18.0	102	3880	81			24
3.	2.067	1.250	855	80.0	68	3426	81			24
4.	4.026	1.750	564	83.0	73	2911	82			24
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.	10.48	75.46	647.2	.9671	.9721	1.048	779.5
2.	10.48	111.20	687.2	.9618	.9721	1.047	1141.0
3.	10.48	263.50	868.2	.9924	.9721	1.083	2885.0
4.	19.27	218.90	577.2	.9677	.9721	1.052	4260.0
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 43,580 cf/bbl.
Gravity of Liquid Hydrocarbons 52.9 deg.
F_c 9.936 $(1-e^{-s})$ .480

Specific Gravity Separator Gas .635
Specific Gravity Flowing Fluid .698
P_c 4088.2 P_c^2 16,713

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.	3969.2	15,754	7.745	59.98	28.79	15,783	930	3972	.9716
2.	3893.2	15,157	11.340	128.60	61.73	15,219	1494	3901	.9542
3.	3439.2	11,828	28.660	821.40	394.30	12,222	4491	3496	.8551
4.	2924.2	8551	42.330	1792.00	860.20	9411	7302	3068	.7504
5.									

Absolute Potential: 8400 MCFPD; n .8239

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

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.