NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

1956 SEP 21 AM 9:56

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Formation Queen County Lea

Initial X Annual Special Date of Test May 31, 1956 June 8, 1956

Company The Texas Company Lease State of N. M. "O" Well No. 2

Unit M Sec. 19 Twp. 19-S Rge. 37-E Purchaser Permian Basin Pipe Line Co.

Casing 4 1/2 Wt. 9.5# I.D. 4.090 Set at 3680 Perf. 3422 To 3560

Tubing 2 3/8 Wt. 4.70 I.D. 1.995 Set at 3836 Perf. To

Gas Pay: From 3422 To 3560 L 3422 xG .668 =GL 2286 Bar.Press. 13.2

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

Date of Completion: 1-29-55 Packer 3836 Reservoir Temp.

CO_2 1.71% N_2 1.61%

OBSERVED DATA

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

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								950.0		72½
1.	4	2.00	465.0	8.7	83			862.1		24
2.	4	2.00	453.5	15.5	81			811.7		24
3.	4	2.00	460.9	27.2	82			711.3		24
4.	4	2.00	470.0	29.7	83			672.9		23½
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.	29.92	61.82	466.2	.9786	.9463	1.043	1,844
2.	29.92	84.05	466.7	.9804	.9463	1.043	2,433
3.	29.92	113.6	474.1	.9795	.9463	1.044	3,289
4.	29.92	119.8	483.2	.9786	.9463	1.045	3,469
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl.
Gravity of Liquid Hydrocarbons deg.
F_c 3.912 $(1-e^{-s})$ 0.146

Specific Gravity Separator Gas
Specific Gravity Flowing Fluid
P_c 963.2 P_c^2 927.8

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.	875.3	766.2	7.21	51.98	7.589	773.8	144.0	879.7	.91
2.	814.3	664.1	9.52	90.63	13.23	677.3	250.5	823.0	.85
3.	724.5	524.9	12.87	165.6	24.18	549.1	378.7	731.0	.75
4.	668.1	470.7	13.57	184.1	26.88	497.6	430.2	705.4	.71
5.									

Absolute Potential: 5,490 MCFPD; n .61

COMPANY THE TEXAS COMPANY

ADDRESS BOX 1270, MIDLAND, TEXAS

AGENT and TITLE L. I. BAKER, DISTRICT GAS MAN L. I. Baker

WITNESSED HAROLD R. BARRETT

COMPANY PERMIAN BASIN PIPE LINE 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.