NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Penrose Formation Queen County Lea

Initial X Annual Special Date of Test 11-2-56

Company Gulf Oil Corporation Lease Grantt, H. T. "D" Well No. 2

Unit G Sec. 13 Twp. 20S Rge. 36E Purchaser Permian Basin PL Co.

Casing 5.5" Wt. 17# I.D. 4.892" Set at 3704' Perf. 3315' To 3462'

Tubing 2.375" Wt. 4.7# I.D. 1.995" Set at 3381' Perf. To

Gas Pay: From 3315 To 3462 L 3315 xG .665 -GL 3204 Bar.Press. 13.2

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

Date of Completion: 4-10-56 Packer 3710' Reservoir Temp.

OBSERVED DATA

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

No.	Flow Data (Prover) (Choke) (Line) Size	(Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Temp. °F.	Casing Data Press. psig	Temp. °F.	Duration of Flow Hr.
SI								955.0		72
1.	4	1.75	870.0	7.3	77			895.0		24
2.	4	1.75	875.4	23.6	76			8[illegible]		24
3.	4	1.75	876.8	18.8	76			776.2		24
4.	4	1.75	876.7	37.2	77			672.2		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.	21.69	59.39	883.2	.9880	.9698	1.039	1251
2.	21.69	81.52	888.6	.9890	.9698	1.039	1719
3.	21.69	75.98	890.0	.9891	.9698	1.039	1600
4.	21.69	134.80	889.9	.9880	.9698	1.039	2839
5.							

CO2 - 3.21%
N2 - 1.55%

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl.
Gravity of Liquid Hydrocarbons deg.
F_c 1.612 $(1-e^{-s})$ 0.1[illegible]

Specific Gravity Separator Gas
Specific Gravity Flowing Fluid
P_c 938.2 P_c^2 880.2

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.	868.2	753.8	2.867	5.239	.7[illegible]	754.5	125.7	868.6	.93
2.	882.7	676.8	3.215	9.700	1.2[illegible]	678.2	202.0	883.5	.88
3.	7[illegible]	813.7	3.[illegible]	11.[illegible]	1.[illegible]	8[illegible]	1[illegible]	8[illegible]	.9[illegible]
4.	8[illegible]	6[illegible]	5.[illegible]	2[illegible]	3.[illegible]	6[illegible]	[illegible]	[illegible]	[illegible]
5.									

Absolute Potential: 4520 MCFPD; n 0.66

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WITNESSED
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REMARKS

[illegible] A. UTZ
[illegible] ENGINEER

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.