NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Formation Yates-Seven Rivers-Queen County Lea

Initial ____ Annual X Special ____ Date of Test 9-21-56

Company Gulf Oil Corp. Lease Bell, R. R. "A" Well No. 2

Unit P Sec. 8 Twp. 21S Rge. 36E Purchaser Permian Basin PL Co.

Casing 7" Wt. 20# I.D. 6.456 Set at 2789 Perf. ____ To ____

Tubing 5" Wt Unknown I.D. ____ Set at 3748 Perf. ____ To ____
Undetermined

Gas Pay: From ____ To ____ L 2789 xG 0.660 -GL 1841 Bar.Press. 13.2

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

Date of Completion: 1-22-35 Packer None Reservoir Temp. ____

OBSERVED DATA

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

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	4							[illegible]		72
1.	4	1.75	471.1	3.7	70			595.2		24
2.	4	1.75	467.3	6.8	69			553.8		24
3.	4	1.75	466.6	13.9	71			515.8		24
4.	4	1.75	459.7	22.8	72			486.8		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	82.33	484.3	.9905	.9535	1.045	906
2.	21.69	85.02	480.5	.9915	.9535	1.046	1395
3.	21.69	81.66	479.8	.9896	.9535	1.044	1745
4.	21.69	105.8	472.9	.9887	.9535	1.043	2214
5.							

CO2 - 0.32%
N2 - 1.91%

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl. Specific Gravity Separator Gas ____
Gravity of Liquid Hydrocarbons ____ deg. Specific Gravity Flowing Fluid ____
P_c ____ $(1-e^{-s})$ ____ P_c 660.0 P_c^2 435.6
Friction not calculated

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.	484.4					364.1	71.5		.74
2.	480.0					318.1	117.5		.69
3.	479.0					279.8	155.8		.80
4.	472.5					229.9	205.7		.73
5.									

Absolute Potential: 4189 MCFPD; n 0.85

COMPANY Gulf Oil Corp.

ADDRESS Box 2167, Hobbs, N.M.

AGENT and TITLE H. L. Kendrick

WITNESSED ____

COMPANY ____

REMARKS

OIL CONSERVATION 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.