NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

1957 OCT [illegible] PM

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 9-4/13-57

Company Gulf Oil Corporation Lease Leonard "C" Well No. 9

Unit B Sec. 36 Twp. 21S Rge. 36E Purchaser Permian Basin Pl. Co.

Casing 5½ Wt. 14 I.D 4.887 Set at 3775 Perf. 3474 To 3590

Tubing 2-3/8 Wt. 4.7 I.D 1.995 Set at 3771 Perf. To

Gas Pay: From 3474 To 3590 L 3474 xG .690 -GL 2397 Bar.Press. 13.2

Producing Thru: Casing X Tubing Type Well G. O. Dual

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

Date of Completion: 7-13-56 Packer 3663 Reservoir Temp.

OBSERVED DATA

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

No.	Flow Data (~~Prover~~/~~Choke~~) (Line) Size	Flow Data (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								931.2		72
1.	4	2.25	498.5	5.2				869.5		24
2.	4	2.25	493.9	10.8				816.6		24
3.	4	225	499.7	17.4				761.6		24
4.	4	2.25	498.8	25.6				705.5		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.	40.53	51.59	512.0	.9877	.9325	1.050	2022
2.	40.53	74.01	507.1	.9896	.9325	1.050	2906
3.	40.53	94.47	512.9	.9875	.9325	1.050	3718
4.	40.53	113.5	503.2	.9887	.9325	1.050	4453
5.							

PRESSURE CALCULATIONS

CO2 — 4.86%

N2 — .43%

Gas Liquid Hydrocarbon Ratio cf/bbl.

Gravity of Liquid Hydrocarbons deg.

F_c 1.883 $(1-e^{-s})$ .152

Specific Gravity Separator Gas

Specific Gravity Flowing Fluid

P_c 944.4 P_c^2 891.9

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.	882.7	779.2	3.807	14.49	2.282	781.4	110.5	884.0	.94
2.	829.8	688.6	5.472	29.94	4.551	693.2	198.7	892.6	.88
3.	774.8	600.3	6.986	48.80	7.418	607.7	284.2	779.6	.83
4.	716.7	516.5	8.385	70.31	10.69	527.2	364.7	726.1	.77
5.									

Absolute Potential 8300 MCFPD; n 0.69

COMPANY Gulf Oil Corp.

ADDRESS Box 2167, Hobbs, N.M.

AGENT and TITLE H. L. Smith

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.