NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

1956 DEC 4 AM 9:43

Pool Eumont Formation Queen County Lea

Initial X Annual ___ Special ___ Date of Test 5-31-56

Company Gulf Oil Corporation Lease Bell, R. R. "M" Well No. 1

Unit M Sec. 23 Twp. 19S Rge. 36E Purchaser Permian Basin PL Co.

Casing 7" Wt. 20# I.D. 6.456" Set at 3688' Perf. ___ To ___

Tubing 2.375" Wt. 4.7# I.D. 1.995" Set at 3852' Perf. ___ To ___

Gas Pay: From 3700 To 3915 L 3852 xG .690 -GL ___ Bar.Press. 13.2

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

Date of Completion: 6-6-54 Packer No Reservoir Temp. ___

OBSERVED DATA

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

No.	~~(Prover)~~ (Line) Size	~~(Choke)~~ (Orifice) Size	Flow Data Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Temp. °F.	Casing Data Press. psig	Temp. °F.	Duration of Flow Hr.
SI						975.3		978.0		72
1.	4	1.50	457.7	4.0	99	890.0		927.5		24
2.	4	1.50	461.1	30.0	64	723.2		796.2		24
3.	4	1.50	469.8	43.5	88	621.5		721.3		24
4.	4	1.50	476.9	47.7	72	554.7		675.4		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.	15.26	43.41		.9645	.9325	1.038	618
2.	15.26	109.2		.9960	.9325	1.050	1625
3.	15.26	144.9		.9782	.9325	1.060	2089
4.	15.26	152.9		.9887	.9325	1.047	2252
5.							

CO2 - 1.975
N2 - 2.145

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ___ cf/bbl. Specific Gravity Separator Gas ___
Gravity of Liquid Hydrocarbons ___ deg. Specific Gravity Flowing Fluid ___
F_c ___ $(1-e^{-s})$ ___ P_c 991.2 P_c^2 982.5

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.	940.7					884.9	97.6		.95
2.	809.4					655.3	327.4		.82
3.	734.5					539.5	443.0		.74
4.	688.6					474.2	508.3		.69
5.									

Absolute Potential: 3920 MCFPD; n .80
COMPANY Gulf Oil Corporation
ADDRESS Box 2167, Hobbs, N.M.
AGENT and TITLE W. L. Smith
WITNESSED ___
COMPANY ___

REMARKS

ELVIS A. UTZ
GAS [illegible]

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.