NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool **Arkansas Junction Queen** Formation **Queen** County **Lea**

Initial **X** Annual_____ Special_____ Date of Test **8-14, 15-61**

Company **Gulf Oil Corporation** Lease **Lea State "EA"** Well No. **1**

Unit **D** Sec. **13** Twp. **18S** Rge. **36E** Purchaser **Warren Petroleum Corp.**

Casing **2-7/8" OD** Wt. **6.50#** I.D. **2.441** Set at **4598** Perf. **4394** To **4442**

Tubing **None** Wt._____ I.D._____ Set at_____ Perf._____ To_____

Gas Pay: From **4394** To **4442** L **4394** xG **.700** -GL **3076** Bar.Press. **13.2**

Producing Thru: Casing **X** Tubing_____ Type Well **single**

Date of Completion: **3-3-61** Packer_____ Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp._____

OBSERVED DATA

Tested Through (~~Prover~~) (~~Choke~~) (Meter)   Type Taps **flange**

No.	Flow Data (Prover)(Line) Size	(Choke)(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								1404		72
1.	3	1.50	2##	5.5	62			1299		3
2.	3	1.50	290	9.2	62			1235		3
3.	3	1.50	300	17.2	59			1087		3
4.	3	1.50	300	26.0	62			922		3
5.	3	1.50	300	36.8	76			596		21

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.	14.36	40.50	298.2	.9981	.9258	1.034	556
2.	14.36	52.82	303.2	.9981	.9258	1.036	726
3.	14.36	73.40	313.2	1.0010	.9258	1.038	1014
4.	14.36	90.24	313.2	.9981	.9258	1.037	1242
5.	14.36	107.36	313.2	.9850	.9258	1.033	1452

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio **None** cf/bbl.
Gravity of Liquid Hydrocarbons_____ deg.
F_c **5.866** $(1-e^{-s})$ **0.191**

Specific Gravity Separator Gas_____
Specific Gravity Flowing Fluid_____
P_c **1417.2** P_c^2 **2008.5**

No.	P_w P_t (psia)	P_t^2	$F_c Q$	$(F_c Q)^2$	$(F_c Q)^2 (1-e^{-s})$	P_w^2	$P_c^2 - P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	1312.2	1721.9	3.261	10.63	2.03	1723.9	284.6	1313.0	.926
2.	1243.2	1558.0	4.259	18.14	3.46	1561.5	447.0	1249.6	###
3.	1100.2	1210.4	5.948	35.38	6.75	1217.2	791.3	1103.3	.776
4.	935.2	874.6	7.286	53.09	10.14	884.7	1123.8	940.6	.660
5.	609.2	371.1	8.517	72.54	13.85	385.3	1623.0	620.8	.430

Absolute Potential: **1645** MCFPD; n **.585**

COMPANY **Gulf Oil Corp.**

ADDRESS **Box 2167, Hobbs, N.M.**

AGENT and TITLE *Kay Watson* **Gas Tester**

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.