

NEW MEXICO OIL CONSERVATION COMMISSION

 ELVIS J. JONES
 GAS ENGINEER
 Form C-122
 Revised 12-1-55

 HOBBS OFFICE OCC
 MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Recent Formation 1556 OCT 8 Talc-Sand-Rivers County Lee
 Initial _____ Annual X Special _____ Date of Test 6-15 to 6-25-56
 Company Gulf Oil Corporation Lease Mattern "A" Well No 2
 Unit 0 Sec. 24 Twp. 2 S Rge. 16 E Purchaser Gulf Oil Corp.
 Casing 10.75 Wt. 45.5 I.D. 9.950 Set at 3000 Perf Open Hole To _____
 Tubing 2.375 Wt. 4.7 I.D. 1.995 Set at 30' 1 ft. Perf. _____ To _____
 Gas Pay: From 3025 To 3048 L 3030 xG .690 -GL 2092 Bar. Press. 13.2
 Producing Thru: Casing X Tubing _____ Type Well Single
 Single-Bradenhead-G. G. or G.O. Dual
 Date of Completion: 10-23-59 Packer _____ Reservoir Temp. _____
 Recompleted 1-55

OBSERVED DATA

 Tested Through Revised (meter) (Meter) Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						1071.0		1071.0		72
1.	4	1.50	788.0	4.2	60	1081.0		1081.0		24
2.	4	1.50	948.0	13.0	60	997.0		997.0		21
3.	4	1.50	718.0	14.0	60	965.0		965.0		22
4.	4	1.50	718.0	19.0	60	955.0		955.0		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.	13.99	94.73	713.2	1.000	.9315	1.005	775
2.	13.99	94.80	953.2	1.000	.9315	1.064	1256
3.	13.99	107.57	783.2	1.000	.9315	1.090	1289
4.	13.99	117.22	783.2	1.000	.9315	1.090	1467
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
 Gravity of Liquid Hydrocarbons _____ deg.
 F_c Friction Negligible ($1-e^{-s}$)

Specific Gravity Separator Gas .690
 Specific Gravity Flowing Fluid _____
 P_c 1004.2 P_c^2 1178

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.	1081.2					1090	86		96.3
2.	1081.2					1081	135		93.1
3.	997.2					957	219		90.2
4.	965.2					937	239		89.3
5.									

 Absolute Potential: 5,500 MCFPD; n .75

 COMPANY Gulf Oil Corporation

 ADDRESS Box 2167, Hobbs, N.M.

 AGENT and TITLE St. J. 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} = Supercompressibility 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 .