NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool __Undesignated__ Formation __Pictured Cliffs__ County __Sandoval__

Initial __X__ Annual _____ Special _____ Date of Test __9/28/59__

Company __Magnolia Petroleum Co.__ Lease __Duff-Federal "B"__ Well No. __1__

Unit __D__ Sec. __19__ Twp. __23N__ Rge. __1W__ Purchaser __Not Connected__

Casing __4½"__ Wt. __9.5#__ I.D. __4.090"__ Set at __3065'__ Perf. __2986'__ To __3007'__

Tubing __1½"__ Wt. __2.90#__ I.D. __1.610"__ Set at __3009'__ Perf. _____ To _____

Gas Pay: From __2986'__ To __3007'__ L _____ xG __0.68__ -GL _____ Bar.Press. _____

Producing Thru: Casing __X__ Tubing _____ Type Well __Single__

Date of Completion: __9/15/59__ Packer __None__ Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. __94°__

OBSERVED DATA

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

| 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						914	—	914	—	
1.	2"	0.750	83	—	54	113	—	83	54	3 Hours
2.										
3.										
4.										
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.	12.365	—	95	1.0058	0.9393	1.000	1110
2.							
3.							
4.							
5.							

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 __926__ P_c^2 __857.476__

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.	125	—	—	—	—	15.625	841.851	—	—
2.									
3.									
4.									
5.									

Absolute Potential: __1128__ MCFPD; n __0.85__

COMPANY __MAGNOLIA PETROLEUM COMPANY__

ADDRESS __P. O. Box 2406, Hobbs, New Mexico__

AGENT and TITLE __C. V. Mireley__   Gas Engineer

WITNESSED _____

COMPANY _____

REMARKS
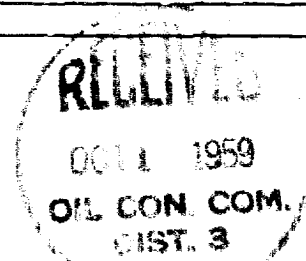
INSTRUCTIONS

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.