NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Tubb Formation Middle Yeso County Lea

Initial - Annual - Special - Date of Test 10-14-58

Company Magnolia Petroleum Company Lease J. N. Carson Well No. 2

Unit H Sec. 33 Twp. 21S Rge. 37E Purchaser Permian Basin Pipeline Co.

Casing 7" Wt. 23# I.D. 6.366 Set at 7250 Perf. 6068 To 6224

Tubing 2-3/8" Wt. 4.7# I.D. 1.995 Set at 6127 Perf. open end To

Gas Pay: From 6068 To 6224 L 6127 xG .701 -GL 4295 Bar.Press. 13.2

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

Date of Completion: 10-19-58 Packer @6040 Reservoir Temp. 122° F

OBSERVED DATA

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

	Flow Data					Tubing Data		Casing Data		
No.	~~(Prover)~~ (Line) Size	~~(Choke)~~ (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	Duration of Flow Hr.
SI						1802				SI 40½ hrs.
1.	4.026	1.5	521.3	5.3	78	820				8¼ hrs.
2.										
3.										
4.										
5.										

FLOW CALCULATIONS

L-10 Chart Differential x static

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	7.3x5.3x3.162=122.34		.9831	.9258	1.061	1652
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl. Specific Gravity Separator Gas .701

Gravity of Liquid Hydrocarbons _____ deg. Specific Gravity Flowing Fluid _____

P_c 9.936 $(1-e^{-s})$ 0.256 P_c 1815.2 P_c^2 3294.95

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.	833.2	694.2	16.1	259.2	66.35	760.55	2534.4	872.1	.48
2.									
3.									
4.									
5.									

Absolute Potential: 2011 MCFPD; n .75

COMPANY MAGNOLIA PETROLEUM COMPANY

ADDRESS P. O. BOX 2406, HOBBS, NEW MEXICO

AGENT and TITLE George L Fowler Gas Engineer

WITNESSED J. D. Horton

COMPANY Permian Basin Pipeline 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.