NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Aztec-Fruitland (Dual with Aztec-Pictured Cliffs) Formation Fruitland County San Juan

Initial X Annual ____ Special ____ Date of Test November 13, 1959

Company Pan American Petroleum Corp. Lease Gonzales Gas Unit "A" Well No. 1

Unit I Sec. 20 Twp. 29N Rge. 10W Purchaser El Paso Natural Gas Company

Casing 5-1/2 Wt. 14 I.D. 5.012 Set at 1997 Perf. 1646 To 1686

Tubing 1-1/4 Wt. 2.3 I.D. 1.380 Set at 1646 Perf. open ended; no perforations To ____

Gas Pay: From 1646 To 1686 L 1646 xG 0.65 (est.) GL 1070 Bar.Press. 12

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

Date of Completion: 10-3-59 Packer 1820 Reservoir Temp. 90° F

OBSERVED DATA

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

No.	Flow Data (P~~rover~~) (Line) Size	(Choke) (~~Orifice~~) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI	Shut in 10 days					655		655		
1.	2"	3/4"	379		60° (est.)	442		595		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		391	1.000	0.9608	1.039	4826
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

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

Specific Gravity Separator Gas ____
Specific Gravity Flowing Fluid ____
P_c 667 P_c^2 444,889

No.	P_w P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$(F_cQ)^2$ $(1-e^{-s})$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.						206,116	238,773		
2.									
3.									
4.									
5.									

Absolute Potential: 8185 MCFPD; n 0.85
COMPANY Pan American Petroleum Corporation
ADDRESS Box 487, Farmington, New Mexico
AGENT and TITLE R. M. Bauer, Jr., Area Engineer R M Bauer Jr.
WITNESSED ____
COMPANY ____

REMARKS

RECEIVED
DEC 7 1959
OIL CON. COM.
DIST. 3

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.