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 October 28, 1959

Company American Petroleum Corporation Lease Keys Gas Unit "C" Well No. 1

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

Casing 5-1/2 Wt. 14 I.D. 5.012 Set at 1855 Perf. 1595 To 1655

Tubing 1-1/2 Wt. 2.9 I.D. 1.610 Set at 1801 Perf. not open To Fruitland Pictured Cliffs producing string,

Gas Pay: From 1595 To 1655 L 1595 xG 0.65 (est.) GL 1037 Bar.Press. 12

Producing Thru: Casing X Tubing Type Well Gas-Gas Dual

Date of Completion: 10-16-59 Packer 1780 Reservoir Temp. 90°F Single-Bradenhead-G. G. or G.C. Dual

OBSERVED DATA

Tested Through (Choke) Type Taps

No.	Flow Data (Line) Size	Flow Data (Choke) Size	Flow Data Press. psig	Flow Data Diff. h_w	Flow Data 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 12 days					606				
1.	2"	3/4"	154		60° (est.)	154				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		166	1.000	0.9608	1.015	2002
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 618 P_c^2 381,924

No.	P_w P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$\frac{(F_cQ)^2}{(1-e^{-s})}$	P_w^2	$P_c^2-P_w^2$	P_w	$\frac{P_w}{P_c}$
1.		Friction Loss Negligible				27,556	354,368	154	
2.									
3.									
4.									
5.									

Absolute Potential: 2133 MCFPD; n 0.85

COMPANY American Petroleum Corporation

ADDRESS Box 487, Farmington, New Mexico

AGENT and TITLE R. . Bauer, Jr., Area 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.