NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool **Blanco** Formation **Mesaverde** County **San Juan**

Initial **X** Annual Special Date of Test **9-3-57**

Company **Aztec Oil & Gas Company** Lease **Grenier** Well No. **6**

Unit **K** Sec. **20** Twp. **31N** Rge. **11W** Purchaser **Southern Union Gas Company**

Casing **5 1/2"** Wt. **14#** I.D. **5.012** Set at **5100** Perf. **4780** To **4944**

Tubing **2 3/8"** Wt. **4.7#** I.D. **1.995** Set at **5001** Perf. **4961** To **5001**

Gas Pay: From **4780** To **4944** L **4961** xG **0.65** ─GL **3238** Bar.Press. **12 psia**

Producing Thru: Casing_____ Tubing **X** Type Well **G.G. Dual**
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: **August 9, 1957** Packer **Baker Model B** Reservoir Temp._____
Date Well Shut-in For Test - August 20, 1957

OBSERVED DATA

Tested Through ~~(Prover)~~ (Choke) ~~(Meter)~~   Type Taps_____

No.	Flow Data (Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Temp. °F.	Casing Data Press. psig	Temp. °F.	Duration of Flow Hr.
SI						**615**	**60**			**14 days**
1.		**0.750**				**181**	**60**			**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**		**193**	**1.002**	**0.961**	**1.020**	**2330**
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio_____ cf/bbl.
Gravity of Liquid Hydrocarbons_____ deg.
F_c **9.402** (1-e^{-s}) **0.210**

Specific Gravity Separator Gas_____
Specific Gravity Flowing Fluid_____
P_c **827** P_c^2 **683969**

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.	**193**	**37.249**	**21.921**	**483.606**	**101.557**	**138.806**	**545.123**	**372.6**	
2.									
3.									
4.									
5.									

Absolute Potential: **2773** MCFPD; n **0.75**
COMPANY **AZTEC OIL & GAS COMPANY**
ADDRESS **P O Box 786, Farmington, New Mexico**
AGENT and TITLE **ORIGINAL SIGNED BY L. M. STEVENS**, **District Engineer**
WITNESSED
COMPANY

RECEIVED
SEP 13 1957
OIL CON. COM.
DIST. 3

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.