NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Angel Peak Extension Formation Dakota County San Juan

Initial XXX Annual _____ Special _____ Date of Test 9/14/60

Company Aztec Oil and Gas Co. Lease McClanahan Well No. 20-D

Unit H Sec. 13 Twp. 28N Rge. 10W Purchaser Southern Union Gas Company

Casing 4½" Wt. 9.5 I.D. 4.090 Set at 6408 ft. Perf. 6230 To 6326

Tubing 2 3/8 Wt. 4.7 I.D. 1.995 Set at 6178 ft. Perf. Pin Collared To _____

Gas Pay: From 6230 To 6326 L 6178 xG 0.70 (E) -GL 4325 Bar.Press. 12

Producing Thru: Casing _____ Tubing XX Type Well Single

Date of Completion: 9/7/60 Packer _____ Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. 130

OBSERVED DATA

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

No.	Flow Data (Prover) (Line) Size	Flow Data (Choke) (Orifice) 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						2035		2035		7 days
1.		0.750				456	60(E)	1014		3 hrs.
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		468	1.000	0.9608	1.055	5866
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 2047 P_c^2 4,190,209

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.	1026					1,052,676	3,137,533		
2.									
3.									
4.									
5.									

Absolute Potential: 7289 MCFPD; n 0.75
COMPANY Aztec Oil and Gas Company
ADDRESS Drawer 570, Farmington, New Mexico
AGENT and TITLE _____ L. M. Stevens, Engineer
WITNESSED _____
COMPANY _____

REMARKS

RECEIVED
SEP 19 1960
OIL

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.