NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Aztec Formation Pictured Cliffs County San Juan

Initial XXXX Annual _____ Special _____ Date of Test 10/10/59

Company Aztec Oil & Gas Company Lease Nave Well No. 13

Unit O Sec. 3 Twp. 29N Rge. 10W Purchaser Southern Union Gas Company

Casing 4½ Wt. 9.5 I.D. 4.090 Set at 2359 Perf. 2309 To 2320

Tubing 1 Wt. 1.7 I.D. 1.049 Set at 2353 Perf. 2343 To 2353

Gas Pay: From 2309 To 2320 L _____ xG _____ -GL _____ Bar.Press. _____

Producing Thru: Casing XXXX Tubing _____ Type Well _____

Date of Completion: 10/10/59 Packer _____ Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. _____

OBSERVED DATA

Tested Through (XXXXXX) (Choke) (XXXXXX) 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						969		969		7 days
1.		.750	169			118	60	169		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.	12.3590		181	1.000	.9608	1.010	1,851
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 981 P_c^2 337,561

No.	P_w (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.	130					16,900	320,661		
2.									
3.									
4.									
5.									

Absolute Potential: 1,516 MCFPD; n .85

COMPANY Aztec Oil & Gas Company

ADDRESS Box 704, Farmington, New Mexico

AGENT and TITLE ORIGINAL SIGNED BY D. K. BRYANT D. K. Bryant, 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.