NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Und. Dakota Formation Dakota County San Juan

Initial X Annual Special Date of Test August 1, 1960

Company Tennessee Gas & Oil Company Lease Elvin J. Payne Gas Unit Well No. "A" 1

Unit Sec. 19 Twp. 29 N Rge. 10 W Purchaser

Casing 4 1/2 Wt. I.D. Set at 6425 Perf. 6280 To 6391

Tubing 2" Wt. I.D. Set at Perf. To

Gas Pay: From 6280 To 6391 L xG -GL Bar.Press.

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

Date of Completion: August 1, 1960 Packer No Reservoir Temp. 156 F

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	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						1954		1951		
1.		.750	317			317	80	766		3.0
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.	12.3650		329	.9813	.8402	1.020	3,752
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio No Sep. cf/bbl.
Gravity of Liquid Hydrocarbons deg.
F_c $(1-e^{-s})$

Specific Gravity Separator Gas
Specific Gravity Flowing Fluid .80
P_c 2394 P_c^2 5,683

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.	935	874				874	4809		
2.									
3.									
4.									
5.									

Absolute Potential: 4,400 MCFPD; n .75

COMPANY Ward & Jamison Engineering Company
ADDRESS P.O. Box 2111, Farmington, New Mexico
AGENT and TITLE John Ward, Engineer
WITNESSED M. Johnson
COMPANY Tennessee Gas & Oil Company

REMARKS

Bottom Hole Pressures measured with Amerada Recording Pressure Gauge

Surface Pressures measured with dead weight tester

RECEIVED
1960
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.

F