

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmat Formation Yates County Lea
Initial _____ Annual _____ Special X Date of Test 8-22/8-30-63
Company Reserve Oil and Gas Company* Lease Gutman Well No. 1 (Tubing)
Unit G Sec. 18 Twp. 24 Rge. 37 Purchaser El Paso Natural Gas Company
Casing 5 1/2 Wt. 14 I.D. _____ Set at 3447 Perf. _____ To _____
Tubing 2 3/8 Wt. 4.7 I.D. _____ Set at 2978 Perf. _____ To _____
Gas Pay: From 2948 To 3048 L 2978 xG .660 -GL 1965 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: February 17, 1958 Backer 2918 Reservoir Temp. _____

OBSERVED DATA

Tested Through ~~Pressure~~ (Choke) (Meter) Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						491				72
1.	4 x 1.000		197	4.84	80	409				24
2.	4 x 1.000		186	9.61	78	368				24
3.	4 x 1.000		187	14.44	74	321				24
4.	4 x 1.000		189	22.09	78	234				24
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wP_f}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	6.135	31.89		.9813	.9535	1.018	186.3
2.	6.135	43.75		.9831	.9535	1.017	255.9
3.	6.135	53.77		.9868	.9535	1.018	316.0
4.	6.135	66.83		.9831	.9535	1.017	390.8
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.
Gravity of Liquid Hydrocarbons None deg.
F_c 9.936 (1-e^{-s}) .126

Specific Gravity Separator Gas .660
Specific Gravity Flowing Fluid None
P_c 504.2 P_c 254.2

No.	P _{xx} 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	P _w /P _c
1.	422.2	178.2	- - -	Negligible	- - - - -	178.2	76.0		
2.	381.2	145.3				145.3	108.9		
3.	334.2	111.7				111.7	142.5		
4.	247.2	61.1				61.1	193.1		
5.									

Absolute Potential: 490 MCFPD; n .766
COMPANY Reserve Oil and Gas Company
ADDRESS 505 Midland Savings Building, Midland, Texas
AGENT and TITLE Paul Gregory, Prod. Supt.
WITNESSED Jack T. Littlefield
COMPANY _____

REMARKS

* Well previously operated by Producing Properties, Inc.

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} = Supercompressibility 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 .

Oct 21 7 53 AM '69