

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Jalnet Formation Yates-Rivers County Lee
Initial _____ Annual _____ Special X Date of Test 3-18/3-22-1957
Company Leonard Oil Co. Lease Justis Well No. 1
Unit I Sec. 19 Twp. 25 Rge. 37 Purchaser KPMG
Casing 8 5/8 Wt. _____ I.D. 32.04 Set at 2616 Perf. _____ To _____
Tubing None Wt. _____ I.D. _____ Set at _____ Perf. _____ To _____
Gas Pay: From 2615 To 2795 L 2615 xG 0.675 -GL 1765 Bar.Press. 13.2
Producing Thru: Casing I Tubing _____ Type Well Single
Date of Completion: 6-2-1931 Packer None Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. _____

OBSERVED DATA

Tested Through (Pressure) (Orifice) (Meter) Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Pressure) (Line) Size	(Orifice) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								370		72
1.	4	.750	223	1.69	68			205		24
2.	4	.750	265	2.25	59			272		24
3.	4	.750	248	4.04	62			250		24
4.	4	.750	250	5.76	61			250		24
5.										

FLOW CALCULATIONS

No.	Coefficient Flange (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.	3.135	19.97		.9924	.9427	1.023	65
2.	3.135	25.01		1.0010	.9427	1.030	83
3.	3.135	35.94		.9981	.9427	1.027	118
4.	3.135	38.92		.9990	.9427	1.028	130
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl. Specific Gravity Separator Gas 0.675
Gravity of Liquid Hydrocarbons _____ deg. Specific Gravity Flowing Fluid _____
P_c 0.2774 (1-e^{-s}) 0.114 P_c 383.2 P_c 146.8

No.	P _w 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.	298.2					88.9	57.2		0.77
2.	265.2					81.3	65.5		0.74
3.	263.2		*****	NEGLECTED	*****	69.3	77.5		0.68
4.	263.2					69.3	77.5		0.68
5.									

Absolute Potential: 249 MCFPD; n 1.000
COMPANY Leonard Oil Co.
ADDRESS Box 708, Roswell, N.M.
AGENT and TITLE Fowler Hix, Production Supt.
WITNESSED Earl G. Smith
COMPANY KPMG

REMARKS

Point Alignment not too good and slope in excess of 1.000 A slope of 1.000 was drawn through the flow point corresponding to the high rate of flow. The subject well is produced with a compressor and would be impossible to test with a Critical Flow Prover due to being a Townsite location.

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 .