

NEW MEXICO OIL CONSERVATION COMMISSION

RECEIVED

JAN 16 1963 Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

O. C. C.
ARTESIA, OFFICE
Chaves

Pool Wildcat Formation Pennsylvanian County Chaves

Initial X Annual Special Date of Test 1/4-5/1963

Company Ralph Lowe Lease Moats-Fee Well No. 1

Unit L Sec. 31 Twp. 15-S Rge. 27-E Purchaser None

Casing 5-1/2 Wt. 17.00 I.D. 4.892 Set at 3164 Perf. 7680 To 7690

Tubing 2 Wt. 4.70 I.D. 1.995 Set at 7662 Perf. To

Gas Pay: From 7680 To 7690 L 7662 xGMix = .660 GL 5057 Bar.Press. 13.2

Producing Thru: Casing Tubing X Type Well Single

Date of Completion: 12-31-1962 Packer 7352 Reservoir Temp.

OBSERVED DATA

Tested Through (Prover)/(Orifice) (Meter)Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Orifice) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						1995				72
1.	3.068	1.250	630	17.0	85	1788				5
2.	3.068	1.250	630	41.0	72	1640				6
3.	3.068	1.250	630	73.0	66	1392				6
4.	3.068	1.500	630	61.0	65	910				6
5.	3.068	1.500	615	59.0	68	889				24

FLOW CALCULATIONS

No.	Coefficient Flg. (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	9.781	104.57		.9768	.9721	1.053	1.023
2.	9.781	162.39		.9887	.9721	1.057	1.613
3.	9.781	216.69		.9943	.9721	1.059	2.169
4.	14.36	192.08		.9952	.9721	1.059	2.913
5.	14.36	192.52		.9924	.9721	1.056	2.816

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 107.194 cf/bbl.

Gravity of Liquid Hydrocarbons 61.0 deg.

P_c 9.936 $(1-e^{-s})$.294

Specific Gravity Separator Gas .535

Specific Gravity Flowing Fluid .7351

P_c 2008.2 P_c^2 4032.9

No.	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.	1801.2	3244.3	10.16	103.2	30.3	3274.6	758.3	1809.6	.9011
2.	1653.2	2733.1	16.03	257.0	75.6	2808.7	1224.2	1675.9	.8345
3.	1405.2	1974.6	21.55	464.4	136.5	2111.1	1921.8	1453.0	.7235
4.	923.2	852.3	28.94	837.5	246.2	1098.5	2934.4	1048.1	.5219
5.	902.2	814.0	27.98	782.0	230.2	1044.2	2988.7	1021.9	.5089

Absolute Potential: 3.425 MCFPD; n .696COMPANY Ralph LoweADDRESS P. O. Box 832, Midland, TexasAGENT and TITLE Archie E. Farn, Petroleum Engineer

WITNESSED

COMPANY

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 casing, tubing if flowing thru tubing.) 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 .