

NEW MEXICO OIL CONSERVATION COMMISSION

ALVIS A. UIZ
GAS ENGINEER

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool WENT Formation WENT County 3:05Initial Annual Special Date of Test 1-28-56Company Lease Well No. 2Unit Sec. 36 Twp. 20 Rge. 36 Purchaser Casing 1.5 Wt. 17 I.D. 4.372 Set at 317 Perf. 3170 To 3176Tubing 2.775 Wt. 4.7 I.D. 1.775 Set at 2170 Perf. To Gas Pay: From 3170 To 3176 L 3170 xG .670 -GL 2325 Bar.Press. 13.2Producing Thru: Casing Tubing Type Well 1

Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 1-2-55 Packer 2170 Reservoir Temp.

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) Type Taps

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								317.6		12
1.	1	2.50	161.0	15.0	74			317.6		24
2.	1	2.50	164.2	20.2	67			337.1		24
3.	1	2.50	167.4	25.0	59			341.8		24
4.	1	2.50	173.0	23.1	60			377.1		24
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.	11.10	71.51	171.2	.986	.863	1.145	1171
2.	11.14	74.21	177.5	.983	.863	1.147	1262
3.	11.14	109.61	180.6	.981	.863	1.141	1535
4.	11.14	115.07	186.2	.980	.863	1.130	1632
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl.
Gravity of Liquid Hydrocarbons deg.
F_c 1.12 (1-e^{-s}) .111

Specific Gravity Separator Gas
Specific Gravity Flowing Fluid
P_c 1.1 P_c² 1.21

No.	P _w 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.	171.2	29304	7.553	57.02	57.02	29304	174.5	16.0	171.2
2.	177.5	31506	9.535	90.82	13.5	31506	203.9	75.2	172.7
3.	180.6	32616	10.754	115.65	17.1	32616	330.7	711.1	172.4
4.	186.2	34656	10.386	107.87	17.1	34656	329.9	701.7	176.1
5.									

Absolute Potential: 13,000 MCFPD; n .85COMPANY ADDRESS or 216, Hobbs, New MexicoAGENT and TITLE H. L. SmithWITNESSED COMPANY

REMARKS

No test run because of regulator trouble.

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 .