

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 .

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Red Hills Formation Wolfeamp County Lea
Initial _____ Annual _____ Special CAOF Date of Test 1-18-65
Company The Pure Oil Company Lease Red Hills Unit Well No. 1
Unit 0 Sec. 32 Twp. 25-S Rge. 33-E Purchaser El Paso Natural Gas Company
Casing 6-5/8 Wt. 28# I.D. 5.666 Set at 16,952' Perf. 13,440' To 13,667'
Tubing 2-7/8 Wt. 6.5 I.D. 2.229 Set at 12,112 Perf. 12,079 To 12,086'
Gas Pay: From _____ To _____ L _____ xG _____ -GL _____ Bar. Press. 13.2 psig
Producing Thru: Casing _____ Tubing 2-7/8" Type Well Gas
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 1-26-64 Packer 13,734' Reservoir Temp. 185

OBSERVED DATA

Tested Through ~~x-Prover~~ ~~x-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										
1.	6.065"	2.25"	8.5	3.4	40	7382	46	800	72	7.25
2.	6.065"	2.25"	8.45	5.9	42	6676	49	950	72	8.00
3.	6.065"	3.25"	8.4	4.15	43	5512	68	1200	72	9.25
4.	6.065"	3.25"	8.5	5.2	60	4407	56	1325	72	12.50
5.	6.065"	3.25"	8.4	6.2	54	3243	83	1450	72	33.0

* 100" x 1000 psi meter with L-10 charts used

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.	31.47	28.9	722	1.0198	.9660	1.063	3,011.5
2.	31.47	49.86	713	1.0178	"	1.062	5,180.0
3.	68.36	34.86	705	1.0168	"	1.0611	7,851.2
4.	68.36	44.20	722	1.0000	"	1.091	10,069.0
5.	68.36	52.08	705	1.0058	"	1.059	11,583.0

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 23,040 cf/bbl.
Gravity of Liquid Hydrocarbons 60° deg.
T_c _____ (1-e^{-s})
Specific Gravity Separator Gas .643
Specific Gravity Flowing Fluid
P_c 10,148 P_c 102,982 x 103

** Pressures measured with bottom hole pressure bomb

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.	9398					88,322	14,660		.926
2.	8666					71,100	27,882		.854
3.	7544					56,912	46,070		.743
4.	6518					42,484	60,498		.643
5.	5507					30,327	72,655		.543

Absolute Potential: 15,750 MCFPD; n .84

COMPANY The Pure Oil Company
ADDRESS Box 671 - Midland, Texas
AGENT and TITLE N. B. Ross - Petroleum Engineer
WITNESSED _____
COMPANY _____

REMARKS

FLOW RATE - MMSCF/D
 RED HILLS UNIT # 1
 WOLFCAMP
 1-22-65

NO. 340R-L22 DIETZGEN GRAPH PAPER
 LOGARITHMIC
 2 CYCLES X 2 CYCLES
 EUGENE DIETZGEN CO.
 MADE IN U. S. A.

