

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Todd San Andres Formation San Andres County Roosevelt
 Initial X Annual _____ Special _____ Date of Test Jan. 30-Feb. 2, '65
 Company Franklin, Aston & Fair, Inc. Lease Cunningham Mark Well No. 3
 Unit G Sec. 26 Twp. 7 S Rge. 35 E Purchaser Not connected
 Casing 4 1/2 Wt. 9.5 I.D. 4.090 Set at 4296 Perf. 4089 To 4249
 Tubing 2 3/8 Wt. 4.7 I.D. 1.995 Set at 4033 Perf. _____ To _____
 Gas Pay: From 4089 To 4249 L 4033 xG .805 -GL 3247 Bar.Press. 13.2
 Producing Thru: Casing Packer Tubing X Type Well Single
 Single-Bradenhead-G. G. or G.O. Dual
 Date of Completion: 1/21/65 Packer 4033 Reservoir Temp. 100 assumed

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
SI						1043		Heater choke	72
1.	2	.375	161.5		100	1002		10/64	1
2.	2	.375	326.5		103	949		14/64	1
3.	2	.375	525.0		100	863		18/64	1
4.	2	.375	645.0		82	755		18/64	1
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.	3.0691		174.7	.9636	.8635	1.020	455
2.	3.0691		339.7	.9610	.8635	1.040	900
3.	3.0691		538.2	.9636	.8635	1.066	1465
4.	3.0691		658.2	.9795	.8635	1.095	1871
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio * _____ cf/bbl.
 Gravity of Liquid Hydrocarbons _____ deg.
 P_c 9.936 (1-e^{-S}) 0.200 Specific Gravity Separator Gas .805
 Specific Gravity Flowing Fluid _____
 P_c 1056.2 P_c² 1115.6

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.	1015.2	1031	4.521	20.44	4.09	1035.1	80.5	1017.4	.96
2.	962.2	926	8.942	79.96	15.99	942.0	173.6	970.6	.92
3.	876.2	768	14.556	211.88	42.38	810.4	305.2	900.2	.85
4.	768.2	590	18.590	345.59	69.12	659.1	456.5	811.8	.77
5.									

Absolute Potential: 4650 MCFPD; n 0.891
 COMPANY Franklin, Aston & Fair, Inc.
 ADDRESS c/o Oil Reports & Gas Services, Box 763, Hobbs, New Mexico
 AGENT and TITLE A. L. Smith Independent Gas Tester
 WITNESSED Grant Smith
 COMPANY Franklin, Aston & Fair, Inc.

REMARKS

* Produced estimated .5 barrel emulsion on rate No. 4

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 .