

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Todd San Andres Formation San Andres County Roosevelt
Initial X Annual _____ Special _____ Date of Test June 14-18, 1964
Company Franklin, Aston & Fair, Inc. Lease Mark Federal Well No. 2
Unit M Sec. 25 Twp. 7 S Rge. 35 E Purchaser None
Casing 4 1/2 Wt. 9.5 I.D. 4.090 Set at 4297 Perf. 4106 To 4248
Tubing 2 3/8 Wt. 4.70 I.D. 1.995 Set at 4076 Perf. open end To _____
Gas Pay: From 4106 To 4248 L 4076 xG .825 -GL 3363 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 6/10/64 Packer 4076 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	Temp. °F.	
SI						1143		Heater	Choke	72
1.	2	.625	40.5		84	1098		9/64		1.5
2.	2	.875	35.0		77	1056		12/64		2.0
3.	2	.875	53.0		74	1004		11/64		2.0
4.	2	1.000	52.0		62	927		17/64		2.0
5.	2	1.000	36.0		42	895		15/64		22.5

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w D_f}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	8.3555		53.7	.9777	.8528	1.000	374
2.	16.7816		48.2	.9840	.8528	1.000	679
3.	16.7816		66.2	.9868	.8528	1.000	935
4.	22.0662		65.2	.9981	.8528	1.000	1225
5.	22.0662		49.2	1.0178	.8528	1.000	942

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio None cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
T_c 9.936 (1-e^{-S}) 0.207
Specific Gravity Separator Gas .825
Specific Gravity Flowing Fluid _____
P_c 1156.2 P_c 1336.8

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.	1111.2	1235	3.716	13.81	2.86	1237.9	98.9	1112.6	.96
2.	1069.2	1143	6.747	45.52	9.42	1152.4	184.4	1073.5	.93
3.	1017.2	1035	9.290	86.30	17.86	1052.9	283.9	1026.1	.89
4.	940.2	884	12.172	148.16	30.67	914.7	422.1	956.4	.83
5.	908.2	825	9.360	87.61	18.14	843.1	493.7	918.2	.79

Absolute Potential: 1900 MCFPD; n .714
COMPANY Franklin, Aston & Fair, Inc.
ADDRESS P. O. Box 1090, Roswell, New Mexico
AGENT and TITLE J. L. Smith Independent Gas Tester
WITNESSED None
COMPANY _____

REMARKS

Originally drilled as Jack L. McClellan

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} = Supercompressability 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 .

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Franklin, Aston and Fair, :.
 Mark Fed No.2
 M Sec.25,Twp. 7S, Rge 35E
 Roosevelt County
 June 14-18, 1964
 Absolute Open Flow - 1,900 MCF

