

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 Apr. 25, 26, 28, 1965
Company Olan F. Featherstone II Trust Lease Federal M-24 Well No. 2
Unit M Sec. 24 Twp. 7 S Rge. 35 E Purchaser Not connected
Casing 4 1/2 Wt. 9.5 I.D. 4.090 Set at 4290 Perf. 4119 To 4272
Tubing 2 Wt. 4.7 I.D. 1.995 Set at 4080 Perf. Open end To _____
Gas Pay: From 4119 To 4272 L 4080 xG .800 -GL _____ Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 4/16/65 Packer None Reservoir Temp. 100 Assumed

OBSERVED DATA

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

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						999				24
1.	2 X 3/16				56	765				1
2.	2 X 1/4				57	525				1
3.	2 X 5/16				57	350				1
4.	2 X 3/8				64	230				1
5.	2 X 1 1/4	OWT	6.0		48	253		18/64 Choke		24

e Flow line

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.	.7851		778.2	1.0039	.8660	1.149	610
2.	1.4090		538.2	1.0029	.8660	1.095	718
3.	2.1577		363.2	1.0029	.8660	1.064	724
4.	3.0691		243.2	.9962	.8660	1.038	668
5.	Vol. 561.3	OWT	--	1.0117	.8660	1.000	492

(Logging. Opened choke WO for 30 minutes and unloaded water TP 60 - corrected Vol. 660

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
P_c _____ (1-e^{-s})
Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 1012.2 P_c 1024.5

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.									
2.									
3.									
4.									
5.									

Absolute Potential: Estimated 660 MCFPD; n _____

COMPANY Olan F. Featherstone II Trust
ADDRESS 236 Petroleum Building, Roswell, New Mexico
AGENT and TITLE Th. R. Smith Independent Gas Tester
WITNESSED None
COMPANY _____

REMARKS

Unable to get point alignment. Well producing water and logs on low rates.
Attempted to stabilize on anticipated sales line pressure but well logged.
Estimate a deliverability of 450 MCF @ 400%.

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 .