

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Formation Queens County Lea

Initial _____ Annual _____ Special X Date of Test 3-4/3-8-63

Company Neville G. Penrose, Inc. Lease Warlick Queen Well No. 1

Unit 1 Sec. 19 Twp. 21 Rge. 37 Purchaser El Paso Natural Gas Company

Casing 5 1/2" Wt. 15.5 I.D. _____ Set at 3403 Perf. _____ To _____

Tubing 2" Wt. 4.7 I.D. _____ Set at 3620 Perf. _____ To _____

Gas Pay: From 3403 To 3650 L 3620 xG .691 -GL _____ Bar.Press. 13.2

Producing Thru: Casing _____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: December 1962 Packer None Reservoir Temp. _____

* Well has been recently re-worked. 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						462		462		72
1.	4" x .750		240	46.24	53	422		425		24
2.	4" x .750		220	65.61	54	402		405		24
3.	4" x .750		227	75.69	56	387		390		24
4.	4" x .75		220	82.81	62	335		352		24
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	3.435	108.20		1.0068	9318	1.031	359.5
2.	3.435	123.69		1.0058	9318	1.028	409.3
3.	3.435	134.84		1.0039	9318	1.027	445.0
4.	3.435	138.96		.9981	9318	1.026	455.4
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl. Specific Gravity Separator Gas .691

Gravity of Liquid Hydrocarbons Dry deg. Specific Gravity Flowing Fluid Dry

P_c _____ (1-e^{-S}) _____ P_c 475.2 P_c 225.8

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.	435.2	189.4				192.0	33.8		92.21
2.	415.2	172.4				174.9	50.9		84.66
3.	400.2	160.2		Measured		162.6	63.2		74.5
4.	348.2	121.2				133.4	92.4		16.35
5.									

Absolute Potential: 920 MCFPD; n .499

COMPANY Neville G. Penrose, Inc.

ADDRESS Box 988, Eunice, New Mexico

AGENT and TITLE Office Manager L. E. Crowell

WITNESSED J. B. Murray

COMPANY El Paso Natural Gas Co.

REMARKS

Please re-instate top allowable for this well.

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 .

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