

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmit Formation Yates County Do
Initial _____ Annual _____ Special X Date of Test 4-1-60
Company El Paso Natural Gas Company Lease Wells Federal Well No. 11
Unit N Sec. 4 Twp. 25 Rge. 37 Purchaser El Paso Natural Gas Company
Casing 5 1/2 Wt. 15.5 I.D. 4.976 Set at 3334 Perf. 3030 To 3050
Tubing 2 Wt. 4.7 I.D. 1.995 Set at 3000 Perf. 3065 To 3140
Gas Pay: From 3030 To 3140 L 3000 xG .657 -GL 1971 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 11-15-57 Packer None Reservoir Temp. _____

OBSERVED DATA

Tested Through (Booster) (Choke) (Meter) Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(<u>Booster</u>) (Line) Size	(<u>Choke</u>) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						485		485		72
1.	4	1.750	177	8.41	56	464		473		24
2.	4	1.750	177	27.56	56	425		456		24
3.	4	1.750	214	49.70	63	379		439		24
4.	4	1.750	214	72.25	60	320		424		24
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.	19.27	40.20	177	1.0039	.9556	1.018	756.5
2.	19.27	76.11	177	1.0039	.9556	1.021	1,136
3.	19.27	106.27	214	.9971	.9556	1.022	1,994
4.	19.27	129.24	214	1.0000	.9556	1.022	2,431
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c Measured (1-e^{-s})

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 498.2 P_c² 248.2

No.	P _w - P _c (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.	486.2					236.4	11.8		.97
2.	469.2					220.1	28.1		.94
3.	452.2					204.5	43.7		.91
4.	437.2					191.1	57.1		.88
5.									

Absolute Potential: 7,300 MCFPD; n .748

COMPANY El Paso Natural Gas Company

ADDRESS P. O. Box 1384 - Jal, New Mexico

AGENT and TITLE R. T. Wright R. T. Wright - Petroleum Engineer

WITNESSED L. D. Southern

COMPANY El Paso Natural Gas Company

REMARKS

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 .