

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmat Formation Yates County Lea
Initial _____ Annual _____ Special X Date of Test 4-29/5-3-1957
Company El Paso Natural Gas Company Lease Carlson Federal Well No. 2
Unit N Sec. 23 Twp. 25 Rge. 37 Purchaser El Paso Natural Gas Company
Casing 5 1/2 Wt. 15.5 I.D. 4.976 Set at 3304 Perf. _____ To _____
Tubing 2 Wt. 4.7 I.D. 1.995 Set at 2639 Perf. _____ To _____
Gas Pay: From 2350 To 2604 L 2639 xG 0.675 -GL 1781 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Date of Completion: 12-8-1955 Packer None Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. _____

OBSERVED DATA

Tested Through (~~Pressure~~) (~~Stroke~~) (Meter)Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Pressure) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						1027		1027		72
1.	4	0.750	132	46.24	65	135		135		24
2.	4	0.750	230	4.84	67	223		225		24
3.										
4.										
5.										

FLOW CALCULATIONS

No.	Coefficient (FLA) (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.	34.35	81.89		.9952	.9427	1.014	258
2.	34.35	34.29		.9933	.9427	1.025	113
3.							
4.							
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 0.675

Specific Gravity Flowing Fluid _____

P_c 1040.2 P_c 1042.0

No.	P _h 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.	148.2	22.0				22.0	1060.0		.13
2.	236.2	55.8			Measured	56.7	1025.3		.22
3.									
4.									
5.									

Absolute Potential: 273MCFPD; n 0.771 Jalmat Avg.COMPANY El Paso Natural Gas CompanyADDRESS P. O. Box 1384, Jal., New MexicoAGENT and TITLE R. J. Wright

WITNESSED

Earl G. Smith

COMPANY El Paso Natural Gas Company

REMARKS

Unable to secure more than two rates of flow during this test. Average Jalmat slope of 0.771 was drawn through the data point corresponding to the highest rate of flow.

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 .