

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Jalnet Formation Yates - 7 Rivers County LeeInitial _____ Annual _____ Special X Date of Test 3-4 to 2-6-57Company El Paso Natural Gas Company Lease Gregory Federal Well No. 1Unit J Sec. 33 Twp. 25 S Rge. 37 E Purchaser El Paso Natural Gas CompanyCasing 3 1/2" Wt. 13.50 I.D. _____ Set at 3076 Perf. _____ To _____Tubing 2" Wt. 4.70 I.D. _____ Set at 3039 Perf. _____ To _____Gas Pay: From 2304 To 2321 L 2304 xG .633 -GL 1702 Bar.Press. 11.2Producing Thru: Casing X Tubing _____ Type Well Single

Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 4-24-55 Packer None Reservoir Temp. _____

OBSERVED DATA

Tested Through (Pressure) (Choke) (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								578		72
1.	A	2.500	295	5.20	33			337		24
2.	A	2.500	279	10.24	35			313		24
3.	A	2.500	274	14.40	37			453		24
4.	A	2.500	310	21.00	60			422		24
5.										

FLOW CALCULATIONS

No.	Coefficient F _{lg} (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.	42.13	40.37		1.0048	.9571	1.032	1.002
2.	42.13	34.68		1.0048	.9571	1.030	2.380
3.	42.13	40.61		1.0030	.9571	1.030	2.633
4.	42.13	30.84		.9971	.9571	1.032	3.720
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.

Gravity of Liquid Hydrocarbons _____ deg.

F_c 1.730 (1-e^{-s}) .111Specific Gravity Separator Gas .635

Specific Gravity Flowing Fluid _____

P_c 301.2 P_c² 340.3

No.	P _{tg} 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.	350.2	302.7	2.97	8.82	0.93	302.7	43.8	331.1	.93
2.	354.2	376.9	4.01	16.08	1.78	278.7	78.9	327.9	.80
3.	404.2	344.2	4.94	24.40	2.73	304.9	100.6	404.9	.84
4.	433.2	189.4	6.54	42.83	4.70	194.2	195.3	440.7	.73
5.									

Absolute Potential: 6,200 MCFPD; n .622COMPANY El Paso Natural Gas CompanyADDRESS P. O. Box 1304, Del., New MexicoAGENT and TITLE R. T. Wright - Petroleum EngineerWITNESSED Earl G. SmithCOMPANY El Paso Natural Gas Company

REMARKS

LWS 4
CWS 10

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 .