

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmat Formation Yates County Lea

Initial _____ Annual _____ Special X Date of Test 4/15-19/57

Company The Texas Company Lease J. F. Black Well No. 2

Unit K Sec. 21 Twp. 24-S Rge. 37-E Purchaser El Paso Natural Gas Company

Casing 7" Wt. 24# I.D. 6.336 Set at 2,983 Perf. 2,926 To 2,950

Tubing None Wt. _____ I.D. _____ Set at _____ Perf. _____ To _____

Gas Pay: From 2,926 To 2,950 L 2,926 xG .660 -GL 1,931 Bar.Press. 13.2

Producing Thru: Casing X Tubing _____ Type Well Single

Date of Completion: 8-30-46 Packer None Reservoir Temp. _____

OBSERVED DATA

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

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								705		72
1.	4	1.50	191	7.84	53°			535		24
2.	4	1.50	200	10.24	58°			476		24
3.	4	1.50	199	15.21	58°			398		24
4.	4	1.50	210	17.64	62°			331		24
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wp} P_t}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	13.99	40.01	204.2	1.0068	.9535	1.021	549
2.	13.99	46.72	213.2	1.0019	.9535	1.023	639
3.	13.99	56.81	212.2	1.0019	.9535	1.021	775
4.	13.99	62.75	223.2	.9981	.9535	1.023	855
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.

Gravity of Liquid Hydrocarbons _____ deg.

F_c .4915 (1-e^{-S}) 0.124

Specific Gravity Separator Gas _____

Specific Gravity Flowing Fluid _____

P_c 718.2 P_c² 515.8

No.	P _w P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-S})	P _t	P _c ² -P _w ²	Cal. P _w	P _w /P _c
1.	548.2	300.5	.2698	.0728	.0090	300.5	215.3	548.2	.76
2.	489.2	239.3	.3141	.0987	.0122	239.3	276.5	489.2	.68
3.	411.2	169.1	.3809	.1451	.0179	169.1	346.7	411.2	.57
4.	344.2	118.5	.4202	.1766	.0219	118.5	397.3	344.2	.48
5.									

Absolute Potential: 1,025 MCFPD; n .72

COMPANY THE TEXAS COMPANY

ADDRESS P. O. BOX 1270, MIDLAND, TEXAS

AGENT and TITLE L. I. BAKER, DISTRICT GAS MAN

WITNESSED EARL. G. SMITH

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 .