

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalnet Formation Yates County Lea
Initial X Annual _____ Special _____ Date of Test 2/26-27/57
Company El Paso Natural Gas Company Lease Wells Federal Well No. 3
Unit X Sec. 4 Twp. 25 Rge. 37 Purchaser El Paso Natural Gas Co.
Casing 5 1/2 Wt. 15.5 I.D. 4.976 Set at 3164 Perf. 2987 To 3120
Tubing 2 Wt. 4.7 I.D. 1.995 Set at 3084 Perf. _____ To _____
Gas Pay: From 2987 To 3120 L. 3084 xG .650 -GL 2004 Bar.Press. 13.2
(assumed)
Producing Thru: Casing _____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 2-27-57 Packer None Reservoir Temp. _____

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						686		691		72
1.	2"	.250	672		72	673		685		2 1/4
2.	2"	.375	574		73	584		673		2 3/4
3.	2"	.500	480		67	509		668		2 1/2
4.	2"	.625	383		62	431		661		2 1/3
5.	2"	.625	377		64	425		651		2 1/2

FLOW CALCULATIONS

No.	Coefficient Prover (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.	1.4090		685.2	.9687	.9608	1.058	975
2.	3.0691		587.2	.9677	.9608	1.057	1,807
3.	5.5233		493.2	.9933	.9608	1.049	2,727
4.	8.3555		396.2	.9981	.9608	1.040	3,302
5.	8.3555		390.2	.9962	.9608	1.039	3,213

PRESSURE CALCULATIONS

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

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 704.2 P_c 495.9

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.	686.2	470.7				477.5	8.4		.991
2.	597.2	356.6				470.9	25.0		.974
3.	522.2	272.7				464.0	31.9		.967
4.	434.2	188.5				457.5	41.4		.957
5.	430.2	185.1				451.2	54.7		.942

Absolute Potential: 17,600 MCFPD; n 52.5COMPANY El Paso Natural Gas CompanyADDRESS Box 1384, Jal., New MexicoAGENT and TITLE R. T. Wright - Petroleum EngineerWITNESSED Jack T. LittlefieldCOMPANY El Paso Natural Gas Company

REMARKS

See attached sheet for proof of stability under 3 hours.

LVS A UTZ
PAC ENGINEER

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 .