

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Formation Saverton County LeaInitial _____ Annual _____ Special X Date of Test 8-6 to 8-10-56Company The Superior Oil Company Lease _____ State _____ Well No. 1-12Unit L Sec. 12 Twp. 21S Rge. 35E Purchaser El Paso Natural Gas CompanyCasing 7 Wt. 20 I.D. 6.456 Set at 4211 Perf. 3674 To 3690Tubing 2 1/2 Wt. 6.5 I.D. 2.441 Set at 3973 Perf. _____ To _____Gas Pay: From 3674 To 3690 L 3674 xG 0.680 -GL 2498 Bar.Press. 13.2Producing Thru: Casing X Tubing _____ Type Well G. O. DualDate of Completion: 7-6-56 Packer 3697 Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. _____

OBSERVED DATA

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

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Line) Size	(Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI										
1.	1/4	1.250	560	10.24	66			887		72
2.	1/4	1.250	529	20.25	65			860		24
3.	1/4	1.250	562	30.25	64			839		24
4.	1/4	1.250	585	49.00	66			819		24
5.								785		24

*Unable to get 30% drawdown because of small choke size.

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.	9.643	76.60		.9943	.9393	1.066	735
2.	9.643	107.63		.9952	.9393	1.066	1034
3.	9.643	131.88		.9962	.9393	1.066	1269
4.	9.643	171.2		.9943	.9393	1.066	1644
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c Calculated 0.843 (1-e^{-S}) .158Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 900 P_c 810

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.	873	762	.605	.366	.058	762	48	872.95	97.0
2.	852	726	.851	.724	.114	726.1	83.9	852.12	94.7
3.	832	692	1.044	1.090	.172	692.2	117.8	831.98	92.4
4.	798	637	1.353	1.831	.289	637.3	172.1	798.93	88.8
5.									

Absolute Potential: 4,350 MCFPD; n .626COMPANY THE SUPERIOR OIL COMPANYADDRESS MIDLAND, TEXASAGENT and TITLE Jim B. [Signature] (Gas Engineer)

WITNESSED _____

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} = 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 .