

NEW MEXICO OIL CONSERVATION COMMISSION

FORM C-122

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Emont Formation Queen County Lea
Initial _____ Annual _____ Special X Date of Test 8-6 to 8-10-56
Company Shell Oil Company Lease State "A" Well No. 2
Unit A Sec. 12 Twp. 21 S Rge. 35 E Purchaser El Paso Natural Gas Company
Casing 7 Wt. 20 I.D. 6.456 Set at 3741 Perf. 3075 To 3555
Tubing 2 1/2 Wt. 6.5 I.D. 2.441 Set at 3736 Perf. _____ To _____
Gas Pay: From 3075 To 3555 L 3075 xG .660 -GL 2030 Bar. Press. 13.2
Producing Thru: Casing X Tubing _____ Type Well G. O. Dual
Date of Completion: 1-13-53 Packer 3689 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. _____

OBSERVED DATA

Tested Through (Packer) (Choke) (Meter)Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Packer) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI										
1.	1	1.500	567	.30 ²	63			902		72
2.	1	1.500	556	.12 ²	64			815		24
3.	1	1.500	556	.82 ²	67			772		24
4.	1	1.500	556	.82 ²	67			712		24
5.	1	1.500	583	.12 ²	73			595		24

FLOW CALCULATIONS

No.	Coefficient (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.	13.99	72.25		.9971	.9535	1.062	1.021
2.	13.99	97.80		.9962	.9535	1.062	1.381
3.	13.99	138.35		.9933	.9535	1.062	1.947
4.	13.99	197.75		.9873	.9535	1.057	2.755
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c .707 (1-e^{-s}) .130

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 915.2 P_c 837.6

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.	828.2	685.9	.72	.52	.07	685.9	151.7	828.2	.9049
2.	785.2	616.5	.28	.06	.12	616.6	221.0	785.3	.8581
3.	725.2	525.9	1.38	1.90	.25	526.2	311.4	725.4	.7926
4.	608.2	369.9	1.95	3.80	.49	370.4	467.2	608.6	.6650
5.									

Absolute Potential: 4,700MCFPD; n 0.893COMPANY Shell Oil CompanyADDRESS Box 1254, Hobbs, New MexicoAGENT and TITLE W. M. HunkleWITNESSED Edward MabeCOMPANY El Paso Natural Gas Company

REMARKS

ELVIN A. HARRIS
GAS 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 .