

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Eumont Formation Yates County Lee Date of Test 8-6 to 8-10-56
Initial Annual Special X
Company Shell Oil Company Lease State #1 Well No. 2
Unit X Sec. 1 Twp. 21 S Rge. 35 E Purchaser El Paso Natural Gas Company
Casing 7 Wt. 24 I.D. 6.336 Set at 3730 Perf. 3050 To 3605
Tubing 2 Wt. 4.7 I.D. 1.995 Set at 3808 Perf. To
Gas Pay: From 3050 To 3605 L 3050 xG .665 -GL 2028 Bar.Press. 13.2
Producing Thru: Casing X Tubing Type Well G.O. Dual
Date of Completion: 2-5-53 Packer 3708 Single-Bradenhead G.O. or G.O. Dual
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										
1.	4	1.500	567	2.82	65			906		72
2.	4	1.500	559	3.82	66			834		24
3.	4	1.500	558	5.32	66			807		24
4.	4	1.500	590	8.02	76			762		24
5.	4	1.500	590	8.02	76			668		24

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.	13.99	67.43		.9952	.9498	1.058	943
2.	13.99	90.88		.9943	.9498	1.058	1,271
3.	13.99	126.65		.9943	.9498	1.058	1,771
4.	13.99	196.45		.9905	.9498	1.064	2,750

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl.Gravity of Liquid Hydrocarbons deg.F_c .740 (1-e^{-s}) .130Specific Gravity Separator Gas Specific Gravity Flowing Fluid P_c 919.2 P_c 844.9

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.	847.2	717.7	.70	.49	.06	718.8	127.1	847.8	.9923
2.	820.2	672.7	.94	.88	.11	672.8	172.1	820.3	.8924
3.	775.2	600.9	1.31	1.72	.22	601.1	243.3	775.3	.8434
4.	691.2	464.0	2.04	4.16	.54	464.5	380.4	681.5	.7444

Absolute Potential: 5,900 MCFPD; n .965COMPANY Shell Oil CompanyADDRESS Box 1957 Hobbs, New MexicoAGENT and TYPE E. M. CantorWITNESSED Edward MarxCOMPANY El Paso Natural Gas Company

REMARKS

L. W. A. UTZ
P. E. 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} = 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 .

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