

NEW MEXICO OIL CONSERVATION COMMISSION

3 NMOCC
3 Western Development
1 So. Union
1 File

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Basin - Dakota Formation Dakota County San Juan
Initial X Annual _____ Special _____ Date of Test July 31, 1962
Company Western Development Co. Lease Hartman Well No. 1-23
Unit M Sec. 23 Twp. 30N Rge. 11W Purchaser _____
Casing 4 1/2" Wt. 10.5# I.D. _____ Set at 6991 Perf. 6710 To 6846
Tubing 1 1/4" Wt. 2.4# I.D. _____ Set at 6790 Perf. Open Ended To _____
Gas Pay: From 6710 To 6846 L _____ xG .65 -GL _____ Bar.Press. _____
Producing Thru: Casing _____ Tubing X Type Well Single - Gas
Single-Bradenhead-G. G. or G.O. Dual _____
Date of Completion: July 16, 1962 Packer _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through 1250001 (Choke) 1250001 Type Taps _____

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						2020		2040		
1.										
2.		3/4"	173		66°			1185		3 hrs
3.										
4.										
5.										

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.							
2.							
3.	12.365		185	.9943	.9608	1.018	2225
4.							
5.							

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 2052 P_c² 4210.704

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.									
2.									
3.	1197					1432.809	2777.895		1.5158
4.									
5.									

Absolute Potential: 3039 MCFPD; n * .75 1.3660

COMPANY Western Development Co.

ADDRESS 825 Petroleum Club Bldg., Denver, Colorado

AGENT and TITLE Original signed by T. A. Dugan Consulting 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 .