

NEW MEXICO OIL CONSERVATION COMMISSION

Form O-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Basin Dakota Formation Dakota County San Juan
Initial XX Annual _____ Special _____ Date of Test 1-9-64
Company Southern Union Production Co. Lease MC GEE Well No. 1
Unit B Sec. 27 Twp. 30-N Rge. 13-W Purchaser El Paso Natural Gas Company
Casing 4-1/2 Wt. 10.50 I.D. 4.052 Set at 6404 Perf. 6122 To 6302
Tubing 1-1/2 Wt. 2.90 I.D. 1.610 Set at 6250 Perf. 6240 To 6250
Gas Pay: From 6122 To 6302 L 6240 xG 730 -GL 4555 Bar.Press. 12.0
Producing Thru: Casing _____ Tubing XX Type Well Single Gas
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 12-20-63 Packer _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (Choke) (Meibach) 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						2009		1978		20 days
1.	2"	3/4	358		70°	358	70°	1537		3 hrs.
2.										
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.	12.3650		370	.9905	.9066	1.045	4293
2.							
3.							
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 2021 P_c² 4084.4

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.						2399.4	1685.0		.766
2.									
3.									
4.									
5.									

Absolute Potential: 8337 MCFPD; n .75COMPANY Southern Union Production CompanyADDRESS P.O. Box 808 - Farmington, New MexicoAGENT and TITLE Verne Rockhold, Jr. EngineerWITNESSED Herman McAnallyCOMPANY El Paso Natural Gas Co.Original Signed By
VERNE ROCKHOLD

REMARKS

- (3) New Mexico O.C.C.
(1) Mr. Paul Clote
(1) El Paso Natural Gas Co., Proration Dept.
P.O. Box 1492, El Paso, Texas
(2) Mr. H. L. Kindricks, P.O. Box 990, Farmington, New Mexico
(1) File

RECEIVED

JAN 28 1964

OIL CON COM

FILE

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 .