

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Basin Dakota Formation Dakota County San Juan
Initial XX Annual _____ Special _____ Date of Test 1-2-63
Company Southern Union Production Co. Lease Ma Cord Well No. 4
Unit G Sec. 22 Twp. 30-N Rge. 13-W Purchaser Southern Union Gas Company
Casing 4 1/2 Wt. 10.50 I.D. 4.052 Set at 6478 Perf. 6250 To 6368
Tubing 1 1/2 Wt. 2.90 I.D. 1.610 Set at 6270 Perf. 6255 To 6270
Gas Pay: From 6250 To 6368 L 6270 xG 700 -GL 4389 Bar.Press. 12.0
Producing Thru: Casing _____ Tubing XXX Type Well Single Gas
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 12-26-62 Packer _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (Choke) (Choke) 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						1896		1874		7 day
1.	2"	3/4"	354		730	354	730	1231		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		366	.9877	.9258	1.041	4308
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 1908 P_c 3640.5

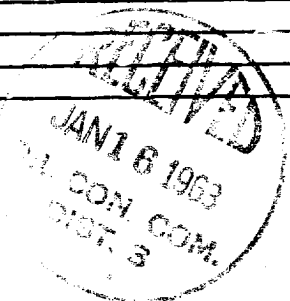
No.	P _w P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-s})	P _w ²	P _c ² -P _w ²	Cal. P _w	P _w P _c
1.						1545.0	2095.5		.651
2.									
3.									
4.									
5.									

Absolute Potential: 6519 MCFPD; n .75

COMPANY Southern Union Production Company
ADDRESS Post Office Box 808, Farmington, New Mexico
AGENT and TITLE Verne Rockholz, Junior Engineer
WITNESSED Val Ripper
COMPANY Southern Union Production Company

cc: (3) N.M.O.C.C.
(1) Mr. P.J.Clote
(1) Mr. L.S.Muennink
(1) Mr. V.A.Ripper
(1) Mr. Bob Corliss
(1) Mr. Rudy Motto
(1) File

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 .