

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Basin-Dakota Formation Dakota County San Juan
Initial XX Annual _____ Special _____ Date of Test July 27, 1961
Company Southern Union Production Co. Lease Rawson Well No. 1
Unit A Sec. 35 Twp. 31N Rge. 12W Purchaser Southern Union Gas Company
Casing 5 1/2" Wt. 15.5 I.D. 4.950 Set at 6971 Perf. 5766 To 6738
Tubing 2-3/8 Wt. 4.7 I.D. 1.995 Set at 6750 Perf. _____ To _____
Gas Pay: From 6766 To 6876 L 6750 xG .69 -GL 1658 Bar.Press. 12
Producing Thru: Casing _____ Tubing XX Type Well Single Gas
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 7/6/61 Packer _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through XXXXXX (Choke) XXXXXX

Type Taps _____

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	XXXXXX (Line) Size	(Choke) XXXXXX Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI										
1.	<u>2"</u>	<u>3/4"</u>	<u>233</u>	<u>-</u>	<u>79°</u>	<u>1678</u> <u>233</u>	<u>79°</u>	<u>1801</u> <u>650</u>		<u>3 hrs.</u>
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.	<u>12.3650</u>	<u>-</u>	<u>215</u>	<u>.9822</u>	<u>.9825</u>	<u>1.025</u>	<u>2844</u>
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 1893 P_c² 3583.45

No.	$\frac{P_w}{P_t}$ (psia)	P _t ²	F _c Q	(F _c Q) ²	$\frac{(F_c Q)^2}{(1-e^{-S})}$	P _w ²	P _c ² -P _w ²	Cal. P _w	$\frac{P_w}{P_c}$
1.						<u>138.24</u>	<u>3145.21</u>		<u>.3497</u>
2.									
3.									
4.									
5.									

Absolute Potential: 3136 MCFPD; n .75COMPANY Southern Union Production CompanyADDRESS P. O. Box 808, Farmington, New MexicoAGENT and TITLE Production Superintendent - L. S. MaenninkWITNESSED George WeldonCOMPANY Southern Union Production 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 .