

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool South Blanco Formation Pictured Cliffs County San Juan
Initial X Annual _____ Special _____ Date of Test March 13, 1959
Operator Southern Union Gas Company Lease Navajo Indian Well No. 2-B
Unit D Sec. 19 Twp. 27N Rge. 8W Purchaser Southern Union Gas Company
Casing 5 1/2" Wt. 15.5# I.D. 4.950 Set at 2141 Perf. 2030 To 2110
Tubing 1" Wt. 1.7# I.D. _____ Set at 2111 Perf. 2091 To 2111
Gas Flow From 2030 To 2110 L _____ xG _____ -CL _____ Bar. Press. _____
Producing From: Casing _____ Tubing X Type Well Single-Gas
Single-Bradenhead-G. G. or G.O. Dual _____
Date of Completion: March 4, 1959 Packer _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) _____ 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. $^{\circ}\text{F.}$	Press. psig	Temp. $^{\circ}\text{F.}$	Press. psig	Temp. $^{\circ}\text{F.}$	
SI						763		764		7 days
1.		3/4"	65		60°	169		65		3 hours
2.										
3.										
4.										
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wP_f}}$	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		77	1.0000	.9463		901
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 776 P_c^2 602.2
 P_w 181 P_w^2 32.7

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	$\frac{P_w}{P_c}$
1.						32.7	569.5		
2.									
3.									
4.									
5.									

Absolute Potential: 946 MCFPD; n 0.85

COMPANY SOUTHERN UNION GAS COMPANY
ADDRESS P. O. Box 815, Farmington, New Mexico
AGENT and TITLE Thomas E. Fenne, 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} = Supercompressibility 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 .

OIL CONSERVATION COMMISSION		
AZTEC DISTRICT OFFICE		
No. Copies Received	3	
DISTRIBUTION		
Specimen	✓	
State File	✓	
Production Office		
State Land Office		
U. S. G. S.	✓	
Transporter		
File	✓	✓