

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Elanco Formation Mesa Verde County Rio Arriba
Initial X Annual _____ Special _____ Date of Test September 26, 1957
Company Southern Union Gas Company Lease San Juan Unit 29-7 Well No. 61
Unit N Sec. 34 Twp. 29N Rge. 7W Purchaser El Paso Natural Gas Company
Casing 7 5/8" Wt. 26.4 I.D. 6.969 Set at 0-3605 Perf. 5068 To 5742
Tubing 2 3/8" Wt. 4.7 I.D. 2.0 Set at 5718 Perf. 5688 To 5718
Gas Pay: From 5068 To 5742 L _____ xG 0.67 Est. GL _____ Bar. Press. 12.0
Producing Thru: Casing _____ Tubing X Type Well Single Gas
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: August 6, 1957 Packer _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (Choke) (Motor)

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										
1.		<u>3/4"</u>	<u>353</u>		<u>65°</u>	<u>1074</u> <u>353</u>	<u>65°</u>	<u>1084</u> <u>872</u>		<u>50 days</u> <u>3 hours</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>365</u>	<u>0.9952</u>	<u>0.9463</u>	<u>1.040</u>	<u>4,420</u>
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

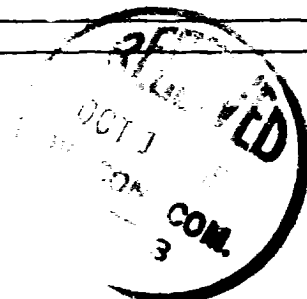
Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
 F_c _____ ($1-e^{-S}$)

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
 P_c 1096 P_c^2 1201.2
 P_w 884 P_w^2 781.4

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	$\frac{P_w}{P_c}$
1.						<u>781.4</u>	<u>419.76</u>		<u>0.805</u>
2.									
3.									
4.									
5.									

Absolute Potential: 9,768 MCFPD; n 0.75
COMPANY Southern Union Gas Company
ADDRESS P. O. Box 815 Farmington, New Mexico
AGENT and TITLE Vernon R. Rucker Geologist
WITNESSED Tom Grant
COMPANY El Paso Natural Gas 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 FIELD OFFICE	
No. Copies	3
Date	
Operator	
Santa Fe	1
Field Office	
Date in Charge	
O. S. G. No.	1
Inspector	
File	1