NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Blanco Mesaverde Formation Mesaverde County Rio Arriba

Initial X Annual Special Date of Test Oct. 13, 1959

Company Southern Union Gas Company Lease San Juan Unit 29-7 Well No. 74

Unit M Sec. 25 Twp. 29N Rge. 7W Purchaser El Paso Natural Gas Company

Casing 5½" / Liner Wt. 15.5# I.D. 4.950 Set at 5579 Perf. 4940 To 5528
Top at 3189' R.K.B.

Tubing 2-3/8" Wt. 4.7# I.D. 1.995 Set at 4963 Perf. 4931 To 4934

Gas Pay: From 4940 To 5528 L xG =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: Sept. 30, 1959 Packer Reservoir Temp.

OBSERVED DATA

Tested Through ~~(Prover)~~ (Choke) ~~(Meter)~~ Type Taps

No.	Flow Data (Prover) (Line) Size	Flow Data (Choke) (Orifice) Size	Flow Data Press. psig	Flow Data Diff. h_w	Flow Data Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						1098		1098		13 days
1.		3/4"	402		70			933		3 hours
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		414	0.9905	0.9463	1.044	5,009
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 1110 P_c^2 1,232
Pw 945 Pw2 893

No.	P_w P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$\frac{(F_cQ)^2}{(1-e^{-s})}$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.						893	339		
2.									
3.									
4.									
5.									

Absolute Potential: 13,173 MCFPD; n 0.75
COMPANY SOUTHERN UNION GAS COMPANY
ADDRESS P. O. Box 815 - Farmington, New Mexico
AGENT and TITLE Thomas E. Fenno
WITNESSED
COMPANY

REMARKS

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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.

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AZTEC DISTRICT OFFICE		
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OPEN FLOW TEST DATA

October 13, 1959

Southern Union Gas Company			San Juan 29-7 No. 74		
Unit M	25-29-7		Rio Arriba	New Mexico	
Mesa Verde			Blanco		
5-1/2		5579	2	4963	
4940		5528		Shut In: 9/30/59	
				X	

.75		12.365			
1098	1110	13	1098	1110	
402		414	933	945	
70		.75	1.044	.670	

CHOKE VOLUME

12.365 x 414 x .9905 x .9463 x 1.044 = 5009

1232100
339075

$3.6337^{.75} \times 5009 = 2.630 \times 5009$

13,173

Thomas E. Fenno (So. Union)

Not Witnessed by EPNG

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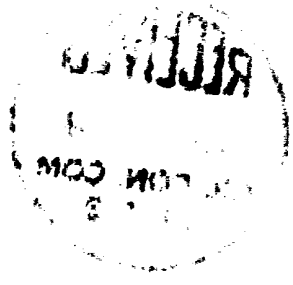
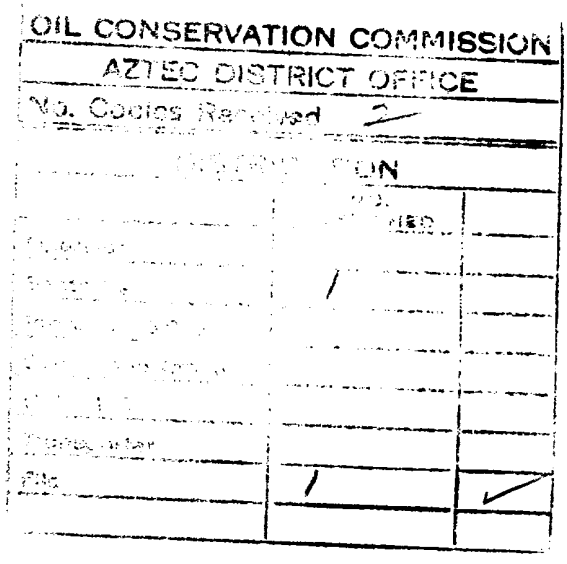
Lewis D. Galloway

L. D. Galloway

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