

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Undesignated Formation Dakota County San Juan
Initial X Annual _____ Special _____ Date of Test 9-26-59
Company Southern Union Gas Company Lease Richardson Well No. 1
Unit A Sec. 2 Twp. 27N Rge. 13W Purchaser El Paso Natural Gas Company
Casing 5 1/2" Wt. 15.50# I.D. 4.950 Set at 6237 Perf. 6186 To 6106
Tubing 2-3/8" Wt. 4.70# I.D. 1.995 Set at 6116 Perf. 6116 To 6086
Gas Pay: From _____ To _____ 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. 8, 1959 Packer None 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. r_w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI										
1.		<u>3/4"</u>	<u>451</u>		<u>79</u>	<u>2145</u>	<u>79</u>	<u>2147</u>		<u>18 days</u>
2.						<u>451</u>		<u>1132</u>		<u>3 hours</u>
3.										
4.										
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wPf}}$	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>463</u>	<u>0.9822</u>	<u>0.9463</u>	<u>1.050</u>	<u>5,587.2</u>
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

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

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
 P_c 2159 P_c^2 4661
 P_w 1144 P_w^2 1309

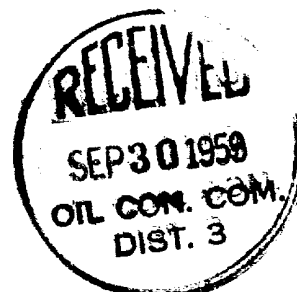
No.	P_w P_t (psia)	P_t^2	$F_c Q$	$(F_c Q)^2$	$(F_c Q)^2$ ($1-e^{-s}$)	P_w^2	$P_c^2 - P_w^2$	Cal. P_w	P_w P_c
1.						<u>1309</u>	<u>3352</u>		
2.									
3.									
4.									
5.									

Absolute Potential: 6,923 MCFPD MCFPD; n 0.75COMPANY SOUTHERN UNION GAS COMPANYADDRESS Box 815, Farmington, New MexicoAGENT and TITLE Thomas E. Fenno - 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 .

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