

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Basin Dakota Formation Dakota County San Juan
Initial X Annual _____ Special _____ Date of Test May 14, 1961
Company Texas Eastern Trans. Corp. Lease Rice Unit Well No. 1
Unit M Sec. 20 Twp. 30N Rge. 12W Purchaser El Paso Natural Gas Company
Casing 4 1/2 Wt. 9.5 I.D. 4.000 Set at 6582 Perf. 6316 To 6445
Tubing 2 3/8 Wt. 4.7 I.D. 2.000 Set at 6284 Perf. Open Ended. To _____
Gas Pay: From 6316 To 6445 L _____ xG _____ -GL _____ Bar.Press. _____
Producing Thru: Casing _____ Tubing X Type Well Single Gas
Single-Bradenhead-G. G. or None
Date of Completion: 5-14-61 Packer _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through ~~X~~ (Choke) ~~X~~

Type Taps _____

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Prover) (Line) Size	(Choke) (Line) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						1862		1864		7 Day shut in
1.		.750	285		85	285	85	732		3 Hour Flow
2.										
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.	12.365		297	.9768	.9798	1.021	3,589
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 1876 P_c² 3519376

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.						553536	2965840		
2.									
3.									
4.									
5.									

Absolute Potential: 4,080 MCFPD; n .75
COMPANY Well Production Company
ADDRESS 1041 Zuni Drive Farmington, New Mexico
AGENT and TITLE N. A. Neely Tester
WITNESSED Harold Smith
COMPANY Texas Eastern Transmission Corp.

REMARKS

WO # 14356

1.1867

.75

1.1369

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 .