

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Blanco Mesa Verde Formation Mesa Verde County San Juan
Initial 1% Annual Special Date of Test 1/10/61
Company Southern Union Production Co. Lease Huerfano Unit Well No. 70
Unit B Sec. 36 Twp. 27-N Rge. 9-W Purchaser El Paso Natural Gas Company
Casing 5-1/2 Wt. 17.0 I.D. 4.892 Set at 5720 Perf. 1324 To 1118
Tubing 1-1/4 Wt. 2.30 I.D. 1.380 Set at 1177 Perf. 1167 To 1177
Gas Pay: From 1324 To 1118 L 1324 xG .730 -GL 3157 Bar.Press. 12.0
Producing Thru: Casing Tubing Type Well Dual Gas
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 1-5-61 Packer 6388 Reservoir Temp.

OBSERVED DATA

Tested Through (Prover) (Choke) (Marker) Type Taps

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						1106		1105		13 days
1.	2"	3/4"	541		350	613		541	350	3 hrs.
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		553	.9938	.9065	1.062	5131
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 1118 P_c 1249.924

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.						122925	20,899		.534
2.									
3.									
4.									
5.									

Absolute Potential: 2814 MCFPD; n .75

COMPANY Southern Union Production Company

ADDRESS P. O. Box 308 - Farmington, New Mexico

AGENT and TITLE Verne Rockhold - Jr. Engineer

WITNESSED Don Roberts

COMPANY El Paso Natural Gas Company

cc: (3) New Mexico O.C.C.

REMARKS

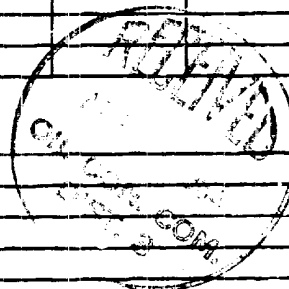
cc: (1) Mr. Paul J. Clote

cc: (1) El Paso Natural Gas Company, Proration Dept. P. O. Box 1192, El Paso, Texas

cc: (2) Mr. E. L. Kindricks, Box 990, Farmington, New Mexico

cc: (1) File

cc: (1) Commissioner of Public Lands of the State of N.M.



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_{sv} = 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 .