

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Blanco Mesaverde Formation Mesaverde County San Juan
Initial X Annual _____ Special _____ Date of Test May 1, 1959
Company Southern Union Gas Co. Lease Navajo Indian Well No. 3-B
Unit N Sec. 19 Twp. 27N Rge. 8W Purchaser Southern Union Gas Co.
7-5/8" 26.4 6.969 23 1/2" 2016-2076, 2134-2148
Casing 5 1/2" Wt. 15.5 I.D. 4.950 Set at 2170-4546 Perf. 4280 To 4472
Tubing 2-3/8 Wt. 4.7 I.D. 1.995 Set at 4345 Perf. 4330 To 4345
Gas Pay: From 4280 To 4472 L 4330 xG 0.67 Est. -GL 2901 Bar.Press. 12.0
Producing Thru: Casing _____ Tubing X Type Well Gas-Gas Dual
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: April 20 Packer 4156 Reservoir Temp. _____

OBSERVED DATA

Tested Through XXXXXX (Prover) (Choke) XXXXXX (Meter) 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						1102				7 Days
1.		3/4"	126		65.5	126	65.5			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		138	0.9952	0.9463	1.014	1.629
2.							
3.							
4.							
5.							

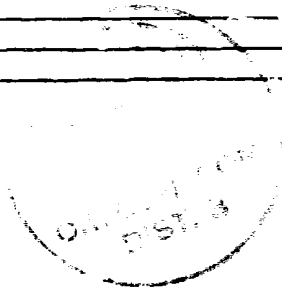
PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 9.402 (1-e^{-s}) 0.190
Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 1114 P_c 1241

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.	138	19.04	15.32	234.7	44.59	63.63	1177.4	252	0.226
2.									
3.									
4.									
5.									

Absolute Potential: 1.694 MCFPD; n 0.75
COMPANY SOUTHERN UNION GAS COMPANY
ADDRESS P. O. Box 815 Farmington, New Mexico
AGENT 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} = 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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