

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Blanco Pictured Cliffs Formation Pictured Cliffs County San Juan
Initial X Annual _____ Special _____ Date of Test Sept. 8, 1956
Company Western Natural Gas Company Lease Graham Well No. 2
Unit I Sec. 9 Twp. 27-N Rge. 8-W Purchaser Not connected
Casing 5 1/2 Wt. 14 I.D. 5.012 Set at 2207 Perf. 2097 (2097-2126) (2134-2150) To 2150
Tubing 1" Wt. 1.70 I.D. 1.049 Set at 2147 Gr Perf. 2132 To 2142
Gas Pay: From 2094 To 2207 L 2097 xG 0.66 -GL 1384 Bar.Press. 12
Producing Thru: Casing X Tubing _____ Type Well Single gas
Single-Bradenhead-G.G. or G.O. Dual
Date of Completion: Aug. 30, 1956 Packer _____ Reservoir Temp. 95

OBSERVED DATA

Tested Through (Prover) X (Choke) (Meter) 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										
1.		3/4				835		835		S.I. 9 days
2.						245		239	66	3 hours
3.										
4.										
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w P_t}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	14.1605		251	0.9943	0.9535	1.033	3440
2.							
3.							
4.							
5.							

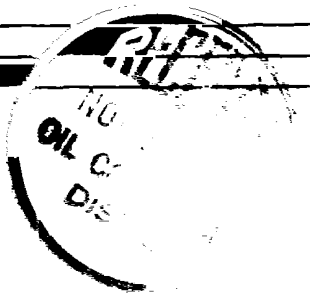
PRESSURE CALCULATIONS

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 847 P_c 717.4

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.						66.0	651.4		0.303
2.									
3.									
4.									
5.									

Absolute Potential: 3779 MCFPD; n 0.85
COMPANY Benson-Montin-Greer (Drilling Contractor)
ADDRESS Farrington, New Mexico
AGENT and TITLE S. J. Stanley - Engineer for Benson-Montin-Greer
WITNESSED W. B. Cook
COMPANY WESTERN NATURAL GAS COMPANY 823 Midland Tower, Midland, Texas

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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