

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Ballard Formation Pictured Cliffs County Rio Arriba
Initial X Annual _____ Special _____ Date of Test 11-10-62
Company J. Gregory Merriam & Assoc. Lease Edna Well No. 4
Unit N Sec. 7 Twp. 24-N Rge. 6-W Purchaser El Paso Natural Gas Co.
Casing 2-7/8 Wt. 6.5 I.D. _____ Set at 2526 Perf. 2298 To 2318
Tubing none Wt. _____ I.D. _____ Set at _____ Perf. _____ To _____
Gas Pay: From 2296 To 2324 L 2300 xG 0.65 -GL 1495 Bar. Press. 12
Producing Thru: Casing X Tubing _____ Type Well G. O. Dual
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 10-21-62 Packer none Reservoir Temp. 100°

OBSERVED DATA

Tested Through (2296) (Choke) (2318) 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		<u>3/4</u>	<u>159</u>	<u>-</u>	<u>50</u>	<u>-</u>	<u>-</u>	<u>159</u>	<u>50</u>	<u>3</u>
1.										
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.	<u>12.365</u>	<u>--</u>	<u>171</u>	<u>1.0098</u>	<u>0.9608</u>	<u>1.018</u>	<u>2088</u>
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

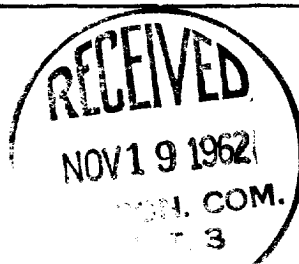
Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 5.551 (1-e^{-s}) 0.103

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 664 P_c² 440.9

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>171</u>	<u>29.241</u>	<u>11.59</u>	<u>134.3</u>	<u>13.83</u>	<u>43.07</u>	<u>407.83</u>	<u>208</u>	<u>0.313</u>
2.									
3.									
4.									
5.									

Absolute Potential: 2199 MCFPD; n 0.75
COMPANY J. Gregory Merriam & Associates
ADDRESS P. O. Box 507, Farmington, New Mexico
AGENT and TITLE Operator
WITNESSED J. Gregory Merriam
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 .