

EL PASO NATURAL GAS COMPANY
OPEN FLOW TEST DATADATE August 10, 1966

Operator El Paso Natural Gas Company		Lease Heaton No. 21	
Location 1750'N, 820'W, Section 29, T-31-N, R-11-W		County San Juan	State New Mexico
Formation Pictured Cliffs		Pool Aztec	
Casing: Diameter 2.875	Set At: Feet 2531	Tubing: Diameter No Tubing	Set At: Feet -
Pay Zone: From 2463	To 2501	Total Depth: 2531	Shut In 8-03-66
Stimulation Method Sand Water Frac		Flow Through Casing X	Flow Through Tubing

Choke Size, Inches .750		Choke Constant: C 12.365		Tubingless Completion	
Shut-In Pressure, Casing, PSIG 650	+ 12 = PSIA 662	Days Shut-In 7	Shut-In Pressure, Tubing PSIG No Tubing	+ 12 = PSIA -	
Flowing Pressure: P PSIG 86	+ 12 = PSIA 98	Working Pressure: P _w PSIG Calc.	+ 12 = PSIA 119		
Temperature: T = 65 °F	F _r = .9952	n = .85	F _{pv} (From Tables) 1.009	Gravity .650	F _g = .9608

$$\text{CHOKE VOLUME} = Q = C \times P_r \times F_r \times F_g \times F_{pv}$$

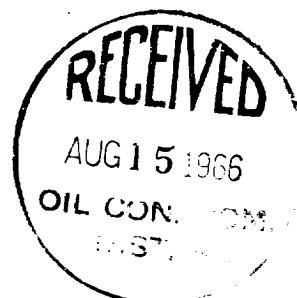
$$Q = (98) (12.365) (.9952) (.9608) (1.009) = \underline{1169} \text{ MCF/D}$$

$$\text{OPEN FLOW} = A_{of} = Q \left(\frac{P_c^2}{P_c^2 - P_w^2} \right)^n$$

$$A_{of} = \left(\frac{438,244}{424,083} \right)^n = (1.0333)^{.85} (1169) = (1.0283) (1169)$$

NOTE: Blew dry gas for entire Test.

$$A_{of} = \underline{1202} \text{ MCF/D}$$

TESTED BY Jesse B. GoodwinWITNESSED BY Hermon E. McNally
Tom B. Grant, Jr.
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