

EL PASO NATURAL GAS COMPANY
OPEN FLOW TEST DATADATE August 15, 1968

Operator El Paso Natural Gas Company		Lease Hartman No. 1 (O&G)	
Location 940'N, 990'W, Sec. 26, T-30-N, R-11-W		County San Juan	State New Mexico
Formation Pictured Cliffs		Pool Aztec	
Casing: Diameter 2.675	Set At: Feet 2366	Tubing: Diameter No Tubing	Set At: Feet
Pay Zone: From 2316	To 2340	Total Depth: 2366	Shut In 7-19-68
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, 439	PSIG	+ 12 = PSIA 451	Days Shut-In 26	Shut-In Pressure, Tubing No Tubing	PSIG + 12 = PSIA
Flowing Pressure: P 33	PSIG	+ 12 = PSIA 45		Working Pressure: P _w Calc.	PSIG + 12 = PSIA 54
Temperature: T = 61 °F	F _t = .9990	n = .85		F _{pv} (From Tables) 1.004	Gravity .650 F _g = .9603

$$\text{CHOKE VOLUME} = Q = C \times P_1 \times F_t \times F_g \times F_{pv}$$

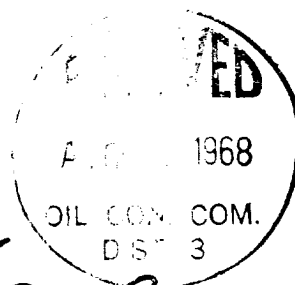
$$Q = (12.365)(45)(.9990)(.9603)(1.004) = \underline{\quad 536 \quad} \text{ MCF/D}$$

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

$$Aof = \left(\frac{203401}{200485} \right)^n = (536)(1.0145)^{.85} = (536)(1.0143)$$

Note: The well produced a very light fog of water throughout the test.

$$Aof = \underline{\quad 543 \quad} \text{ MCF/D}$$

TESTED BY Bobby BroughtonChecked by
WITNESSED BY Tom B. Grant

H. L. Kendrick
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