

EL PASO NATURAL GAS COMPANY
OPEN FLOW TEST DATADATE March 3, 1976

Operator Koch Industries		Lease Lamb #8	
Location NE 21-31-10		County San Juan	State New Mexico
Formation Picture Cliffs		Pool Blanco	
Casing: Diameter 4 1/2 10.5#	Set At: Feet 3044	Tubing: Diameter 2 3/8	Set At: Feet 2930
Pay Zone: From 2908	To 2970	Total Depth: 3044	Shut In 2-17-76
Stimulation Method Sandwater Frac		Flow Through Casing	Flow Through Tubing XX

Choke Size, Inches .750		Choke Constant: C 12.365			
Shut-In Pressure, Casing, PSIG 870	+ 12 = PSIA 882	Days Shut-In 15	Shut-In Pressure, Tubing PSIG 869	+ 12 = PSIA 881	
Flowing Pressure: P PSIG 106	+ 12 = PSIA 118		Working Pressure: P _w PSIG 194	+ 12 = PSIA 206	
Temperature: T = 63 °F	n = F _t = .9971		F _{pv} (From Tables) 1.011	Gravity .670	F _g = .9463

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

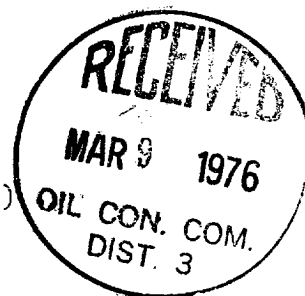
$$Q = (12.365)(118)(.9971)(.9463)(1.011) = \underline{1392} \text{ MCF/D}$$

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

$$Aof = Q \left(\frac{777924}{735488} \right)^n = 1392(1.0578)^{.85} = (1.0489)(1392)$$

$$Aof = \underline{1460} \text{ MCF/D}$$

Note: Dry throughout test.

TESTED BY Jackson- (Koch Ind)WITNESSED BY Roger Hardy

C.R. Wagner
Well Test Engineer