

OPEN FLOW TEST DATA

DATE February 22, 1977

Operator Koch Industries		Lease Walker #1 <i>R</i>	
Location NW 13-31-10		County San Juan	State New Mexico
Formation Mesa Verde		Pool Blanco	
Casing: Diameter 4 1/2	Set At: Feet 5660'	Tubing: Diameter 2 3/8"	Set At: Feet 5977'
Pay Zone: From 4916	To 5996	Total Depth: 6039	Shut In 2-12-77
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 705	+ 12 = PSIA 717	Days Shut-In 10	Shut-In Pressure, Tubing PSIG 704	+ 12 = PSIA 716	
Flowing Pressure: P PSIG 221	+ 12 = PSIA 233		Working Pressure: P _w PSIG 616	+ 12 = PSIA 628	
Temperature: T = 70 °F	F _t = .9905	n = .75	F _{pv} (From Tables) 1.024	Gravity .670	F _g = .9463

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

$$Q = 12.365 (233) (.9905) (.9463) (1.024) = \underline{2765} \text{ MCF/D}$$

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

$$Aof = Q \left(\frac{514089}{119705} \right)^n = (2765) (4.2946)^{.75} = (2765) (2.9833)$$

$$Aof = \underline{8249} \text{ MCF/D}$$

Note: Very light fog of oil and water throughout test.

TESTED BY Jim Thurstonson & C. R. Wagner

WITNESSED BY Jack Jackson- Koch Ind.

C.R. Wagner
Well Test Engineer